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INSTRUCTIONAL COMPETENCE OF SOCIAL STUDIES TEACHERS: BASIS FOR A PROPOSED MANAGEMENT PLAN

Dr. Arturo G. Palaming

Faculty, Pangasinan State University, Bayambang Campus

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ABSTRACT

This study sought to determine the instructional competence of Social Studies teachers in the public secondary schools of Bautista as a basis for a proposed management plan during the school year 2021-2022.

In consonance with the primary objective, the study sought to answer the following specific questions: (1) What is the profile of Social Studies teachers in terms of the following variables: educational attainment; teaching experience; and monthly income. (2) What is the instructional competence of the Social Studies teachers as evaluated by themselves? (3) What is the instructional competence of the Social Studies teachers as evaluated by their school heads themselves? (4) Is there a significant relationship between the profile of Social Studies teachers and their instructional competence level? (5) Is there a significant difference between the evaluation of the school heads and of the Social Studies teachers on the instructional competence? (6) What management plan can be proposed to enhance the instructional competence of the teachers in Social Studies?

In relation to the foregoing sub-problems, the following research hypotheses were tested at .05 level of significance in its null form to wit: (1) There is no significant relationship between the profile of the Social Studies teachers and their instructional competence. (2) There is no significant difference between the evaluation of the school heads and the Social Studies teachers on their instructional competence?

The coverage of this study was the evaluation of the level of instructional competency of the teachers in Social Studies. It includes the 31 teachers teaching Social Studies and 26 school heads of Bautista, Division of Pangasinan II for the school year 2021-2022.

An output of the study was the proposed management plan for teachers teaching Social Studies in order to improve and strengthen their instructional competency level for the benefit of the students.

This study used the descriptive-normative method of research. The method is chosen because the technique is expected to illicit information that are objective in nature in order to realistically answer the research sub-problems. This method was appropriate because it reveals the actual condition of the respondents concerning their instructional competency level.

The researcher used a questionnaire-checklist as the main data-gathering instrument. After which an unstructured interview was conducted to countercheck responses in the questionnaire, which the respondents find difficult to understand.

The data that was gathered from this study was tabulated, analyzed and interpreted using frequency count, percentage, weighted mean, and analysis of variance. To get the relationship between the profile and the evaluated competency level of teachers – the contingency coefficient was used.

KEYWORD: *Teaching, Social Studies, Instruction, Teaching Strategies, Competence of Teachers*

Chapter 1

THE PROBLEM

Rationale

Quality education is the most critical resource in the development of the global Filipino. Some findings of recent studies however, provide cause for alarm. According to David (2020), the educational system is socially regressive and tends to perpetuate the poverty cycle. The poor, particularly those from the rural areas, have the least access to basic education. Public schools even cost more for low-income households than private education for the rich.

By this time, the teachers are all aware of the results of the previous National Achievement Test (NAT) in which students



learned less one-third of the competencies and skills in Social Studies. Along this line, it is imperative to look into the instructional competence of the teacher in imparting knowledge, and skills to the pupils. According to Gabriel (2020) instruction is “the management or direction of teaching activities in the classroom such as instructional objectives, instructional materials, instructional evaluation, instructional technology and instructional strategies”.

In the above context teaching is the behavior of the teacher that evolves during the instructional process while instruction is the specific methods and activities by which the teacher influences learning. According to Preppy (2020) the more attention the students pay to a lesson, the more likely they could learn from it. As a teacher therefore, how do students pay attention and concentrate on the subject matter? Countless activities are possible, but here the researcher considers the instructional competence of the teacher as the most important factor in teaching.

Instructional management includes operation and control of activities inside the classroom. Unless classroom procedures are spelled out carefully, much time and energy will be wasted such details as instructional objectives, strategies, use of instructional material, classroom courtesies, and discipline require foresight and planning. Learning becomes interesting and enjoyable under favorable working conditions; well-planned teaching affect the performance as well as the learning of students. The teacher can teach effectively only when conditions around him are favorable. A well-organized teaching induces good thoughts and inspires both teacher and students to do their best. The management of a classroom includes control of its instructional objectives, instructional materials, instructional evaluation, instructional technology and instructional strategies.

The aims, goals and objectives are terms that can be defined in many ways. The term objectives are descriptions what are to eventually take place at the classroom level. They specify content and sometimes the proficiency level to be attained. Objectives are stated in behavioral terms. They stated specific skills, tasks, content, and attitudes to be taught and learned, and give teachers and students a standard by which to judge if they are achieving the objectives. According to Tara (2020) “the chief function of [...] objectives is to guide the making of [...] decisions on what to cover, what to emphasize, and what content to select, and what learning experience to stress.” Because the possibilities of content, learning, and teaching are endless, teachers face the problem of selection: What content is most important? What learning activities are most appropriate? What unit plan is most effective? Objectives supply criteria for these decisions. No matter what its nature, the statement of objectives in terms of desired outcomes sets the scope and limits for what is to be taught and learned.

Instructional objectives help the teachers focus on what students should know at the end of a lesson, and also help students know what is expected of them. They also help the teacher plan and organize instruction by identifying what is to be taught and when it is to be taught. Instructional objectives are stated in observable and measurable terms (outcomes, proficiencies, or competencies). The specificity enables the teacher to determine whether what was intended was achieved, and to what extent. When the teacher moves from one goal to instructional objectives, the role and responsibility of the teacher become evident.

The real-life experiences provide the most direct type of learning, but they are difficult to supply in the traditional classroom. Most experiences in the classroom occur through verbal symbolism-written or spoken words. These classroom experiences may easier for teachers to supply, but they may be more difficulty for many students to understand. Verbal symbolism depends on the ability to conceptualize and think in the abstract, while the impact of firsthand experience is immediate and concrete. Various multisensory instructional materials can substitute for firsthand experiences and enhance understanding, so they are an integral part of the learning activity. Regardless of the type of instructional materials to be used, a teacher must consider it in the light of the purpose of the learning activity.

The instructional materials must be suited to that objective purpose- whether it be subject matter mastery, skills improvement, or valuing. Although materials and media can stimulate and maintain students’ interest, they are not meant merely to entertain the students. Unless pupils are properly guided, they become distracted by the attention-getting aspects of the instructional materials and lose sight of their educational significance. The experienced teacher will be able to use a variety of materials in a multimedia approach in any subject to vary the learning experiences. All students have different interests and abilities that determine what they attend to and learn. But what they learn also depends on the ability of the teachers to capture their attention and spark their interest through the use of appropriate instructional materials. According to Gregorio (2020) “classroom activities are relatively confined to the more mechanical aspects of teaching activity and this can be realized through used of instructional materials.”

Instructional technology is conceived as instructional when, through specialized materials and equipment, it supplements the conventional process of instruction. The special materials and equipment make it possible for learners to experience stimuli that might otherwise be impossible or impractical to bring to the classroom or school. Place, objects, and events can be seen and heard in the classroom. Effective use does require some basic guidelines. Turning on a movie projector or computer is not a quite as simple as opening of book, but important steps in their use are not unlike the steps recommended for all other instructional materials.

Instructional evaluation is a process in which there is a value on or assign worth to something. The essential characteristic of evaluation is judgment. Evaluation is a two-step process. The first step is measurement, in which the data are obtained by the use of one or a series of tests. Once the measurement has been made, judgments are made about the adequacy of the performance, usually in



the context of instructional objectives. Problems in the test content, sampling, and procedures can result in errors in measurement, and all evaluation are subject to error, since human judgment is involved. But how competent the teacher in doing such evaluation?

The teacher in the classroom is a veritable manager (Lardizabal, 2020). He is at the helm of all activities, and these activities will succeed depending on how well he can steer and guide them properly. One of the most difficult problems that confront a teacher is her instructional competency.

According to Perez (2020) a well-managed instruction give the student rich opportunities for mental growth and development. Therefore, organized classroom instruction procedures, favorable working conditions are conducive to good learning and make schoolwork enjoyable and interesting.

The teacher in the real sense of the word is the custodian of the learning opportunities of the student. Progressive education is concerned with providing every student with the facilities that encourage learning and opens the avenue for it. The school is looked upon as the agency of society to provide these opportunities. Anything the teacher may do to inhibit these opportunities violates his trust. A well-managed classroom also makes the student appreciate the value of time upon which his future success depends. These effective teaching and learning are possible only in a well-managed classroom.

Remember that teachers touch the future of the students! In order to teach, it is important to manage the learning activities of the students. No matter how much potential does a teacher, if she cannot control the pupils in the classroom instruction, little learning will take place. Classroom instruction is an integral part of teaching and techniques of managing students both can and must be acquired by the teacher. Poor classroom instruction is widely considered the major education problem among the secondary teachers (Naungayan, 2020). The problems among the secondary school are following: (1) many students lack inner control and unwilling to defer to teacher authority, (2) many teachers lack systematic methods in teaching, does not have the enough skills to impart knowledge (3) many school administrators do not provide adequate support for teachers, (4) parents' failure to discipline youth in the home.

Classroom instruction is the result of a combination of a large number of factors and influences. These factors come from within the teacher and learners from the nature of the subject matter, strategies, instructional materials, instructional evaluation and technology from the influences of the culture of the learning context on learning and teaching including their role students.

In this sense, classroom instruction is indeed, a tough activity. This alone should prompt teachers to continually work on their skills in classroom instruction. This particular aspect invites the teacher first to carry out an assessment of his belief. A teacher can be a facilitator, a parent, a judge, a model, a resource, a friend, and many more. The role, whatever is assumed iritably possesses tasks, duties, and modes of relationship (Cioco, 2020).

The instructional activities expect to specify rules of behavior and consequences for disobeying them and to communicate these rules and consequences clearly. The classroom is managed in such a way that students are not allowed to forget who is in charge of the classroom.

The instructional competence of the teacher influences the learning conditions and internalization of the skills by the students. Therefore, it is imperative to underscore how competent the teachers in imparting the right skills towards the students.

Theoretical Framework of the Study

The present study is supported by the following theories: The theory, which states “applying the right principles in classroom management help the teacher add new and concrete dimension to classroom teaching (Mukalel, 2020). The teacher dependence on the materials in the textbook can easily lead to stereotyped mode of teaching. But if the teacher used modern technique and strategies in the classroom it helps him to add new dimension of his teaching.

Another theory which states that “teacher provide the learner with materials and activities that are satisfying and meaningful to facilitate their acquisition of skills, abilities and attitudes that are applicable across school subject areas and are relevant to their development “(Solomon, 2020).

Furthermore, the theory that says, “an instructional material and technology is an instructional aids function as the primary tool for classroom interactions “(Taba, 2020). The teacher who aims at creative classroom interaction cannot afford to neglect the use of instructional aids as a means to creating interaction, both peer interaction and student teacher interaction.

Lastly, the theory that “verbal learning about any concepts must culminate in actual word to be effective” (Sanchez, 2020). With the use of the module the students enhance their critical thinking.

The selection of teaching instruction is influenced mainly by the diversity in over-all concepts of education and appreciation of the value and potential of individual methods. To be able to cope with the current fast turnover of knowledge, the learners need teaching and learning approaches where they are taught “how” to learn rather than “what” to learn (Lardizabal, 2020).

Under this situation the learner learned the best by doing, analyzing and reflecting on what happened instead of memorizing and repeating facts. It is important that they are trained how to think independently and think in an inquiring manner. This can be attained by giving the learner the maximum opportunity in doing something and analyzing and reflecting on what they have learned and how they learned it through module. Knowledge is best “wrung out” of the student rather than “poured into” him. In other words,



“doing is better learning than by telling”. It is only in actual doing that a learner can fully grasp the meaning of the learning experience, like doing in their own thinking, analyzing, organizing, concluding and making their own decision.

The teaching of Social Studies is the essence of the study because it is a systematic investigation of a problem or an issue. It implies a process, a series of investigative actions occurring in some order, undertaken to discover an answer to a recognized problem, which is supported by evidences. In Social Studies will lead the learner to discover by him based on the result of these investigations to evolve an answer that is actually not lifted from a book but rather, the answer based on research. This means that in his search for the answer to the problem, the students use several sources of relevant information, analyzes these, organizes the information, concludes and decides on the best alternative solution.

The learners do not belong to the same mold, so teaching method cannot be standardized. There should be as many teaching strategies as there are individual differences among children/learner. There is no single best method, but there are many good methods. According to Meeks (2000) a teaching strategy is good if (1) it makes use of the principle of learning and permits the operation of those principles such as those of readiness, exercise and effect; (2) it utilizes the principles of self-activity or learning by doing and provides for direct experiencing. Activities give learners opportunities for doing and reactions; (3) it provides for individual differences. It is flexible enough to serve the needs of the bright, the average and the slow learners. It has provisions for meeting different needs, interests, aptitudes and emotional maturity; (4) it stimulates thinking and reasoning. It should not merely encourage memorization of responses to factual questions. It should provide for the development of decision-making skills and problem-solving skills; and (5) it provides for growth and development. Student should grow in knowledge and ideas, in habits, skills and abilities and in desirable attitudes and values.

Conceptual Framework of the Study

In the above theories gathered and presented in the theoretical framework of the study by the researcher he was able to present the study through a paradigm or model following the independent and dependent variables.

The independent variables or the input of the study are: the educational attainment, the teaching experience, and the monthly income of the respondents. An arrow pointing to the dependent variables of the study shows a relationship the instructional competence level of teachers in teaching Social Studies.

From the above viewpoint, it can be said that educational attainment, teaching experience and the monthly income affects the classroom instruction of the teachers. As pointed out by Perez (2020) the management of a certain person is directly influence by his educational attainment, monthly income, and his teaching experience as teacher.

The dependent variables of the study as shown in the paradigm are the instructional competence level of the secondary Social Studies teachers.

In the final analysis of the data collected as exhibited by the relationship of the variables – a proposed management plan to enhance the instructional competence level of secondary teachers in Social Studies.

Paradigm of the Study

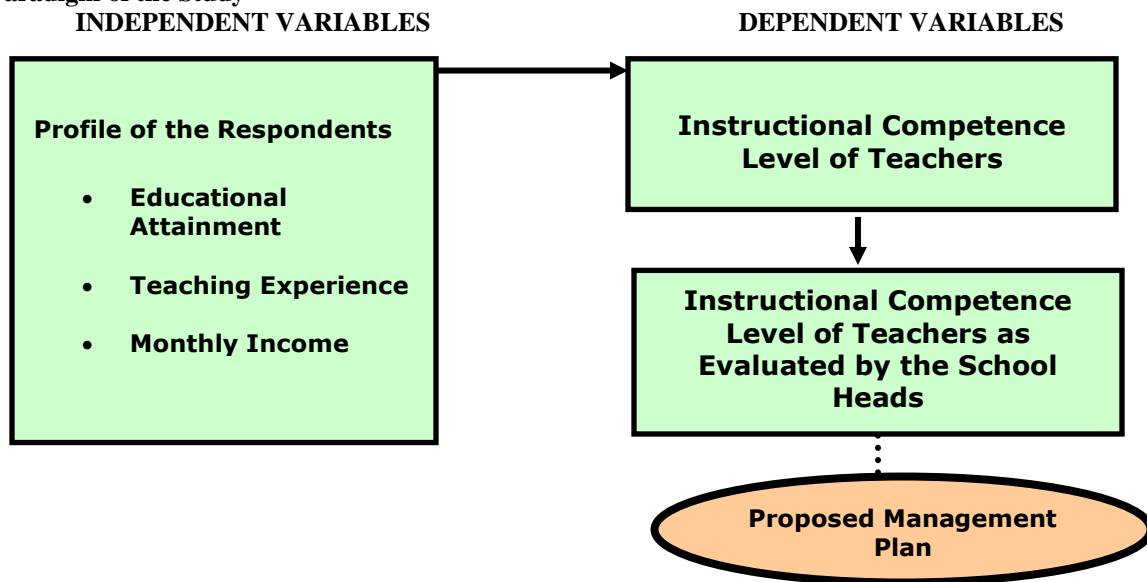


Figure 1. Conceptual Paradigm of the Study



Statement of the Problem

This study sought to determine the instructional competence of secondary Social Studies teachers in the public secondary schools Bautista, Pangasinan II as basis for a proposed management plan during the school year 2021-2022.

In consonance with the primary objective, the study sought to answer the following specific questions:

1. What is the profile of Social Studies teachers in terms of the following variables?
 - a. educational attainment;
 - b. teaching experience; and
 - c. monthly income?
2. What is the instructional competence of the Social Studies teachers as evaluated by themselves?
3. What is the instructional competence of the Social Studies teachers as evaluated by their school heads?
4. Is there a significant relationship between the profile of Social Studies teachers and their instructional competence?
5. Is there a significant difference between the evaluation of the school heads and of the Social Studies teachers on their instructional competence?
6. What management plan can be proposed to enhance the instructional competence of the Social Studies teachers?

Research Hypotheses

In relation to the foregoing sub-problems, the following research hypotheses were tested at .05 level of significant in its null form to wit:

1. There is no significant relationship between the profile of the Social Studies teachers and their instructional competence?
2. There is no significant difference between the evaluation of the school heads and the Social Studies teachers on their instructional competence?

Scope and Delimitation of the Study

The coverage of this study was the evaluation of the level of instructional competence of the Social Studies teachers. It includes the 31 teachers teaching Social Studies in the schools.

The study focused on the relationship between the educational attainment, section assignment, teaching experience and the monthly income to the instructional competence of the teachers teaching Social Studies. The significant difference was taken into in this research between the evaluation of the teachers and school heads on the instructional competence of the teachers.

An output of the study was the proposed management plan for teachers teaching Social Studies in order to improve and strengthen their instructional competence level for the benefit of the students.

Importance of the Study

The results of this study will be beneficial to the school administrators, to the teachers, to the pupils, to the school officials and to the researcher himself.

To the school administrators, the findings of this study will provide them actual picture on the instructional competence of teachers in the performance of their duties. Such information will enable them plan school programs where they can maximize the potentialities of their teachers and also it will provide them the avenues where to improve them.

The teachers themselves will gain insights on how to assess their competence with regards to their classroom instruction. From these findings, they will know what good points they need to maintain and those that they will improve in order to become more effective teachers.

The higher school officials will gain factual information on whether or not the teachers are competent in their present position as their instructional competence. From these data, they can plan and program activities that will further enhance the teacher scheme.

The other researcher will also get information on how well the teachers perform their duties and functions as to whether or not they are competent in performing such roles.

The teachers can make the students who are the primary beneficiaries of this research for whatever improvement in teaching that, they will be most benefited.

The researcher who is a teacher of Social Studies himself will also be benefited by this research work for he can also assess her own performance and compare these to the other teachers. Any shortcomings in his classroom instruction can be improved after learning them.



Definition of Terms

This section of the research includes important or key terms that should be substantially and clearly defined according to how they are used in the study in order to facilitate understanding of the problem and avoid ambiguous meaning to terms which can be otherwise interpreted in different ways.

Instruction. In this study, it pertains to the teaching activities or classroom management of the teacher inside the classroom such areas as: instructional objectives, instructional materials, instructional evaluation, instructional technology, and instructional strategies.

Instructional Objectives. In this study, it pertains to the learning skills or the competencies of the teacher in the teaching of his subject matter. Specifically, the learning objectives in Social Studies.

Instructional Materials. It refers to the visual aids, teaching materials that can stimulate and facilitate the learning activities of the teacher.

Instructional Evaluation. This pertains to the evaluative tools use by the teacher in measuring the learning outcomes of his teaching process.

Instructional Technology. This pertains to the modern technology equipment and materials use by teachers in teaching.

Instructional Strategies. It refers to the methods, the use of devices and principles in teaching to effect a proper development of the individual pupils.

Management Plan. It refers to the action plan or instructional plan or a work plan of teachers in teaching Social Studies.

Instructional Competence. In this study, it pertains to the ability of the teacher in doing all the expected activities in the teaching of Social Studies or the ability of the teachers in imparting the skills towards the students.

Chapter 2

REVIEW OF LITERATURE AND STUDIES

This part of the research presents the exhausted materials reviewed for finding existing facts and knowledge about the subject under investigation.

Related Literature

Creekers (2020) explained the four mistaken goals of acceptance activities in classroom management style to wit: (1) Attention getting-when students are not getting the recognition they desire, they often resort to attention getting misbehavior. They want other students or the teacher to pay attention to them. They may act as the “class clown”, ask special favors, continually seek help with assignments, or refuse to work unless the teacher honors over them. They function as long as they obtain their peers’ or teachers’ attention. (2) Power seeking-students may also express their desire for recognition by defying adults to achieve what they perceive as power. Their defiance is expressed in arguing, contradicting, teasing, temper tantrums, and low-level hostile behavior. If the students get the teacher to argue or fight with them, they win, because they succeed in getting the teacher involved in a power struggle. (3) Revenge seeking-pupils who fail to gain recognition through power seek revenge. Their mistaken goal is to hurt others to make up for being hurt or feeling rejected and unloved. Students, who seek revenge, do not care about being punished. They are cruel, hostile, or violent toward others. Simple logic does not always work with them. Being punished gives, they renewed cause for action. The more trouble they cause for themselves, the more justified they feel. (4) Withdrawal – if students feel helpless and rejected, the goals of their behavior may become withdrawal from the social situation, rather than confrontation. They guard whatever little self-esteem they have by removing themselves from situations that test their abilities. Such withdrawal displays their feelings of inadequacy. If not helped, they eventually become isolated.

Candelas (2020) explain that an assertive approach includes the following features:

1. Such classroom teachers specify for students the rules for classroom conduct. During the course of the year, new rules may be decided upon and occasionally an old rule may be deleted. An up-to-date list of rules is always displayed in the classroom.

2. The first time the student violates a rule during a particular class session, the teacher write the student’s name on a designated area of a white board. The number of the rule that was violated is put next to name. The teacher does not say anything about the transgression but only writes the name and numeral on the board and continues with the planned activity.

3. The second time in the class period that the same student violates a rule (not necessarily the same rule), the number of that rule is added to the name appearing on the board. Again, the teacher makes no other response to the off-task behavior.

4. After the third violation of the rules in the same class period, the student must leave the class and report to a detention room. Again, the teacher does not take class time to talk to the student about the matter. The teacher only indicates that a third violation has occurred, and the student is already aware of the consequences.

5. There are no penalties or requirements for the students who have no more than one violation during any one-class period.

6. Students with two violations are required to meet with the teacher after school to discuss the violation and may out a plan for preventing recurrences.



7. The parent of the students with three violations must appear at school to discuss the violations and make plans for preventing recurrences with student, the teacher, and another school official. The student may not return to the class where the violations occurred until a plan has been worked out with the parents.

In many classrooms, students are powerless with respect to decisions about the classroom rules, curriculum, learning activities and materials, and assessment. In many other classrooms, students are able to participate in important classroom decision about routines, projects, evaluating the class, and planning curriculum.

Rinne (2020) stressed that assertive and acceptance activities as a strategies to classroom management – with a goal of maintaining order in the classroom – is based on the two principles that are familiar to the most teachers today to wit: (1) the teacher should have the complete attention of all students before instruction begins; and (2) when students misbehave or are inattentive during instruction, the teacher should immediately stop the lesson, restore order, and then resume teaching.

Principle number one implies that the lesson content itself can not compel and sustain student attention, that external forces must be employed to enforce the attention of students to subject matter. This action is at odds with the efforts of today’s educators to make lessons more intrinsically motivating and more involving for learners.

Once instruction begins, principle number two exhorts the teachers to “rip every problem in the bud before it gets out of hand”. It encourages order-oriented teachers to interrupt instructions at any moment. The focus of assertive and acceptance activities is to avoid distracting any student’s attention unnecessarily from lesson content, use content-focused techniques whenever possible. With the focus of this principle, teacher strive to attract student attention immediately to the lesson content and then prevent the student’s minds from straying away content even for a single instant. A substantial body of research supports this action.

Doyle (2020) reported that effective teachers were less likely to make management errors such as switching abruptly back and forth between instruction and behavior management [...] and calling attention to themselves for no apparent reason. Report that effective classroom managers “focus more on instruction than on “control””.

In summarizing empirical studies of successful classroom management activities, states the focus principle this way [...] “successful managers tended to fill communication channels with the information about curriculum contest and assignments rather than misbehavior”.

Wittrock (2020) explained that excellent classroom management strives to influence three domains of students’ behavior: (1) student attention, (2) student motivation, (3) and student self-control.

Student self-control means that your students are self-reliant and responsible not because they are caused by outside focus, but because they feel impelled from within themselves. They demonstrate responsibility by fulfilling their obligations to other people/classmates, as well as to themselves, without being asked or prompted. When your pupils become both self-reliant and responsible, they are self –controlled.

Cayabyab (2020) suggested some tips on classroom management such as (1) Circulate through-out the room staying in one place means a “blind spot” on some behavior like playing with an item on the desk (yes, they can maintain eye contact with you and do this). If kids know you might catch them doing something else, they are less likely to get off task. (2) Be consistent with your expectations and follow through. Post class rules and refer to the when they broken. (3) Have a daily routine posted somewhere in the room on word cards or a sheet of paper. Go over this each meaning so they will be aware of special events or other changes. (4) Remind students of their manners if needed. (5) Card for each member of the class must be provided for class participation.

Lardizabal (2020) suggested some techniques in the use of acceptance and assertive activities in the classroom management such as; (1) a teacher should make every effort to show an appreciative attitude towards student answers. The pupils should be made to feel free to do their best. They should be allowed to make mistakes without fear of recrimination, but they should not be abetted in doing careless work. When the student does not answer correctly, the teacher can ask further questions to help the student discover for himself why his original question was wrong. (2) A teacher should never allow wrong answers to slip by. (3) The teacher should follow correct answers of students with encouraging remarks. (4) The teacher should insist upon clarity in every point expressed by the students. (5) Answering in correct should be discouraged. (6) A teacher should encourage students to answer in a loud and clear voice. (7) Students should be encouraged to answer in complete thought; and (8) a teacher should refrain from marking the students in his record book during the class recitation.

Related Studies

The study of **Marciano (2020)** revealed that in improving classroom management, formulating objectives in terms of behavioral changes desired. She further explained that, objectives describe the teacher’s intention in classroom activities. The objectives should be to identify the expected achievements and behavior changes that should take place in students. The teacher should not only direct her attention toward the mastery of the subject-matter but also toward the problem of student behavior classroom experiences of students should be looked into as a functional part of the entire school program. The promotion of sound mental health behavior should therefore, be a legitimate part of the teacher’s responsibility.

The study of **Castillo (2020)** showed that interesting activity is the keynote to proper classroom management and it is



undoubtedly the most important element in good teaching and learning. A student who is interested in his work has little or no time for illness and mischief. Activities based on the student's experiences and interests should be introduced. Students enjoy activities in which they can participate with a hope of successful achievement. An active class or pupil rarely has serious persistent problems of discipline. When students find nothing useful or interesting to do, problems of discipline are sure to appear.

The study of **Anastacio (2020)** on providing proper motivation as a classroom management showed that teaching should be adjusted to the mental maturity of the learners, and each learner should be brought into the discussion of the lesson. It was further revealed that to secure mental alertness the following incentives might be employed: (a) keeping every member of the class busy. Busy hands generally cause little trouble. It is believed that idleness breeds conduct difficulties, (b) holding every member of the class responsible for all the things taught in the classroom.

The study also revealed that teachers with pleasant personalities control their classes, not by physical force, but by the power of their personalities. A teacher's good personality may include his mastery of his subject; his confidence in his own ability; his faith, and confidence in the good intentions of his pupils; his cheerful; pleasant; sympathetic attitude: a courteous and friendly treatment of his students coupled with fairness of his judgment.

Morales (2020) investigated the students' participation in classroom management and it was revealed that one way of securing good classroom management is to build up a school spirit. The essential characteristics of a good school spirit are an attitude of goodwill and cooperation. Student participation in class management has been much advocated as the best means of securing a feeling of responsibility on the part of the students for the welfare of the whole group, as well as for the exercise of self-control. The development of an attitude goodwill and cooperation should be the goal of every classroom activity. To develop such an attitude, the teacher should turn the classroom into a workshop where the students have a good opportunity to work together under the world guidance of a teacher.

The study also revealed that the conference with the students will give the student a chance to explain his side of the case and will enable the teachers to understand the real nature of the offense, hence, establishing personal relations which should bring about mutual understanding. The open admission of one's guilt is in itself a wholesome corrective.

Salazar (2020) in her critical analysis of the routinely activities of students in the classroom revealed that a teacher who provides the proper routine avoids many disciplinary problems. When the proper procedure has been outlined, there's a little temptation to indulge in anything out of the way. Routine is frequently prescribed by means of rules. Rules should all be based on the fundamental rule that whatever is done in school a class as a whole. To develop certain habit that grow into routine in the lives of the school children is satisfying not only to the teacher, but to the students, as well.

Valdez (2020) propounded in her investigation on the relationship of good discipline to good teaching. The investigation revealed that many of the difficulties which teachers have with discipline are due to conflict between the psychological needs of students and unwise provisions or requirement in the classroom. Most prominent among these needs are the need for recognition and the need for activity that challenges that interest and ability of the student. It is therefore necessary that the discipline of both the home and the school should recognize the dignity of each individual and his right to seek recognizes the dignity of each individual and his right to seek recognition and direct his own activities.

Lieberman (2020) conducted a study on the importance of the teacher as a leader in the school, and then it would be reasonable to assume that his influence would be evident among those whom he leads. The findings were that when the teachers' shares decision-making with his students, when he involves the students in organizing the classroom deal with its problems, the students responded with higher morale and greater performance. Under such leadership, teachers become more willing to engage in the process of bringing about fruitful change in the school. She further found out that when pupils gave their teachers a high score, they in turn received high scores from their students. When students were given little decision-making power, they themselves were reluctant to give decision-making power to their schoolmate.

Bustos and Espiritu (2020) explained that teacher who is charge with the management of classroom learning holds a particular theory of teaching based on his knowledge about the learner and the learning process. Such theory of teaching becomes the basic of his decisions on how to go about his various significant roles in the classroom, namely as classroom manager, as facilitator of students' learning and as evaluator of students' learning.

From these viewpoints, the complexity of the role of a teacher must not be confined within the four walls of the so called "learning or training room." Oftentimes, the teachers act as parents too. The students imitate the behavior and attitudes, which they display. The students look up to them as model as if there is no room for mistakes particularly in terms of morality. Hence, it is imperative for the teacher as representative of the adult society to embody desirable patterns of behavior and values. After all, one cannot teach what is right if the students could see that their teacher is doing the opposite.

Samtonis (2020) expounded on the concept that as manager of the classroom situation, the teacher is also responsible for setting up the physical environment most conducive to learning. Such condition is lighting, ventilation, and room appearance. She is also involved with establishment of effective procedures so that class activities proceed with efficiency and with the least expenditure



of time and energy on the part of both teacher and students. In addition to this, the teacher must be aware of the safety environment where their students are moving. This could be done by checking if there are no broken glass windows, no open current to be touched by a curious student, no open manhole, and the like.

As facilitator, the teacher must be knowledgeable of alternative approaches to teaching. The teacher has to bear in mind that there is no single perfect approach to teaching, which will help every student, learn everything in every way. There are many kinds of learning and learners with different learning styles, which for the most part require different methods of teaching. In selecting methods to be used, the teacher must consider the kind of group as well as their individuality and the subject matter to be taught, for it may be appropriate to the group but inappropriate to the subject matter.

As evaluator, the teacher is expected to understand the most effective use of reliable and valid instruments of evaluating the outcome of the learning and diagnosing learning difficulties of the students. This implies the teacher understand the theories of measurement and the evaluation of students performance. Fairness and accurateness must be linked while practicing this role.

Mood (2020) underscored the qualities that make an effective teacher. He has provided excellent advice, which if followed, will be helpful in insuring the success of every teacher: Give attention to what the students are saying. Provide each student with a sense of personal worth. Develop each student's self-confidence and respect his ability to learn. Assume a posture of moral or intellectual superiority. Minimize conflict with students. Minimize lecturing. Provide an open and relax atmosphere. Generate activity among students. Be on guard against apathy and boredom. Show concern for the well-being of each student in the class. Try not to let students' fall-behind. Diversify teacher. Ask your students about the teaching activity. Teach the best you can. Interact with colleagues. Tone down grading systems. Be a model.

Thelen (2020) has catalogued some common views teachers have of themselves and of their roles as teachers. He uses some interesting metaphors.

Model 1(SOCRATES)

The teacher sees himself, or behaves much like, the wise old tutor of antiquity, with a reputation based on love of argument, debate, and deliberately provocative statements. The style is highly individualistic and unsystematic.

Model 2 (THE TOWN-MEETING MANAGER)

This teacher is always seeking consensus and cooperation among members of the class. Educators who speak the importance of the community fall into this category, viewing their classes as communities of independent and equal human beings. He is more a moderator than expert. This is a direct participatory democracy.

Model 3 (THE MASTER/APPRENTICE)

The teacher perceives himself as genuine model for students. The teacher is like an old-fashion preceptor, and the pupil is the apprentice. He is concerned with how the students learn to live. The teacher plays multiple roles, as teachers, as father, as mother, a friend, colleague and boss.

Model 4 (THE GENERAL)

The teacher lays the law and the expertise and demands obedience. There is no room for any sort of ambiguity, and the teacher has the power to reward or punish. The student must do exactly what he is told. When you have a general for a teacher, it is true to say; "I am free to do as I please as I do as I am told."

Model 5 (THE BUSINESS EXECUTIVE)

The teacher functions as business executive, operating a company (the classroom) and working out business deals with the employees (the students). An air of efficiency and crispness goes along with this image. Detailed "production charts" may live the walls of the classroom, and the chief executive can be normally identified by a very tidy desk. This corporate image has become "official" in the newest classroom, where thick wall carpeting is now standard equipment.

Model 6 (THE COACH)

The teacher views role as inspirational - desire, dedication, and devotion are the hallmarks of team talks. The coach is totally devoted to the task. Students are like members of the tea; each one is insignificant as an individual, but as group the students can move mountains. The only measure of effectiveness is the outcome, the final score. To the coach, "winning isn't everything, it's the only thing."

Model 7 (THE TOUR GUIDE)

This teacher bears an unmistakable resemblance to a professional guide. He clearly knows the way around, all the facts, all the time indeed; the teacher seems to be a walking encyclopedia. He also tends to be somewhat reserved, disinterest, and laconic. Technically perfect, the guide shows only a hit of boredom.

Recapitulation

The reviewed studies propounded on the effects of good teaching brought about by organized classroom management. Their study is different from the present study on the subjects, venue, statistical measures and time.



The literature of reviewed books discussed on the management of teachers in the classroom activities in which is the researcher gained much in the improvement of the questionnaire.

Some read articles gave a clearer view on how to manage the classroom activities in which the researcher benefited to update the questionnaire in the Philippine setting.

Chapter 3

RESEARCH METHODOLOGY

This chapter presents the research design and procedure that includes the research method used, the research instrument, the respondents of the study and the statistical treatment of the data.

Research Design

This study used of the descriptive-normative method of research. The method is chosen because the technique is expected to illicit information that are objective in nature in order to realistic answer the research sub-problems. This method was appropriate because it reveals the actual condition of the respondents concerning their instructional competence.

Sources of Data

Locale of the Study

The study was conducted at Bautista National High School, Division of Pangasinan II. The coverage of this study was the evaluation of the level of instructional competence of teachers in Social Studies. It includes the 31 teachers teaching Social Studies in the Municipality of Bautista, Division of Pangasinan II for the school year 2021-2022.

The study focused on the relationship between the educational attainment, teaching experience and the monthly income to the competence level of the teachers teaching Social Studies. The significant difference was taken into in this research between the evaluation of the teachers and school heads on the instructional competence level of the teachers.

An output of the study was the proposed management plan for teachers teaching Social Studies in order to improve and strengthen their instructional competence level for the benefit of the pupils.

Population and Sampling

The respondents in this study are the 31 Social Studies teachers and the 26 school heads in the Municipality of Bautista. This represent 100 percent of the total Social Studies teachers and school heads.

The questionnaire-checklist was administered personally by the researcher to the respondents to ensure a hundred percent retrieval of the instrument. A permit to conduct the study in the research environments was secured by the researcher from the Schools Division Superintendent of Pangasinan II and from the District Supervisors of Bautista. The researcher was on leave of absence during the administration and retrieval of the questionnaire.

Instrumentation and Data Collection

The researcher used a questionnaire-checklist as the main data-gathering instrument. After which an unstructured interview was conducted to countercheck responses in the questionnaire, which the respondents finds difficult to understand.

The researcher based on his reading of books, thesis, dissertations and other literatures that have relevance to the research topic are of great help to prepare the questionnaire.

The initial draft of the questionnaire-checklist was referred to her adviser and to other teachers and school heads for comments and suggestions. The above chosen critics made revisions of the instruments after passing scrutiny. After final approval of his adviser, the questionnaire-checklist was subjected to a dry run for validation in content and construct.

The dry run was done in San Carlos Central I School and San Carlos Central II Elementary School. Fifteen teachers were acted as try-out respondents in San Carlos Central I School and fifteen teachers in San Carlos Central II Elementary School.

The 10 principals or school heads of San Carlos City Division will be the try-out respondents representing the school administrators' group. These schools in San Carlos City was chosen because they are adjacent to the municipality of Malasiqui, the hometown of the researcher.

Tools for Data Analysis

The data that was gathered from this study was tabulated, analyzed and interpreted using frequency count, percentage, weighted mean, chi-square and analysis of variance.

Weighted Arithmetic Mean or Average Weighted Frequency

This statistical tool was utilized to analyze the answer having sealed responses. The following procedures were used in obtaining the average weighted mean. Arbitrary weights were assigned to the descriptive equivalent rating.



<i>Weight</i>	<i>Equivalent Descriptive Rating</i>
3 - (2.25 – 3.00)	Very Competent
2 – (1.50 – 2.24)	Moderately Competent
1 – (0.75 – 1.49)	Less Competent

The Average Weighted Mean (WAM) or Weighted Frequency (AWF) was obtained by multiplying the frequency of each alternative response by the corresponding arbitrary weight. The sum of which was added together, divided by the total number of respondents. The obtained WAM or AWF becomes the basis of the equivalent descriptive rating (EDR) to denote the importance of each item.

In Symbol:

$$\text{WAM/AFW} = \frac{f \times w}{N}$$

Where:

WAM	- Weighted arithmetic mean
(AWF)	- Average weighted frequency
f	- Frequency
w	- Weight in the selected point scale
n	- Total number of respondents

General Weighted Average Frequency

To obtain the GAWF of GWAM, the weighted average or mean for each area was added together, then divided by the number of items included in each item.

Testing the Hypotheses

To get the relationship between the profile and the evaluated competency level of teachers – the contingency coefficient was used.

Chapter 4

PRESENTATION, INTERPRETATION AND ANALYSIS OF DATA

This chapter presents the data gathered, the details of the analysis made and the interpretation of the findings on the basis of the stated problems. More specifically, it presents the profile of the Social Studies teachers. The instructional competence level of the Social Studies teachers, the significant relationship between the profile of the Social Studies teachers and their instructional competence level.

Furthermore, the evaluation of the school heads on the instructional competency level of the Social Studies teachers, the significant difference between the evaluation of the school heads and the Social Studies teachers on the instructional competence level, the management plan that can be proposed to enhance the instructional competence of teachers in Social Studies.

PROFILE OF THE SOCIAL STUDIES TEACHERS

Table 1.1
Profile of the Social Studies Teachers
Along Educational Attainment

Educational Attainment	Frequency	Percentage
Bachelor In Elementary Education (BEED)	18	58.06
Bachelor In Elementary Education (BEED)/Bachelor in Secondary Education (BSE)	10	32.26
Master of Arts Graduate (MAEd)	03	09.68
Doctor of Education Graduate (Ed.D. /Ph.D.)	00	00.00
Total	31	100



Table 1.1 present the profile of the Social Studies teachers in the Municipality of Bautista. The profile of the teachers is categorized into: educational attainment, teaching experience and the monthly income.

The Social Studies teachers must possess the necessary educational qualification in order to prepare them for the leadership or management role. This is in accord to what Reeder (2001) said: that it would be a great boon to education and to society if school teachers and school heads would take the lead in standardizing their profession along the lines.

It is highly evident that Social Studies teachers possessed the right educational qualifications. As borne by the data, there are 3 or 9.68 percent obtained the degree Master of Arts in Education (MAEd); 10 or 32.26 percent were combined Bachelor Elementary and Secondary Education graduate; 18 or 58.06 percent were Bachelor in Elementary Education. Notably, almost half (50) of the total respondents are within the combined curriculum of Bachelor in Elementary and Secondary Education. What is interesting to note is the Social Studies teachers who have MA degrees, which tends to indicate the high premiums placed by the respondents to educational advancement. From these data it can be deduced further that Social Studies teachers in general have adequately met the needed educational requirements for teaching positions in public elementary education.

Table 1.2 shows the profile of the Social Studies teachers along teaching experience. The teaching experience of the teachers is equated with their length of service.

Table 1.2
Profile of the Social Studies Teachers
Along Teaching Experience

Teaching Experience	Frequency	Percentage
1-5 years	09	29.03
6-10 years	05	16.13
11-15 years	08	25.81
16-20 years	06	19.35
21 and above years	03	09.68
Total	31	100

A careful scrutiny of the information sheet for the Social Studies teachers as to the number of years in their present position disclosed that 3 or 9.68 percent of the subjects have occupied the position for 21 year and above. Meanwhile, the table presents the cumulative years of service the Social Studies teachers have occupied their present position and designation.

It could be gleaned from the foregoing table that most of the Social Studies teachers (9 or 29.03 percent) have occupied for an average number of years (1 to 5 years) to their present position, which means that their experience as Social Studies teachers is adequate to undertake the delicate task of classroom management. This is followed closely by those who have stayed in the position for only a short number of years. Only 5 or 16.13 percent of the total respondents have served their school as Social Studies teachers post for more than 6 to 10 years.

It could also be noted in the posted data that there are 8 or 25.81 percent of the as Social Studies teachers who rendered the public schools for 11 to 15 years. While there are 6 or 19.35 percent of the total respondents who successfully served the public schools within 16 to 20 years. The data implies that most of the Social Studies teachers are still young in the service such young they enjoy the profession inspite of the ups and downs.



Table 1.3
Profile of the Social Studies Teachers
Along Monthly Income

Monthly Income	Frequency	Percentage
1, 000 and below	04	12.90
2, 000 to 3,000	05	16.13
4, 000 to 5,000	11	35.48
6, 000 to 7,000	06	19.35
8, 000 and above	05	16.13
Total	31	100

In this study monthly income refers to the net take home pay of the Social Studies teachers. Table 1.3 shows the monthly income of the Social Studies teachers. It can be noticed in the table that there are 4 or 12.90 of the total respondents with a month net take home pay of 1, 000 and below, while there are teachers also receiving a net salary of 2, 000 to 3,000 and 8, 0000 above with 5 or 16.13 percent respectively.

Moreover, the 11 or 35.48 percent of the teacher exhibit a total net take home pay of 4, 000 to 5,000 and 6 or 19.35 percent have a monthly income of 6, 000 to 7,000. Sensing the data, it implies that greater number of the Social Studies teacher received a net income of 4, 000 to 5,000 pesos and described that this teachers are within the poverty line.

Instructional Competence of the Social Studies Teachers as Evaluated by Themselves

Table 2 presents the instructional competence of the Social Studies teachers as evaluated by themselves. It can be gleamed in the table that the following composite mean were exhibited by the teachers as they rated themselves to the items as “very competent”: wording questions appropriately (x=2.66–very competent); asking concise and specific questions (x=2.56–very competent); using learner’s previous knowledge (x=2.89–very competent); asking relevant questions (x=2.64–very competent); varying the manner of questioning (x=2.53-very competent); asking question in non-threatening manner (x=2.45-very competent); allowing enough time for the learner’s to think (x=2.43-very competent); rephrasing questions for clarification (x=2.34-very competent); following-up on learner’s answer (x=2.33-very competent); acknowledging the learner’s and their answers (x=2.27 - very competent) stating the objectives and focus (x=2.38-very competent) using appropriate language level (not too technical) (x=2.98-very competent) presenting points in a logical manner (x=2.90-very competent); giving examples to make ideas concrete (x=2.78-very competent) linking ideas constantly (x=2.61-very competent) repeating and reinforcing the main points (x=2.92-very competent) restating focus at end as reinforcement and review (x=2.96-very competent) dividing instructions into stages (x=2.59-very competent) speaking loudly and distinctly to hear by all (x=2.69-very competent) using simple direct statements for instruction (x=2.71-very competent) writing instructions legibly on the board (x=2.73-very competent) noting time limit of task (x=2.84-very competent) checking if the learners understand the task (x=2.85-very competent) and giving assignment of roles in-group work (x=2.83-very competent).

Furthermore, the items: giving approximately equal time to each group (x=2.34-very competent) asking questions to help the group improve its work (x=2.55-very competent) making sure presentation can be seen and heard (x=2.57-very competent) asking questions to elicit the learner’s comments (X=2.63-very competent) summarizing the learner’s comments (x=2.68-very competent) getting the learner’s to make the evaluation (x=2.95-very competent) synthesizing learners ideas to the lesson focus (x=2.98-very competent) evaluated as “very competent.”

On the other hand “using humor to clarify ideas (x=2.18–moderately competent) and “giving time to work in-group before checking on them” (x=2.22 – moderately competent) disclosed as “moderately competent”. The mean of x=2.64 deduced that the teachers are “very competent” in their instructional skills.



Table 2
Instructional Competence of the Social Studies Teachers as Evaluated by Themselves

Teaching Skills	AWF	D
1. Wording questions appropriately.	2.66	VC
2. Asking concise and specific questions.	2.56	VC
3. Using learner's previous knowledge.	2.89	VC
4. Asking relevant questions	2.64	VC
5. Varying the manner of questioning.	2.53	VC
6. Asking question in non-threatening manner.	2.45	VC
7. Allowing enough time for the learner's to think.	2.43	VC
8. Rephrasing questions for clarification.	2.34	VC
9. Following-up on learner's answer.	2.33	VC
10. Acknowledging the learner's and their answers.	2.27	VC
11. Stating the objectives and focus.	2.38	VC
12. Using appropriate language level (not too technical)	2.98	VC
13. Presenting points in a logical manner.	2.90	VC
14. Giving examples to make ideas concrete.	2.78	VC
15. Using humor to clarify ideas.	2.18	MC
16. Linking ideas constantly.	2.61	VC
17. Repeating and reinforcing the main points.	2.92	VC
18. Restating focus at end as reinforcement and review.	2.96	VC
19. Dividing instructions into stages.	2.59	VC
20. Speaking loudly and distinctly to hear by all.	2.69	VC
21. Using simple direct statements for instruction.	2.71	VC
22. Writing instructions legibly on the board.	2.73	VC
23. Noting time limit of task.	2.84	VC
24. Checking if the learners understand the task.	2.85	VC
25. Giving assignment of roles in-group work.	2.83	VC
26. Giving time to work in-group before checking on them.	2.22	MC
27. Giving approximately equal time to each group.	2.34	VC
28. Asking questions to help the group improve its work.	2.55	VC
29. Making sure presentation can be seen and heard.	2.57	VC
30. Asking questions to elicit the learner's comments.	2.63	VC
31. Summarizing the learner's comments.	2.68	VC
32. Getting the learner's to make the evaluation.	2.95	VC
33. Synthesizing learners ideas to the lesson focus	2.98	VC
Mean	2.64	VC

Legend:

3 (2.25 – 3.00)

Very Competent (VC)

2 (1.50 – 2.24)

Moderately Competent (MC)

1 (0.75 – 1.49)

Less Competent (LC)

AWF

Average Weighted Frequency

D

Description

In the a nutshell the item “using appropriate language level (not too technical) with $x=2.98$ and rated as “very competent” this implies that the Social Studies teachers used language that is within the understanding and vocabulary level of the pupils. It is also observed in the posted data that teachers in Social Studies possesses an skill “presenting points in a logical manner with $x=2.90$ as “very competent” this implies that teachers are strictly following what is stated and in their daily lesson.

In the responses of the respondents it magnify that they are “very competent” to repeat and reinforce the main points of the lesson with $x=2.92$. The data seems to imply that the main objectives of every teaching activity in the classroom are for mastery of the lesson that's why teachers keep repeating the lesson for emphasis.



It was noted in the composite mean that the “restating focus at end as reinforcement and review” as very competent with $X=2.96$ this implies that the teachers in Social Studies believed on the adage “practice makes perfect” that why the teachers focus the pupils in reinforcement and review on their lesson. In the item “getting the learner’s to make the evaluation” with $x=2.95$ as “very competent” the data implies that teachers evaluation oriented or performance result oriented. The data further revealed that the teachers strictly observe synthesizing learners’ ideas to the lesson as focus of the study.

Instructional Competence of the Social Studies Teachers as Evaluated by the School Head

Table 3 shows the instructional competence of the Social Studies teachers as evaluated by the school head. From the responses of the school heads on the instructional competence of their Social Studies teachers the following evaluation are noted as “very competent” to wit: acknowledging the learner’s and their answers $x=2.85$ very competent using appropriate language level (not too technical) $x=2.89$ very competent using humor to clarify ideas $x=2.89$ very competent using simple direct statements for instruction $x=2.87$ very competent giving approximately equal time to each group $x=2.99$ very competent asking questions to help the group improve its work $x=2.98$ very competent asking questions to elicit the learner’s comments $x=2.88$ very competent. The mean of $x=2.57$ disclosed that the teachers as evaluated by the school heads are “very competent” in terms of their instructional competence level in teaching Social Studies.

On the contrary, the item on the following are evaluated by the school heads as “moderately competence “asking concise and specific questions with $x=2.18$ (moderately competent); using learner’s previous knowledge with $x=2.19$ (moderately competent) asking relevant questions $x=2.20$ (moderately competent); linking ideas constantly with $x=2.23$ (moderately competent); synthesizing learners ideas to the lesson focus with $x=2.22$ (moderately competent).

Table 3
Instructional Competence of the Social Studies Teachers as Evaluated by the School Head

Teaching Skills	AWF	D
1. Wording questions appropriately.	2.85	VC
2. Asking concise and specific questions.	2.18	MC
3. Using learner’s previous knowledge.	2.19	MC
4. Asking relevant questions	2.20	MC
5. Varying the manner of questioning.	2.25	VC
6. Asking question in non-threatening manner.	2.45	VC
7. Allowing enough time for the learner’s to think.	2.56	VC
8. Rephrasing questions for clarification.	2.47	VC
9. Following-up on learner’s answer.	2.58	VC
10. Acknowledging the learner’s and their answers.	2.85	VC
11. Stating the objectives and focus.	2.56	VC
12. Using appropriate language level (not too technical)	2.89	VC
13. Presenting points in a logical manner.	2.78	VC
14. Giving examples to make ideas concrete.	2.45	VC
15. Using humor to clarify ideas.	2.89	VC
16. Linking ideas constantly.	2.23	MC
17. Repeating and reinforcing the main points.	2.41	VC
18. Restating focus at end as reinforcement and review.	2.42	VC
19. Dividing instructions into stages.	2.45	VC
20. Speaking loudly and distinctly to hear by all.	2.78	VC
21. Using simple direct statements for instruction.	2.87	VC
22. Writing instructions legibly on the board.	2.63	VC
23. Noting time limit of task.	2.55	VC
24. Checking if the learners understand the task.	2.66	VC
25. Giving assignment of roles in-group work.	2.44	VC
26. Giving time to work in-group before checking on them.	2.65	VC
27. Giving approximately equal time to each group.	2.99	VC



28. Asking questions to help the group improve its work.	2.98	VC
29. Making sure presentation can be seen and heard.	2.79	VC
30. Asking questions to elicit the learner's comments.	2.88	VC
31. Summarizing the learner's comments.	2.54	VC
32. Getting the learner's to make the evaluation.	2.33	VC
33. Synthesizing learners ideas to the lesson focus	2.22	MC
Mean	2.57	VC

Chi-Square Table Showing the Relationship Between the Profile of the Social Studies Teachers and their Instructional Competence Level

Table 4 presents the chi-square table showing the relationship between the profile of the Social Studies teachers and their instructional competence level in teaching. It can be noted in the table that the variables: educational attainment; teaching experience; and monthly income shows a computed chi-square value of 24.98 (educational attainment); 48.16 (teaching experience) and 56.34 (monthly income).

On the other hand the tabular t-value of 9.488 (educational attainment); 15.507 (teaching experience) and 15.507 (monthly income) taken at 4 and 8 respectively as the degree of freedom (df). The computed chi-square value of the variables is much higher than the tabular t-value. This warrants the rejection of the research hypotheses, which states – that there is no significant relationship between the profile of the teachers and the evaluated instructional competence in teaching Social Studies.

Thus, there is a significant relationship between the profile of the teachers and the evaluated instructional competence in teaching Social Studies. This implies that the higher the educational attainment of the Social Studies teachers the more competent he is. The longer the teaching experience of the teachers the more competence he is. The higher the income the more he could uplift himself for competency in teaching.

In other words, the profile of the teachers such as educational attainment, teaching experience and monthly income are directly proportional to the instructional competence level of the teachers. This is supported by the computed contingency coefficient of .67 (educational attainment); .78 (teaching experience) and .80 (monthly income). The selected variables are factors to improve the instructional competence of the Social Studies teachers in teaching.

Table 4

Chi-Square Table Showing the Relationship Between the Profile of the Social Studies Teachers and their Instructional Competence Level

Variables	χ^2 Chi-square	df (.05)	t-value	C	Decision
Level of Competence					
• Educational Attainment	24.98	4	9.488	.67	Reject Ho.
• Teaching Experience	48.16	8	15.507	.78	Reject Ho.
• Monthly Income	56.34	8	15.507	.80	Reject Ho.

Legend:

- df = degree of freedom
- C = contingency coefficient
- t-value = tabular value

ANOVA Table Showing the Difference Between the Evaluation of the School Heads and the Social Studies Teachers' Instructional Competence Level

Table 5 shows the analysis of variance showing the difference between the evaluation of the school heads and the Social Studies teachers in their instructional competence teaching.

A closer look on the posted data that the computed sum of squares between the group is 4.513 and the within the group value is 16.454. The mean square of the variables as exhibited between the groups is 2.257 and within the group value is .588.



Such trend of the above data the computed F-value is 3.840 is much higher than the tabular F-value of 3.34 taken at n=2 and n=28. This warrants the rejection of the hypothesis of the study, which states – that there is no significant difference in the evaluation of the school heads and the teachers as to the instructional competence of the Social Studies teaching. Thus, the evaluation of the school heads and the teachers are different and comparable.

This means that the observations of the school heads are different from the observations of the Social Studies teachers in their instructional competence. The evaluation of the school heads on the instructional competence of their teachers seems to be comparable to that of the teachers. This may be construed to the fact that perception is subjective to the person involved.

Table 5

ANOVA Table Showing the Difference Between the Evaluation of the School Heads and the Social Studies Teachers' Instructional Competence Level

	Sum of Squares	Df	Mean Square	F	Significant
Between Groups	4.513	2	2.257	3.840	.034
Within Groups	16.454	28	.588		
Total	20.967	30		3.34	Reject Ho.

Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS OF THE STUDY

This part of the study presents the summary, conclusions and recommendations of the study.

Summary

This study sought to determine the instructional competence of grade five Social Studies teachers in the public secondary schools of Bautista as basis for a proposed management plan during the school year 2021-2022.

In consonance with the primary objective, the study will seek to answer the following specific questions: (1) What is the profile of the Social Studies teachers in terms of the following variables: educational attainment; teaching experience; and monthly income. (2) What is the instructional competence of the Social Studies teachers as evaluated themselves? (3) What is the instructional competence of the Social Studies teachers as evaluated by their school heads themselves? (4) Is there a significant relationship between the profile of the Social Studies teachers and their instructional competence level? (5) Is there a significant difference between the evaluation of the school heads and of the Social Studies teachers on the instructional competence? (6) What management plan can be proposed to enhance the instructional competence of the teachers in Social Studies?

In relation to the foregoing sub-problems, the following research hypotheses will be tested at .05 level of significant in its null form to wit: (1) There is no significant relationship between the profile of the Social Studies teachers and their instructional competence. (2) There is no significant difference between the evaluation of the school heads and the Social Studies teachers on their instructional competence?

The coverage of this study will be the evaluation of the level of instructional competency of the teachers in Social Studies. It includes the 31 teachers teaching Social Studies and 26 school heads of Bautista Municipality, Division of Pangasinan II for the school year 2021-2022.

An output of the study will be the proposed management plan for teachers teaching Social Studies in order to improve and strengthen their instructional competency level for the benefit of the students.

This study will make use of the descriptive-normative method of research. The method is chosen because the technique is expected to illicit information that are objective in nature in order to realistic answer the research sub-problems. This method will be appropriate because it reveals the actual condition of the respondents concerning their instructional competency level.

The researcher will use a questionnaire-checklist as the main data-gathering instrument. After which an unstructured interview will be conducted to countercheck responses in the questionnaire, which the respondents finds difficult to understand.

The data that will be gathered from this study will be tabulated, analyzed and interpreted using frequency count, percentage, weighted mean, and analysis of variance. To get the relationship between the profile and the evaluated competency level of teachers – the contingency coefficient will be used.

Study Findings

Based on the data collected, analyzed and interpreted the following study findings are deduced:



1. There are 3 or 9.68 percent obtained the degree Master of Arts in Education (MAEd); 10 or 32.26 percent were combined Bachelor Elementary and Secondary Education graduate; 18 or 58.06 percent were Bachelor in Elementary Education.

The Social Studies teachers as to the number of years in their present position disclosed that 3 or 9.68 percent of the subjects have occupied the position for 21 year and above. That most of the Social Studies teachers (9 or 29.03 percent) have occupied for an average number of years (1 to 5 years) to their present position. Five or 16.13 percent of the total respondents have served their school as Social Studies teachers post for more than 6 to 10 years. It could also be noted in the posted data that there are 8 or 25.81 percent of the as Social Studies teachers who rendered the public schools for 11 to 15 years while there are 6 or 19.35 percent of the total respondents who successfully served the public schools within 16 to 20 years.

That there are 4 or 12.90 of the total respondents with a month net take home pay of 1, 000 and below, while there are teachers also receiving a net salary of 2, 000 to 3,000 and 8, 0000 above with 5 or 16.13 percent respectively, the 11 or 35.48 percent of the teacher exhibit a total net take home pay of 4, 000 to 5,000 and 6 or 19.35 percent have a monthly income of 6, 000 to 7,000.

2. The teachers disclosed themselves as “very competent” as Social Studies teachers. Particularly in the following the items: “using appropriate language level (not too technical) with $x=2.98$ and rated as “very competent”; presenting points in a logical manner; to repeat and reinforce the main points of the lesson; restating focus at end as reinforcement and review; and getting the learner’s to make the evaluation.

3. The instructional competence of the Social Studies teachers as evaluated by the school head disclosed as “very competent” to wit: acknowledging the learner’s and their answers; using appropriate language level (not too technical); using humor to clarify ideas; using simple direct statements for instruction; giving approximately equal time to each group; asking questions to help the group improve its work; asking questions to elicit the learner’s comments;

On the contrary, the item on the following are evaluated by the school heads as “moderately competence “asking concise and specific questions; using learner’s previous knowledge; asking relevant questions; linking ideas constantly; and synthesizing learners ideas to the lesson focus.

4. There is a significant relationship between the profile of the teachers and the evaluated instructional competence in teaching Social Studies.

5. The evaluation of the school heads and the teachers are different and comparable.

CONCLUSIONS

Based on the data collected, analyzed and interpreted the following conclusions are formulated:

1. The Social Studies teachers possess the necessary educational qualification in order to prepare them for the leadership or classroom management role. The respondents tend to indicate the high premiums to educational advancement. That Social Studies teacher in general has adequately met the needed educational requirements for teaching positions in public elementary education.

The experience as Social Studies teachers is adequate to undertake the delicate task of classroom management. This is followed closely by those who have stayed in the position for only a short number of years.

The data implies that most of the Social Studies teachers are still young in the service such young they enjoy the profession inspite of the ups and downs. That the Social Studies teachers are within the poverty line.

2. The Social Studies teachers are very competent in teaching the concepts of Social Studies.

3. The Social Studies teachers are very competent in teaching the concepts of Social Studies as evaluated by their school heads.

4. The profile of the teachers such as educational attainment, teaching experience and monthly income are directly proportional to the instructional competence level of the teachers.

5. The evaluation of the school heads and the teachers are different and comparable. This means that the observations of the school heads are different from the observations of the Social Studies teachers in their instructional competence. The evaluation of the school heads on the instructional competence of their teachers seems to be comparable to that of the teachers. This may be construed to the fact that perception is subjective to the person involved.

RECOMMENDATIONS

Based on the study findings and on the formulated conclusions the following recommendations are hereby advanced:

1. The Department of Education through the division offices should formulate policies, programs and projects for scholarship grants, trainings and additional units in Master of Arts in Education for those teachers handling the subjects. In this way the teachers will strengthen and enhance instructional competence in Social Studies.

2. The DepEd officials should plan a training program that will address the instructional competence of the Social Studies teachers particularly in classroom teaching. In this way the teachers are aware of what are to be taken and carried out. This is a simple way of management by planning.



3. The school heads should design an intensive classroom visitation to the Social Studies teachers. In this activity the school heads will identify the focal point on how the teachers can improve and enhance their instructional competence. The school heads should also make a plan to design a school-based training program for the Social Studies teachers.

4. The instructional management plan as an output of the study should be tested for effectiveness in the school, division, and regional level. The plan should be given consideration by the authorities for wider implementation. In this way the results of such activities will serve as a data bank of information for further study.



ALTERNATIVE LEARNING SYSTEM PRACTICES, ASPIRATIONS AND PROSPECTS: A FRAME TO REVIEW

Rommel Pascual Manzon

International Maritime College of Oman, Sohar, Oman

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ABSTRACT

Globally, education has long been regarded and acknowledged as a key ally in the pursuit of full human development. It has been compared to educational reforms, which emphasize how crucial it is for everyone to be academically competent. In all areas of human activity, it also plays a significant part as a tool for massive advancement and revolution. It can be argued that, in the broadest sense, it is just as important as any of a person's essential requirements.

KEYWORDS: *Alternative Learning System, Teaching Strategies, Project for Implementation*

DISCUSSION OF FINDINGS

The Bureau of Alternative Learning System (BALS) of the Department of Education (DepEd) administers the Alternative Learning System (ALS), a free educational program that supports students who cannot afford to attend traditional schools and works around their schedule. The curriculum, which incorporates both non-formal and informal sources of knowledge and skills, offers a strong substitute for the current formal school instruction.

When it was first introduced in 1984 under the term Non-Formal Education, its main goal was to aid students in acquiring technical skills that they could use to support themselves. Its focus broadened to include literacy classes with the goal of eventually awarding Elementary and High School diplomas to eligible students who were forced to drop out of primary and secondary school after having its name changed to Alternative Learning System in 2004.

In addition to addressing the needs of underprivileged groups, ALS aspires to expand educational possibilities for Filipino individuals with a variety of interests, capacities, demographic traits, socioeconomic origins, and statuses.

The method shortens the time needed to complete elementary and high school, drastically lowering costs in the process. Along with giving hope to those in need, it also offers opportunities to Out-of-School Youth (OSY) and Adults, elementary and secondary school dropouts, workers in the private sector, housewives, maids, factory workers, drivers, people from culturally and racially marginalized groups, and people who are physically or mentally disabled.

Classroom instruction takes place in Community Learning Centers. There are various CLCs located throughout each municipality or city for interested learners to visit. These CLCs can be public elementary or secondary schools, barangay halls, buildings lent by governmental bodies, for-profit businesses, or other organizations, or any other empty location where students can congregate. 800 classroom hours, or 10 months, of instruction are required for ALS students.

Since ALS uses a module-based learning method, students arrive at a predetermined time and select a module to read. The modules may be taken home by students so they can study them whenever and wherever they choose if other commitments prevent them from attending class. These modules conclude with questions and exercises that students must complete in order to gauge their level of understanding of the material.

The learners will take the Accreditation and Equivalency (A and E) Test after a period of time. The ALS Accreditation and Equivalency Test seeks to provide students with two learning achievements at Elementary and Secondary levels. It is a multiple-choice and composition writing test that is administered using paper and pencil. The test questions are based on the five learning strands of the ALS Curriculum's five learning skills.

The multiple choice tests and the composition writing are the two sections of the exam. For the elementary Level, the test lasts for three hours and thirty minutes, and for the secondary Level, four hours and fifteen minutes. A certificate with the Secretary of the Department of Education's signature is given to exam takers of either the Elementary or Secondary Level. This enables a passer to integrate into the nation's educational system. The following opportunities are provided to him or her: the ability to enroll in post-secondary courses (technical or vocational, two, four, or five year courses) at institutions that are members of the MFI and



TESDA, as well as the CHED (for private colleges and universities) and PASUC (for government owned / controlled) member institutions.

De Guzman (2020) claimed that Filipino families in the Philippines understand the value of education in achieving a fruitful lifestyle. However, according to Greenbrae (2020), poverty is a major factor in the prevalence of child labor, child prostitution, and human trafficking among children and young adults. Despite the fact that basic education is free, many children still do not attend school due to a lack of other necessities (Ruggeri, 2020).

According to Eborá (2020), only 66 out of 100 Grade one students completed Grade Six, 58 out of the 66 who enrolled in Grade 7, and only 43 graduated high school. According to the research, only 23 of the 43 students who completed high school chose to attend college, and only 14 of those 23 completed their studies (Eborá, 2020).

In light of this, the Medium Term Philippine Development Plan (MTPDP) advocated for the implementation of the extended vision of Education for All (EFA) by eradicating illiteracy and providing basic education and life skills to adults and young people who are not currently enrolled in school (Tendon, 2020). It is listed as one of the ways for reducing poverty. However, the official educational systems have not been the only means by which the government has attempted to educate the Filipino people. In order to provide basic education to the population of out-of-school children, teenagers, and adults, the Governance Act for Basic Education, also known as Republic Act 9155, creates the Alternative Learning System (ALS).

Executive Order No. 356 also specifies that the ALS is essential in assisting school dropouts in building human capital, enhancing long-term educational outcomes, and increasing employment chances. However, since the ALS's conception, numerous difficulties have surfaced in its implementation. Mobile teachers of the ALS claimed that there was a lack of community-based instructional resources, a delay in the provision of trip reimbursement, and a lack of a fixed space to hold the learning sessions (Pincay, 2020).

According to Aprilia (2020), it is clear that the stakeholders are inadequate, particularly those who are associated with the local government and the parents of the kids. Therefore, ALS instruction's support mechanisms, such as instructional materials, facilities, and equipment, financial resources, as well as stakeholder participation, remained elusive despite the tremendous achievement in increasing access to basic education (Absalom, 2020).

Despite the fact that Tomas (2020) revealed poor participation and passing rates in ALS, these findings do not totally support the adoption. However, a strikingly high percentage of pupils went on to pass the ALS Accreditation and Equivalency (A&E) test and eventually graduate from college. Given a performing teacher, learning can still occur in the classroom despite curriculum shortcomings, a lack of technology in the classrooms, the inadequacy of the instructional materials, unmotivated students, inadequate facilities and equipment, a lack of financial support, and a lack of support from stakeholders as long as the teachers are dedicated to their work (Anwar, 2020).

As a result, instructors merely need to possess a positive outlook, best practices, and keep up with global trends in order to stay ahead of their students, as an improvement in a teacher's quality will unavoidably result in an improvement in the quality of education. According to Gourneau (2020), instructors' important attitudes and behaviors might ultimately have a substantial impact on the everyday activities of their students.

The workplace is currently a place where people might encounter constantly changing working conditions as a result of the workplace's rising acceptability as an essential setting for acquiring new information and skills. To maintain a competitive edge and their employability, workers in today's complex market are expected to frequently examine their knowledge, abilities, and habits. Learning is seen as a process that results from work-related activities that give employees the chance to learn through apprenticeship and increased involvement in a community of practice.

Workplaces and educational institutions, according to Billet (2020) reports that between Grades 3 and 5, with Grade 4 having the highest occurrence, four out of every five school dropouts occur. Approximately 16% of these dropouts improved their literacy skills by two to five grades, according to a literacy test, while the remaining 84% saw their knowledge and skills deteriorate by 2nd-grade levels.

If a student drops out of school in the third grade or lower, retrogression is more likely. In contrast to being treated as a distinct notion, literacy is intertwined with people's daily lives and communities, according to Doronila's (2020) study.

Recognition of Prior Learning, which manifests in the business, community, and daily life, was inspired by the idea of informal learning (RPL). PLAR stands for "a cluster of ways and procedures for defining, recognizing, and demonstrating the whole spectrum of accomplishments are fundamentally different forms of social activities in which involvement helps learning."

It is essential for workers' daily activities and capacities to learn on the job, especially in the workplace. Using these procedures, previous experience and unofficial learning (whether accredited or not) can be used to satisfy the requirements of vocational colleges and higher education institutions.

The main goal of the ALS program is to give students opportunities who, for a variety of reasons, cannot benefit from traditional schooling. A more focused objective is to develop a learning environment that motivates students to continue their studies as opposed to quitting or re-enrolling dropouts. People with ALS may benefit from adaptability, strict behavioral support, self-control, and emotional support.



To help them meet institutional and national graduation requirements, students will get extensive training and remediation. It offers kids a special way to achieve the same high academic standards as the rest. A particular theme or cutting-edge teaching techniques may be used to determine whether students are accepted into ALS programs or institutions. Programs that enable students who have been suspended or expelled from school for a lengthy period of time to receive a diploma may also be a part of ALS. Certain Alternative Education programs and institutions may place a strong emphasis on behavior control through positive behavioral intervention. To treat behavior as a subject of instruction and lessen the students' loss of educational opportunities, long-term exclusions from school may be transferred to the ALS program.

Depending on the nature of the program, its objectives, and the requirements of the kids it serves, ALS may provide services to them for a considerable amount of time. It might be applied to keep kids in school until they graduate or reassign them to a typical middle or high school.

ALS seeks to expand educational possibilities for Filipino individuals with a variety of interests, capacities, socioeconomic origins, and positions and address the needs of underprivileged populations. The approach drastically reduces the time it takes to finish high school and the costs associated with it. It gives hope to those who are less fortunate, but it also provides possibilities for Out-of-School Learning. The program also provides instructional managers and coordinators training and assists learners with their accreditation and equivalency (A&E) reviews.

According to Paso (2020), the scope and aim of ALS are currently in flux. She also stated that attempting to depict the current state of ALS in the United States generates mixed results. Over time, individual groups or social organizations have developed pockets of practices.

It satisfied the program's learning objectives and was receptive to learning resources and skills to be taught at all levels of learning comparable to the ALS program in Kalapa, Nueva Vizcaya, because of its good facilities.

According to a recent study, ALS is so successful because it emphasizes both academic accomplishment and the development of life skills literacy. According to another study, considerable work remains to be done to ensure that Alternative Learning System programs efficiently develop clientele's livelihood and life-long skills that they may utilize to better their quality of life. (Begawan, 2020). The goal of livelihood programs is to improve the learner's socioeconomic status by focusing on the learner's needs and interests. Those who have chosen to strengthen their moral and social values to survive have made community development possible.

On the other hand, according to Lai (2020), mobile teachers can employ open-ended activities, real-world or "genuine" problem situations and poorly structured problems that demand students to do more than recall or restate previously taught information to foster learners' critical thinking.

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REHABILITATION OF CERVICOGENIC HEADACHE OCCURRING DUE TO ALTERED BIOMECHANICS AT THE CERVICAL AND THORACIC REGION

Esha Sharma¹, Prof. (Dr.) Jasmine Anandabai², Dr. Shikha Singh³

¹Jyotirao Phule Subharti College of Physiotherapy, Faculty of Physiotherapy and Allied Health Sciences, Swami Vivekananda Subharti University, Uttar Pradesh, India

²Jyotirao Phule Subharti College of Physiotherapy, Faculty of Physiotherapy and Allied Health Sciences, Swami Vivekananda Subharti University, Uttar Pradesh, India

³Jyotirao Phule Subharti College of Physiotherapy, Faculty of Physiotherapy and Allied Health Sciences, Swami Vivekananda Subharti University, Uttar Pradesh, India

ABSTRACT

A Cervicogenic headache (CGH) is a type of secondary headache that emerges from a nociceptive source like bony structures, tight fascia, or ligaments present in the atlanto-occipital and cervical joints. The generated pain is non-throbbing in nature and is usually perceived unilaterally in one or more than one region of the head and/or the face. The pain usually starts in the neck and the occiput region, which can radiate to other regions of the head, such as the forehead, orbital region, temples, and vertex, as stated in the early 1980s by a Norwegian neurologist named Ottar Sjaastad. The study aims to delay the occurrence of Cervicogenic headaches in an individual by correcting the biomechanics of the cervical joints. The International Headache Society (IHS) and the Cervicogenic Headache International Society Group's suggested Diagnostic Criteria for Cervicogenic Headaches are used as standard references for this publication (CHISG); also cervical flexion rotation tests are taken as standard references for this journal. Outcome measurements included; Numerical rating pain scale (pain intensity), headache frequency, and the Neck Disability Index (NDI) questionnaire. Postural correction plays an important role in the physiotherapy treatment of Cervicogenic headaches.

KEYWORDS: Upper cross syndrome, Transgeminocervical nucleus, Breathing retraining, Postural correction

1. INTRODUCTION

In the early 1980s, Ottar Sjaastad identified this headache, as arising from a nociceptive source present in the cervical region. Then in 1988, a society for Cervicogenic Headache was formed named the cervicogenic headache International Study Group (CHISG).⁽¹⁾

In Cervicogenic headache, the prevalence for patients with chronic headache is estimated to be 15-20% and for the general population, it is ought to range from 0.4% to 2.5%.⁽²⁾

Cervicogenic headache is a distinct, chronic, and a type of secondary headache categorized by the international headache society (HIS) in 2004.⁽²⁾

Cervicogenic headache affects patients with a mean age of 42.9 years and males and females get affected with a ratio of 0.97 (F/M ratio) which shows that both have about the same chances of getting affected. (10,14) This headache is mostly found in people with age over 40 years old. The pain is referred from the upper 3 cervical spines via the upper three cervical nerves and afferent from the Transgeminial nerve in the Transgeminocervical nucleus (Bartsch and Goadsby 2003a, Bogduk 2004) and this is the only reason why many times it mimics the pain generated at the time of migraine.⁽³⁾ The most prevailing differential diagnosis consists of migraine and tension-type headaches.^(3,4) Pain is generated via the upper three cervical vertebrae due to the altered biomechanics of cervical vertebrae because of cervical Spondylosis or poor posture leading to exaggerated lordotic curvature of the cervical spine and changing cervical vertebrae angulation with each other and these changes are associated with the tight upper trapezius, sternocleidomastoid muscle and levator scapulae with the presence of trigger points in them.



Initially, pain may show recurrent nature. It can then spread to one side (unilateral) of the patient's face and/or head with or without the involvement of one side of the eye. It then becomes almost continuous. ⁽⁵⁾⁽⁶⁾

There is no blurring of vision or dizziness with this type of headache but an aura will be experienced by the patient before having an actual cervicogenic headache. The intensity of pain is aggravated in cervicogenic headaches when the neck stays in the same position for a prolonged period.

The intensity of pain in the initial days will be low but with time the intensity of the pain will increase to become worse and can disturb the sleep pattern as well if left untreated.

2. CASE STUDY

A 47-year-old woman who works as a housewife started having moderate-intensity headaches 2 years back with upper back pain over time while denying any trauma, she acknowledged leading a sedentary life. The patient went to meet the physician regarding the same and he started his detailed clinical examination. The non-throbbing pain usually started from her cervical region with stiffness all around her neck with no associated symptoms like nausea, vomiting, blurred vision, or dizziness. Vital signs showed normal blood pressure, and heart rate with a normal temperature and then after some time, the pain started leading up to the occipital region of the head. Stress played an important role in aggravating the intensity of headaches. Despite doing a thorough clinical investigation that included a cardiac and neurological examination doctor was unable to pinpoint the exact reason for the patient's complaints so, along with the required physical examination, an X-ray was done to rule out any other potential causes of the deep, dull, non-throbbing pain in the head. However, other than functionally incorrect posture modifications resulting from her daily habits, no structural impairment was found. After some time, non-throbbing pain got deep and severe, and intermittent, lasting hours to days, and started referring from the neck to the occiput region followed by the one-side temporal region of the head. Later on, one eye also started getting affected by the pain i.e., the left side of the head got involved accompanied by the left eye. So, the patient went to see the ophthalmologist however there was no change in her eyesight, and no other red flag related to the neurological symptom was identified. The doctor suggested the patient do physiotherapy for the same. Then the patient came to see the physiotherapist again when the headache got more frequent with the severe intensity of pain because of which the patient's sleep was also getting affected.

3. ASSESSMENT AND TREATMENT

The patient approached the physiotherapist, during initial Sagittal and frontal plane postural analysis, it was observed that the patient had a slouched posture with rounded shoulders and was seen to have an asymmetry in the shoulder level when observed in the frontal plane. i.e., the dominant shoulder (right shoulder) was lowered in comparison to the other one and there was an apical breathing pattern with limited involvement of diaphragmatic muscles, forward head and neck protrusion, hyperlordosis at cervical and hyperkyphosis at the thoracic region and the scapulae have a modest winging.

Table 1. Demographic Data of the Patient with scale and tests performed in the first week

Characteristic	Value
Age	49
Gender	Female
BMI	28
NDI	32
NRPS	6
CFR Test	The patient had a lot of pain while performing this test and the rotational range of motion between C1-C2 came to be less than 45
DNFE Test	The Patient was not able to keep her occiput 2.5cm from the table for 30 seconds

(BMI: Body mass index; NDI: Neck disability index; NRPS; Numerical rating pain scale; CFRT: Cervical flexion rotation test; DNFE: Deep neck flexors endurance test)

On the dorsal side, the pectoralis major and minor were crossed with tightness in the upper trapezius and levator scapula, and the deep cervical flexor weakness crossed ventrally with middle and lower trapezius weakness also. There were some trigger points with grade 2 tenderness in the upper trapezius muscle. This muscular imbalance creates joint dysfunction, mainly at the atlanto-occipital joint, lower cervical spine joints (C4-5), glenohumeral joint, scapulothoracic articulation, and a few segments of the thoracic spine (T4-5).

Flexibility and muscle strength were also evaluated. Examination revealed that the antagonist muscle group's strength and flexibility were out of balance, which is a sign of "upper crossed syndrome."

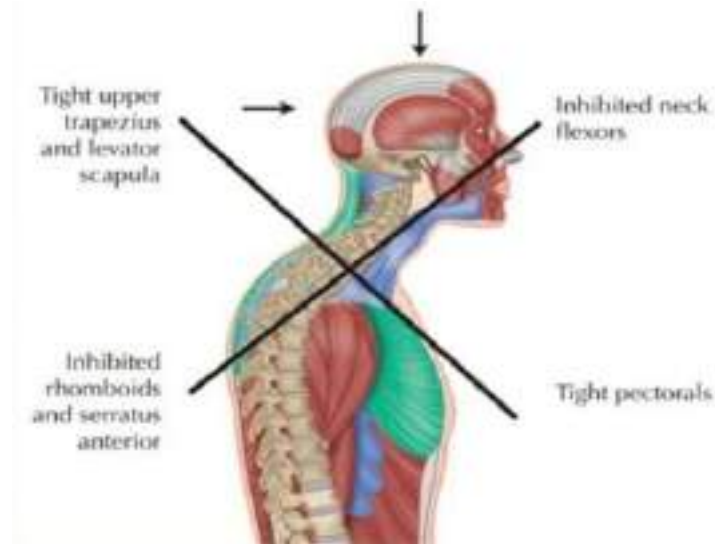


Figure 1: Upper crossed syndrome ⁽⁷⁾

In the initial diagnosis of cervicogenic headache, a cervical flexion rotation test is performed which came to be positive. ⁽⁸⁾ The International Headache Society (IHS) and the Cervicogenic Headache International Society Group's suggested Diagnostic Criteria for Cervicogenic Headaches are used as standard references for this publication (CHISG). ⁽⁹⁾

	International Headache Study Group ⁽⁸⁾	International Headache Society ⁽⁹⁾
Symptoms	<ul style="list-style-type: none"> • Unilateral headache without side shift • Ipsilateral neck, shoulder and arm pain of a rather vague, non-radicular nature • Pain episodes of varying duration or fluctuating, continuous pain • Moderate, non-excruciating pain, usually of a non-throbbing nature • Pain starting in the neck, eventually spreading to head, where the maximum pain is often located • Pain triggered by neck movement and/or sustained awkward position • Sustained neck trauma prior to the onset • Autonomic symptoms and signs (e.g. nausea, vomiting, dizziness, photo- and phonophobia, blurred vision) 	A. Any headache fulfilling criterion C
Physical examination	<ul style="list-style-type: none"> • Reduced cervical spine range of motion • Symptoms on palpation of the cranium or neck • Anaesthetic blockades abolish the pain transiently 	B. Clinical, laboratory and/or imaging evidence of a neck disorder, known to be able to cause headache C. Evidence of causation demonstrated by at least two of the following: <ol style="list-style-type: none"> 1. Headache has developed in temporal relation to the onset of the neck disorder 2. Headache has significantly improved in parallel with improvement in the neck disorder 3. Cervical range of motion is reduced and headache made worse by provocative manoeuvres 4. Headache is abolished following cervical diagnostic anaesthetic blockade
Other		D. Not better accounted for by another headache diagnosis

Figure 2: The Diagnostic criterion for Cervicogenic headaches proposed by The International Headache Society and Cervicogenic Headache International Society Group ⁽⁹⁾



Sessions after the initial evaluation were more action-oriented and focused more on the conventional structural biomechanical approach with a comprehensive corrective and rehabilitative exercise program for the upper-crossed syndrome. ⁽¹⁰⁾

Three steps make up the design of the chosen exercises: Initial, improvement, and maintenance phases, including a 12-15-minute warm-up and a 10-minute cool-down after each exercise session.

Table 2: Conventional structural biomechanical approach exercises in the initial Phase

For the first two weeks (Initial Phase)
Headache Sustained Natural Apophyseal Glide with Headache (at the time of cervicogenic headache)
Functional release therapy for the upper Trapezius muscle
Static stretching for the levator scapulae muscle
Brugger’s relief position

Table 3: Corrective exercises in the Improvement Phase

For the next three weeks (Improvement Phase)
Headache Sustained Natural Apophyseal Glide with Headache (at the time of cervicogenic headache)
Low load Endurance activities To train cervicoscapular muscles
Functional Release therapy and static stretching for upper Trapezius muscle and levator scapulae
Abdominal breathing exercise in the “beach pose posture”
Unilateral rotation SNAGs at C ₁

Table 4: Corrective exercises in the Improvement Phase

For the next three weeks (Improvement Phase)
Headache Sustained Natural Apophyseal Glide with Headache (at the time of cervicogenic headache)
Blackburn exercises
Progressive abdominal breathing
Suboccipital soft tissue release

Table 5: Rehabilitative exercises in Maintenance Phase

For the next two weeks (Maintenance Phase)
Headache Sustained Natural Apophyseal Glide with Headache (at the time of cervicogenic headache)
Blackburn exercises
Suboccipital soft tissue release

The therapist started doing the treatment for the first week by stretching the tightened and shortened muscles to correct the altered length-tension relationship and for the same few manual techniques was applied to the patient mainly functional release therapy for the upper trapezius followed by static stretching of the levator scapula muscle, and central SNAG at the C1-C2 vertebral joint. Furthermore, to correct the slouched posture and to reduce the stress and tightness generated by the bad posture on the neck muscles “Brugger’s relief position – in sitting” was performed 4-5 times per day for postural improvement. It helps in reducing strain on the back and cervical region; It encourages proper sitting posture and relaxed breathing. ^(11,12)

Headache Sustained Natural Apophyseal Glide with Headache(at the time of cervicogenic headache) is given from day 1 until week 11, it aids in resolving the positioning issue at the C2 level and may relieve the pressure that might be placed on the greater occipital nerve due to a tight fascia.



For the next three weeks, the patient was asked to stop doing apical breathing and was made to do abdominal breathing (diaphragmatic breathing) in the "beach pose posture". This assisted her in maintaining a calm upper chest and facilitated the usage of the diaphragm muscle responsible for abdominal breathing. She was told to keep doing it every day at home for 15 minutes thrice a day to get a reducing effect on stress hormones. This abdominal breathing pattern is also used as a relaxation technique. Breathing exercises work to relieve stress by lowering the levels of serum cortisol that are released by the hypothalamus when people are under stress. It also has a direct impact on sympathetic activity and lowers the release of the hormone epinephrine from the adrenaline hormone. This allows ascendancy of the parasympathetic tone which results in an increased sense of lightness and blissfulness, decreased anxiety, and an increased threshold for stress perception. ^{(13) (14)}

This should be followed by low-load endurance activities for cervicospinal muscles and the patient was asked to perform, 3 sets of 20 repetitions of each exercise daily to increase endurance and strength of the scapular muscles.

Consequently, it was self-reported by the patient that the frequency of cervicogenic headaches has been reduced but the intensity was not decreased much so for that, Unilateral rotation SNAGs at C₁ were performed at the time of headache to rectify the pathomechanics of the joints and further stimulate the proprioceptors and the mechanoreceptors in and around the lower cervical joints to ease the pain. Additionally, it aids in expanding joint play, which increases the joint range of motion. ⁽¹⁵⁾

In the 6th to 8th week, the suboccipital soft tissue release technique is performed on the patient with the addition of Blackburn exercises. To increase endurance and strength of the scapular muscles, the patient was asked to perform 3 sets of 20 repetitions of each of these exercises thrice a day: Prone Horizontal Abduction (Neutral), Prone Horizontal Abduction (Full External rotation), Prone Horizontal Scaption (Neutral), Prone Horizontal Scaption (Full External rotation), Prone Horizontal External rotation. She was instructed to take a breather at the end of each exhalation to slow down her breathing, and because of her success with diaphragmatic breathing in the supine lying position, it progressed to sitting.

For the next two weeks, in Maintenance Phase rehabilitative exercise protocol, was made to ensure a full recovery. The patient was asked to perform 3 sets of 20 repetitions of each Blackburn exercise daily to increase endurance and strength of the scapular muscles. These exercises are important to maintain the scapula in a position, by maintaining the strength of the muscles around the scapula as in patients with rounded shoulders and hyperkyphosis it is seen that the position of the scapula gets altered.

The upper trapezius (UT) muscle demonstrated a considerable decrease in muscular hardness and an increase in pressure pain threshold. This is followed by suboccipital relaxation as the upper trapezius muscle gets originated from the superior nuchal line and external occipital protuberance and subsequently crosses across the suboccipital muscle. The suboccipital release technique has a direct impact on the upper trapezius muscle once it has been applied. As a result, the hardness of the muscles is reduced. ⁽¹⁶⁾ According to a study, the sarcomere's vertical width gets narrowed and elongates when ischemia compression is given to the myofascial trigger points, whereas the myofascial trigger point's area decreases following ischemic compression intervention. ⁽¹⁷⁾

4. RESULT

Changes in the physical examination:

Neck disability index (NDI)

In the 11th week, the neck disability index score was 21 out of 50 after intervention i.e., mild disability

Numerical rating pain scale (NRPS)

In the 11th week, the score of the Numerical rating pain scale was 3 out of 10, which showed very less

Cervical flexion rotation test (CFRT)

After the 10th week, the patient had slight pain while doing a rotation with a passively flexed neck but the rotational range of motion between C1-C2 came to be 45

Deep neck flexors endurance test (DNFET)

The Patient was able to keep her occiput 2.5cm from the table for 30 seconds

Also, the patient provided positive feedback while rechecking the upper trapezius trigger points' intensity.

It was self-reported by the patient that the frequency of cervicogenic headaches has been reduced.



5. DISCUSSION

Effectiveness of Test Measures

1. Neck disability index (NDI)

The efficacy and reliability (for the neck disability questionnaire) are fair to moderate regarding neck pain due to musculoskeletal issues or cervical radiculopathy.

It has been used in the clinical setting as well as in research settings related to neck disability or dysfunctional issues.

2. Cervical flexion rotation test (CFRT)

This clinical exam is allegedly biased to evaluate impairment in the C1-C2 motion segment. In the upper cervical segments, rotation is coupled with contralateral lateral flexion and vice versa. The alar ligaments limit rotation at the atlantoaxial joints. Approximately 50% - 58% of the cervical rotation occurs at the atlantoaxial joint. ⁽¹⁸⁾

This clinical evaluation has a high sensitivity and specificity to identify individuals with neck pain and headaches who also have upper cervical joint dysfunction.

6. CONCLUSION

Although Cervicogenic headache is mostly undiagnosed or misdiagnosed, by going through the International Headache Society Diagnostic criteria, an individual can diagnose this headache as distinct. Her cervicogenic headache was caused by an altered length-tension relationship of the scapular muscles, excessive postural muscle usage without sufficient relaxation, and ignorance of his discomfort in the thoracic and cervical regions. Physiotherapy was taken as a primary treatment for the concerned patient. Therapeutic exercises with postural correction in a sitting position played a crucial role in maintaining body posture and strengthening weak muscles and relaxing the tensed ones. Mulligan techniques (unilateral SNAG in the patient's lower cervical region and central SNAG at C1 and C2 joints) with mobilization were performed. Cranial-base release technique helped relieve tensed soft tissues around the joint and relieve stressed fascia at the atlanto-occipital region. Whereas, relaxation technique (diaphragmatic breathing) played an important role in relieving stress from the body's respiratory muscles and helped reduce the overall stress response generated by the body. Although consciously breathing via the diaphragm ultimately decreased the frequency of the headache, the intensity of the pain stayed the same. Distraction at the atlanto-occipital joint with lateral flexion, unilateral SNAG, and suboccipital soft tissue release technique showed an instant decrease in pain intensity in the orbital region when applied at the time of the cervicogenic headache. While postural impairment is frequent in those who lead sedentary lifestyles, it would be beneficial for future studies to concentrate on cervicogenic headache related to the upper crossed syndrome.

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MECHANISMS FOR FORMING CREATIVE THE POTENTIAL OF THE FUTURE TEACHER IN THE CONDITIONS OF UNIVERSITY EDUCATION

Ibragimova Feruza Kholboevna

*Doctoral Student of the Uzbek Research Institute of Pedagogical Sciences named after T.N. Kori Niyazi,
Specialty 13.00.01 - Theory of Pedagogy. History of Pedagogical Teachings, Tashkent city, Republic of Uzbekistan.*

ANNOTATION

The article presents some conceptual issues of the formation of the creative potential of the future teacher. The author analyzed that the readiness of the individual to work with the contingent depends on the formation of creative pedagogical potential in higher education, which consists of several components, such as motivational-valuable, cognitive and operational. The author came to the conclusion that the process of development of personality creativity can be controlled, since there is a relationship between creativity and personality development. It is indicated that one of the sensitive periods for the formation of the creative potential of the individual is the time interval between 18 and 25 years, when a person receives a professional education. A model of the structural components of the creative potential of the future teacher is presented. The multi-level training of teachers in the professional development of the individual, as well as the stages of creative actualization, are analyzed.

KEY WORDS: *creative pedagogical potential, formation, component, actualization, higher education.*

The level of development of modern psychological and pedagogical science, social prerequisites and the modern educational paradigm stimulate the emergence of creative innovative ideas. Creative approach is an indispensable condition of the pedagogical process, an objective professional need for the teacher's activity, in connection with which there is a need to prepare teachers in the system of university and postgraduate education for creative pedagogical activity, the dominant of which is the ability to work in the conditions of choosing a pedagogical position, technology, textbooks, content and forms of education.

Creativity is a necessary component of professional development and one of the conditions for self-realization of a teacher of any profile, therefore, the preparation of a creative teacher is one of the most important needs of education, the development of the creative potential of a young person, the historical change in teaching methods and techniques, the search for innovative structural types of lessons are also relevant. and modeling other forms of conducting classes.

The concept of "creativity" (from Latin creatio - "creation") entered the Russian vocabulary in the 70s of the last century and means the ability of a person to find a solution in non-standard situations, to create something new, original, previously unknown.

The main sign of a creative personality is its creative qualities, that is, the individual psychological characteristics of a person that meet the requirements of creative activity and are a condition for its successful implementation [7].

The teacher becomes creatively shaped by mastering the categories at the motivational, cognitive and operational levels while creating optimal conditions for inclusion in various activities of the future specialist.

The focus of the educational process on the formation of the creative potential of future teachers needs to change the organization of the entire learning process.

Recently, many studies have substantiated the need for multilevel training of teachers (O.V. Akimova, G.M. Solomina, A.S. Frants, I.G. Shendrik, L. Klarika, etc.) [1, 12].

It is proved that a teacher in his professional development goes through a number of levels:

1. The level of pedagogical skill, which is achieved after graduation from the university and improved at school, is based on sufficient theoretical and practical training, forming the basis of a teacher's professionalism.

2. The level of pedagogical skill, that is, the level of pedagogical skill brought to the highest degree, which reflects the high level of methods and techniques for using psychological and pedagogical theory in practice, which ensures the high efficiency of the educational process.

3. The level of pedagogical creativity, which is characterized by the inclusion in the teaching and educational activities of certain methodological modifications, rationalization of teaching methods and methods.



4. The level of pedagogical innovation is the highest level of professional activity of a teacher who organically puts forward and implements new, progressive ideas, principles and techniques in the learning process, which significantly improves its quality.

The system-forming factor in the formation of the creative pedagogical potential of a student-teacher becomes a personality in a common creative interaction. Co-creative interaction is a condition for mastering the values of creative pedagogical activity.

Based on the research of psychologists J. Gilford, E.A. Maslow, L.S. Nikolaeva, T.N. Chumakova, L.I. Antsyferova, D.B. Bogoyavlenskaya and others [2; four; 8], one can consider creativity as a dynamic integrative set of personality traits that determine its readiness for creativity in any sphere of human activity. In other words, these are the creative abilities of a person, which can be expressed in thinking, feelings and actions, the ability to generate original ideas. Creativity is a necessary condition for the self-realization of a person. In this regard, it is creative pedagogy that best meets the nature of creativity. Its tasks are the development of a complex of creative personality traits, the acquisition of experience in creative activity based on self-knowledge and self-development. Creative pedagogy is based on problematic, cognitive-heuristic, creative learning technologies [9].

1. Formation of the creative abilities of the future teacher

In our opinion, the creative pedagogical potential must be approached from the position of formation, since at the age of 17-18 young people can have the "rudiments" of creativity (creativity), professional and pedagogical dedication, the need for professional self-actualization, so one of the tasks of higher education is to assist students in the self-organization of these rudiments into a structural, organized form. At this age, the personality traits that are part of the structure of the creative pedagogical potential are unstable, plastic, therefore, they are more easily amenable to external influence, they are much easier to change than in the stage of maturity. The external influences and actions to which a person succumbs in order to form a creative pedagogical potential at the initial stage are stored deeper than the influences experienced later - in the stage of maturity.

In the ontogenesis of personality, sensitive periods are distinguished for the development of creativity. According to V. Druzhinin, these are: an implicit period (3-5 years), when the development of "primary creativity" takes place as a general creative ability, non-specialized in relation to a certain area of human activity; adolescence (11-15 years) and adolescence (15-20 years), when specialized abilities for creativity develop, associated with a certain professional activity of the individual [5; 6].

An important role in the preparation of a future teacher, of course, belongs to active teaching methods - the most effective way to organize such interaction is creative learning, which should be a new type of both educational interaction and pedagogical communication. Let's try to determine the pedagogical conditions, the implementation of which can positively affect the phenomenon we are studying - the formation of the creative pedagogical potential of the future teacher in the conditions of university education. It should be noted that the result of this training is the personal acquisition by each student of the appropriate readiness to work with children: motivational and value (orientations, attitudes and personal goals), cognitive (knowledge, representation), operational (skills and skills).

2. Structural components of the creative potential of the future teacher

The motivational-value component contains the whole variety of goals and tasks of pedagogical activity: from the main task (the formation of a comprehensively and harmoniously developed personality) to specific tasks for the formation of individual qualities or their elements. This component is implemented subject to the appropriate interaction between the teacher and the student. That is, in order to form a motivational-value component in students, it is necessary to fill the emotional-value sphere of the educational process with methods of educational activity, forms of communication that would make it possible to form students' motivation for professional activity, interest in it, a positive personal attitude to pedagogical work and the desire to accumulate relevant teaching experience.

The next component of the readiness of future teachers for creative professional activity is the cognitive component, which reflects the essence of what is realized in the process of achieving both the general goal of study and each task in particular, and contributes to the in-depth development of students' professional interests and skills. Therefore, in order to form a creative cognitive component in students, it is necessary to select and structure the educational material in such a way that it contains the necessary information that would enable students to develop the abilities of a future creative teacher based on the qualitatively assimilated knowledge and formed ideas.

The next component of readiness is the activity-operational one. Its structural elements are the corresponding skills and abilities. This is the ability to apply standard and non-standard methods in one's professional activity, to consistently and effectively introduce all elements of technology, in particular design-constructive, communicative and didactic-organizational.

The activity-operational component of future teachers provides for the appropriate organization of the educational process, in which the student should occupy a central place in terms of his active activity, since the organization of study reflects the interaction of those who study and teachers, their cooperation, organization and management of the learning process, focused on the planned result (achievement of the goal and objectives of training). Taking this structure of activity as a basis, the main components of the formation of the creative potential of the future teacher were determined, namely: motivational-targeted, subjective, objective, technological and productive. Each of these components should be formed at three levels: motivational, cognitive and operational. It should be noted that the formation of an effective component is possible only if all the previous components are formed at three levels (Table 1).



Table 1
Structural components of the creative potential of the future teacher

STRUCTURAL COMPONENTS OF CREATIVE POTENTIAL		
I. Motivational-target component		
Motivational level	Cognitive level	Operational level
Awareness and acceptance of the goal and task of pedagogical activity at the motivational, cognitive and operational levels		
II. Subject Component		
Motivational level	Cognitive level	Operational level
A complex of personal qualities that ensures the implementation of pedagogical activity at the motivational, cognitive and operational levels		
III. Entity Component		
Motivational level	Cognitive level	Operational level
Mastering knowledge about the object of pedagogical activity at the motivational, cognitive and operational levels		
IV. Technology Component		
Motivational level	Cognitive level	Operational level
Mastering the methods and methods of pedagogical activity at the motivational, cognitive and operational levels		
V. Effective component		
Motivational level	Cognitive level	Operational level
Self-assessment of pedagogical activity at the motivational, cognitive and operational levels		

This model assumes that the purpose of the activity is an ideal image embodied in the product, which is the result of the transformation of the object of activity. It is important that it be personally meaningful. Accordingly, the goal of the activity should turn from extraverted into internally attractive and personally conscious, understandable and necessary for the student, who knows how to transform the goal set from the outside into his own goal and task of the activity that is being performed.

The subject component provides for the student's awareness of himself as a subject of activity, diagnostics of his own capabilities in its implementation, knowledge of the qualities of his own personality that ensure the performance of the activity, active inclusion, the creation of an individual trajectory of knowledge, which gives it originality and originality.

The future teacher, who has a need and desire, is actively involved in the activity. A student who is not self-confident - complexes, avoids, acts according to the model. The subjective component provides for reliance on the basic needs of a person: in knowledge, in communication, creativity, study, work, recognition and security, pleasure, awareness of one's activity, and expansion of the worldview [8]. And the more needs in the learning process a student-teacher can fulfill by engaging in activities, the more he self-realizes.

The object component provides for the definition of the object of activity, a positive attitude towards it, interest in this object and the need to work with it, knowledge of its specifics, and the ability to use it in one's life.

The technological component is associated with the possession of means and methods of activity. Each student should choose for himself those teaching aids that are most convenient, accessible, attractive, rational. He studies their features and, taking into account his own capabilities and needs, applies, producing his own technology.

The effective component provides for the manifestation by the individual of the level of mastery of competencies, allows you to consciously evaluate the results of your activities and the level of your own development. Consequently, the result of the formation of creative competence is a persistent need to engage in professional activities, interest in it and a desire to constantly improve oneself, deep meaningful knowledge of the specifics of this activity, as well as its skillful implementation.

Thus, when creating optimal conditions for inclusion in various types of activities, the future specialist becomes creatively formed due to mastering the relevant categories at the motivational, cognitive and operational levels [13,14].

Therefore, the focus of the educational process on the formation of the creative potential of future teachers needs, as already noted, a corresponding change in the organization of the learning process.

CONCLUSION

The training of a future teacher in the system of university education should be based on such components of creative potential as motivational-targeted, subjective, object, technological, productive, which contribute to the development of the individual in a creative direction, which in turn determines the potential of the future teacher in higher education .

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CONCEPT AND STRUCTURE OF WORLD VIEW IN MODERN SOCIETY

Siddikov Bakhtiyor Saidkulovich

Candidate of Pedagogical Sciences, Associate Professor of Fergana State University

ABSTRACT

The growing pace of changes in all spheres of life of modern society cannot but influence the worldview of a person. This impact is so intense and dynamic that constant intense intellectual work is required to comprehend the processes taking place in the system of views on the world and the place of man in it. First of all, it is necessary to consider the worldview of modern man from the point of view of existence, highlighting its key features, and secondly, from the point of view of what should be, that is, what it should be to ensure the sustainable development of mankind. The solution of the latter problem is extremely important for numerous institutions that ensure the process of formation of a worldview. The article describes the concept of worldview and shows its structural elements. A critical analysis of existing points of view is given.

KEY WORDS: *worldview, values, beliefs, structure, elements and components.*

The concept of worldview in the modern humanities is getting a rebirth - experts from various fields of knowledge are beginning to be actively interested in it. This interest is due to the fact that the worldview begins to be interpreted precisely as a special phenomenon, and not just a concept, the scope of which is more or less conventional [7]. We propose to combine numerous approaches to the phenomenon of worldview into two directions - anthropological (this includes psychological and linguistic approaches) and pedagogical (philosophical and theological). Each direction interprets the worldview in its characteristic way, and this allows us to find out the main characteristics of the worldview as a phenomenon.

Usually, a worldview is considered as a set of views on the objective world and a person's place in it, on a person's attitude to the reality around him and to himself, as well as beliefs, ideals, principles of cognition and activity, value orientations that have developed on the basis of these views. Man always exists only in a certain relation to other people, in a certain relation to nature, to the world in general. This attitude always comes down to the question of the world around us and one's place in this world [1].

The concept of "worldview" first appeared in German philosophical literature of the late XVIII - early XIX centuries. Most researchers point to the work of the outstanding German philosopher, theologian and preacher Friedrich Daniel Schleiermacher "Speech on Religion" (1799), as the first source in which the concept of "worldview" appeared. The concept of "worldview" is associated with activities characteristic of the worldview. F. Schleiermacher considers it as a conceivable combination of knowledge, experience and ideas about the world and human existence, based on thinking, feeling, will and human action. In other words, this concept is introduced in contrast to the already existing concept of "picture of the world" (Weltbild), which was considered as a passive contemplative perception of the world. It should be noted that an earlier attempt to oppose the concept of "worldview" with the passive-contemplative weltbild was made in 1792 by Johann Fichte in his "Experience in the Criticism of All Revelation". Thus, the worldview of Friedrich Schleiermacher was considered as a creative awareness of the subject of life, the desire for a holistic understanding of the outside world and oneself in a single system of ideas and views [2,3].

The natural reaction of most people to the rapidly increasing flow of information is a conscious or unconscious refusal to perceive it: it is psychologically difficult for each individual to realize the fact that every day he lags more and more behind the dynamically developing world [8]. The consequence of this is the emergence of a paradox in the worldview of modern man: the greater the amount of information and the wider the possibilities for obtaining it, the more people consciously refuse it, creating their own, extremely primitive and deformed picture of the world. In the conditions of the growing information flow, with which the consciousness of a statistical person is unable to cope, a wide variety of reactions are possible, associated with an attempt to isolate oneself from the diversity of the world. What they have in common is an extreme emphasis on some aspect of life. A wide range of such accentuations can be distinguished:

- Religious;
- Esoteric and mystical;
- Pseudoscientific (based on one of the "theories" created and broadcast in recent years);



- A healthy lifestyle (associated with a sports lifestyle, with various theories of healthy nutrition, specific methods of maintaining and strengthening health);
- entertaining (primarily gaming);
- Demonstrational (associated with the desire to broadcast photo, video and text information about one's life on social networks)
- Consumer (the main value of which is the process of consumption of material goods);
- Household (emphasizing the performance of household functions: cooking, housekeeping).

To understand any phenomenon, you need to decompose it into components. The complexity of such an analysis of the worldview is due to the fact that, despite the common features for all people, it always has its own shade. In order to take into account such complexity and universality, it is customary to distinguish not only the carriers and components of the worldview, but also its levels, elements and types.

The SUBJECT (CARRIER) of a worldview is an individual, social or professional groups, ethno-national or religious communities, as well as society as a whole. The worldview of the individual is formed under the influence of the spontaneous or deliberate worldview of society and those social communities in which the individual is included.

At the same time, the worldview is always distinguished by personal originality, in which the specific life experience of each person finds its expression.

In fact, the worldview is the core of social and individual consciousness. The development of a worldview is a significant indicator of the maturity not only of an individual, but also of a certain social group. In its essence, the worldview is a socio-historical phenomenon that arose along with the emergence of human society. The source of the origin of this or that worldview is the conditions of the material life of society, social being. Outside of society, people will not be able to develop their own worldview, they simply will not have the "building" material for this.

COMPONENTS OF WORLD VIEW

According to Professor Alexei Radugin, four main components are traditionally distinguished in the construction of a worldview:

- The cognitive component includes, first of all, knowledge obtained in various ways - everyday, professional, scientific. This is a concrete-scientific and universal picture of the world, which in a systematized and generalized form includes individual and social knowledge.
- The value-normative component is based on various values, beliefs, ideals. It also includes the norms and beliefs that should govern social and interpersonal relationships. Values usually denote the properties of any phenomenon and object to satisfy the desires and needs of people. The value system includes ideas about the meaning of life, good and evil, happiness and unhappiness. There is a certain hierarchy of values. The consequence of a stable, repetitive assessment of a person's relationship with other people are social norms, which are divided into moral, religious, legal. Compared to values, they have more prohibitive properties.
- The emotional-volitional component is the emotional coloring of values, beliefs, beliefs, as well as the psychological attitude to the readiness to act in accordance with them.
- The practical component is the real willingness of a person to act in a certain way in specific circumstances. Despite the fact that all people have these components, they are consistent each time depending on the individual, which gives rise to special, unique individual traits.

ELEMENTS OF WORLD VIEW

As part of the worldview, it is customary to single out such qualitatively different elements, such as beliefs and knowledge. Knowledge, in fact, is the content components of the worldview system (which means it stretches the thread to such concepts as "scientific picture of the world", if we are talking about a scientific or philosophical worldview, and the concept of "life experience", if we are talking about everyday, worldview). Beliefs also imply a value-colored and emotional attitude to knowledge, and to reality itself.

The life of people in society has a historical character. Either slowly or rapidly, all its components change intensively over time: technological tools and the nature of work, the relationship between people and the people themselves, their feelings, thoughts, interests. People's views of the world are also changing, fixing and refracting changes in their social life. In the worldview of a particular time, its general intellectual, psychological mood, the "spirit" of the era, country, and certain social forces find expression. This allows (on the scale of history) sometimes conditionally speaking about the worldview in a summary, impersonal form. However, in reality, beliefs, norms of life, ideals are formed in the consciousness, experience of specific people. This means that in addition to the typical views that determine the life of the whole society, the worldview of each era lives, acts in a variety of group and individual variants. And yet, in the diversity of worldviews, there is a fairly stable set of basic "components". It is clear that we are not talking about their mechanical connection. The worldview is integral: the connection of components, their "alloy" is critically important in it. And, as in an alloy, different combinations of elements, their proportions give different results, so something similar happens with the worldview. What are the components, "components" of the



worldview? The worldview includes and plays the main role general knowledge - life-practical, professional, scientific. The degree of cognitive saturation, validity, thoughtfulness, internal consistency of worldviews can be different. The more solid the stock of knowledge of this or that people or person in this or that epoch, the more serious support - in this respect - the world outlook can receive. A naive, unenlightened consciousness lacks intellectual means to clearly substantiate its views, often referring to fantastic fictions, customs, and beliefs.

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CRITICAL ANALYSIS OF SAMANYA KARNAROGA NIDANA WSRT BADHIRYA

Dr.Sreeshma V¹, Dr.Ashutosh Kar², Dr. A B Biradar³

¹PG Scholar, Dept.of Shalakyatantra,KAHER's KLE Shri BMKAyurvedaMahavidyalaya,Belagavi,Karnataka

²PG Scholar, Dept.of Shalakyatantra,KAHER's KLE Shri BMKAyurvedaMahavidyalaya,Belagavi,Karnataka

³Associate Professor Dept.of Shalakyatantra,KAHER's KLE Shri BMKAyurvedaMahavidyalaya,Belagavi,Karnataka

ABSTRACT

Badhirya is one among the 28 karnarogas described in classics. Based on dosa we can classify it into 2 types like vata and vata kaphaja. Hearing loss is the impairment in hearing it can be partial or complete. Defect at any level from sound transduction to interpretation can cause hearing loss. Modern science classify hearing loss as three types conductive hearing loss, Sensory neural hearing loss and mixed hearing loss. Samanya Karna roganidanas include Avasyaya, Jalakrida, Karnakandu, Mithya yoga of sastra & sabda, Pratisyaya by different acharyas. Here is an attempt made to think how the Samanya Karna roganidanas are leading to Badhirya (hearing loss).

KEY WORDS: Badhirya, Hearing loss, conductive hearing loss, Sensory neural hearing loss, Mixed hearing loss.

INTRODUCTION

Sense organs are our link to the external world. They collect the information from outside send to brain and helps us to respond accordingly. Any problem arising in this pathway makes it difficult to communicate to the outside world which can even leads to mental trauma. one among the main mode of communication is speech. Speech is directly connected with hearing. According to Ayurveda, Shrotrendriya originates from Akasha Mahabhoota, Shabda carried by vata comes in contact with Shrotrendriya Adhishthana (Karna) and transmitted through Indriya to Shravana Buddhi which is responsible for perception of sound, so Vata plays important role in normal hearing procedure.

Badhirya has been described in classics as hearing loss. *Sushruta* opines that vitiated *vata* along with *kapha* residing in *Shabdanuvahasira* leads to *Badhirya*¹. *Acharya Dalhana* comment that along with *vata* & *kapha* *Raktha* & *Pitta* also plays a major role in developing *Badhirya*². *Vagbhatta* opines *Vata* associated with *Kapha* or *Karnanada* if neglected, gives rise to hearing of loud sounds only or hearing with difficulty and gradually leads to deafness³.

Hearing loss is the impairment in hearing⁴. It can be unilateral or bilateral. Disabling hearing loss refers to hearing loss more than 40 decibels (dB) in the better hearing ear in adults and a hearing loss more than 30 dB in the better hearing ear in children⁵.

NIDANA & CLASSIFICATION

Samanya Karnaroga nidanas told in classics are *Avasyaya*, *Pratisyaya*, *Jalakreeda*, *Karnakandu*, *Mithyayoga of sastra*, *Mithyayoga of Shabda*. Hearing loss is of three types a) Conductive hearing loss b) sensory neural hearing loss c) mixed hearing loss. Any diseases or process interfering with the conduction of sound from external ear to the stapediovestibular joint leads to CHL⁶. Its common aetiology includes a) EAC- wax, foreign bodies, otitis externa, stenosis, osteomas b) TM perforations c) ossicles -fixation & discontinuity d) Middle ear- ET dysfunction, otitis media with effusion, adhesive otitis media, hemotympanum, cholesteatoma, tumours⁷. SNHL results from lesions of the cochlea or VIIIth nerve & its central connections⁸. Causes may be congenital various infections, trauma, ototoxic drugs, systemic diseases. In mixed elements of both CHL & SNHL are seen⁹. In *Meniere's* disease there will be vertigo, tinnitus & pulsating hearing loss¹⁰. *Presbycusis* is a situation where SNHL type of hearing loss is seen as a result of physiological changes due to ageing. Noise trauma also leads to hearing loss¹¹.

AVASYAYA

It is the excessive exposure to cold or humid climate, early morning exposure to mist in present era we can consider excess usage of air conditioner also. Since the *kala* is *seetha* *gunaprominent* it leads to the vitiation of *vata* and *kapha* in the body. Due to



humidity ear canal will be staying as moist thus continuous exposure to humid climate will leads to otomycosis in many cases otomycosis will always present with otalgia, aural fullness and CHL type of hearing loss. High humidity is thought to trigger chemical and electrical changes in the brain and irritate nerves. In a recent study, high humidity was found to be positively associated with aural fullness, hearing loss, and increased odds of episodes of Meniere's disease¹²

PRATISYAYA

The *kapha dosha* will produce avarana to vata or obstructs the path of vata leading to hearing loss. It can be compared to upper respiratory tract infection. URTI will causes acute tubal blockage which results in absorption of gases in middle ear, thus a negative pressure is created in the middle ear which leads to retraction of tympanic membrane. Further increase in negative pressure causes collection of transudates, exudates & even haemorrhage. Prolonged tubal blockage causes otitis media with effusion leading to perforation & development of retraction pockets or cholesteatoma and finally erosion of incudostapedial joint occurs. These all will end up in hearing loss¹³.

JALAKREEDA

Jalakrida includes spending time in water like swimming, bathing in rivers, water falls or even in shower. This water may directly enter the ear canal and leads to infection or may cause dosavitiation by its snigdha, sitha guna which later on leads to various ear disorders like *karna shola*, *karna srava*, *Ati yoga in jala* can lead to *kaphaprapakopa* or *avarana* to other *dosas* by *kapha* as well as vata prakopa with these all things it will ultimately ends in otitis externa, otitis media, various types of ear discharges, otomycosis etc. During underwater diving eustachian tube won't be able to maintain the middle ear pressure at ambient atmospheric level. This disequilibrium is middle ear Barotrauma. sudden negative pressure in middle ear causes retraction of tympanic membrane, hyperaemia, engorgement of vessels and haemorrhages. Sometimes there may be rupture of labyrinthine membranes with vertigo and SNHL¹⁴.

KARNAKANDU

itching in ear occurs when *atisanchaya* of *kapha* occurs in *karna*. *Kapha* is having *Sthira, Manda Guna* by it causes *vataavarodha & rogas* by increasing *Khamala* which can be considered as wax¹⁵. Due to itching person will start fingering of ear, put buds or some pointed or blunt instruments to ear for itching. This may cause injury to EAC and also pushes the wax deep inside and will definitely lead to conductive type of hearing loss associated with other ear disorders. Improper way of aural toileting and excess cleaning of ears creates a vicious cycle of increased cerumen production causing ear-fullness, swelling, tinnitus, hearing loss etc¹⁶.

MITHYA YOGA OF SASTRA

Improper usage of *sastra* can cause direct injury to ear likewise unsterilized instruments results in infection which in turn vitiates *raktha, pitta* or *vata dosas*. Many have a habit of fingering of ear, inserting things like pin, pencil etc.. to the ear canal for removing wax and also if they have itching etc. It can cause *kshatha* in EAC, deep penetration can perforate the TM & can cause injury to ear ossicles. These unsterilized things can leads to development of otitis externa. Wide usage of buds for removing wax is in practise but it doesn't remove the wax properly instead it is pushing the wax to deep inside which in turn leading to tinnitus, CHL. So by these improper instrumentation finally ends up in *karnapaka*, *karnapratinaha* which will gradually ends up in *bhadhirya*. In electrocochleography (used to cochlear function) a tympanic needle electrode is passed through ear drum, causing perforation of membrane which will results in CHL¹⁷.

MITHYA YOGA OF SABDHA

It the wrong indulgence of sense organ of hearing which results in *Vata prakopa*. The vitiated *Vata* residing in *shadava hasrotas* causes *Bhadhirya*. It can be related to hearing loss due to noise trauma. Acoustic trauma is caused by exposure to excessive intense sound for a single time eg. Bomb explosion, powerful crackers which results in permanent hearing loss due to damage to outer hair cells, organ of corti, Reisner's membrane, tympanic membrane and ossicular chain¹⁸. Chronic exposure to less intense sound leads to noise induced hearing loss which can be temporary or permanent threshold shift. In temporary threshold shift there will be a recovery within few minutes to few hours. In permanent there will be no revert¹⁹. National Institute of Deafness and Other Communication Disorders have estimated that 15% of present population has got hearing loss due to exposure to loud noise and that may be noise at work, leisure activity or use of mobile phone.

DISCUSSION & CONCLUSION

While analysing the *karnaroganidana* in classics it can be concluded that all the *nidanans* are mainly causing the vitiating of vata or kapha. When there is disturbance in *Vata Dosha*, sound is not conveyed from ear to brain. In some cases vitiated *Kapha* obstructs the *Vata* pathway because of which *Vata* fails to conduct the sound waves. Therefore the hearing ability of one goes on deteriorating gradually and can be lost completely. *Badhirya* is produced by deranged *vata* or *vatakapha*, by obstructing the



shabdavahasira, neglecting *karna nada*. In CHL there is *kaphanubandha* it is mainly caused by wax, otitis media,cholesteatoma etc., SNHL is purely *vatika* & in mixed there is *vatakaphanubandha*.

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NEEDS FOR DEVELOPMENT OF PROFESSIONAL COMPETENCE OF HEADS OF PRE-SCHOOL EDUCATIONAL ORGANIZATIONS

Kurbanov Ibrat Gayrat o'gli

Independent researcher of Urgench State University

In Uzbekistan, great attention is paid to improving the quality of preschool education, increasing the professional competence of the heads of preschool education organizations (PEOs).

Ensuring the quality and efficiency of education depends primarily on the directors and pedagogues of preschool educational organizations. That is why it is important to increase the professional competence of directors of pre-school educational organizations, to teach them modern methods of management, and to expand educational services by developing important professional qualities.

As part of our theoretical research, we first studied the concept and content of professional competence.

According to Professor N. Muslimov, professional competence is the acquisition of knowledge, skills and qualifications necessary for professional activity by a specialist and their practical application at a high level [1].

The managerial competence of the director of a preschool educational organization M. Khamdamova is an integral personal-professional description in a set of components of knowledge, values, communicative and organizational-methodological activity, defining the readiness and ability of the director to professionally perform managerial functions in preschool educational organizations, which he describes as ensuring effective performance of managerial tasks [2]. We can give many similar definitions.

According to Sh. Sharipova [3], a person's high professional competence is evident in the following cases:

- in the implementation of complex processes;
- performing unclear tasks;
- correct analysis of conflicting data and their use;
- able to act independently in an unexpected situation.

In our opinion, a competent head of a preschool educational organization should be able to apply and demonstrate professional knowledge, skills, and abilities at a high level, have the ability to make independent decisions in problematic situations, and should thoroughly master modern management methods.

We conducted a survey to determine the levels of professional competence of the heads of the preschool educational organization and their needs. Surveys were conducted in 13 districts and cities of Khorezm region.

A total of **331** directors of pre-school education organizations participated in the survey conducted electronically through the Internet platform. In particular, there are **246** (74%) directors of state preschool education organizations, **15** (5%) directors of public-private preschool education organizations, **67** (20%) heads of family non-governmental preschool education organizations, **3** heads of private preschool education organizations (1%). **14** (4.2%) of the directors of preschool educational organizations participated in the survey up to one year, **110** (33.2%) from 1 to 3 years, **57** (17.2%) from 3 to 5 years, **45** (13.6 %) from 7 to 10 years, **18** (5.4%) from 10 to 15 years, **36** (10.9%) from 15 to 20 years, **21** (6.3%) from 20 to 25 years, **13** (3.9 %) was found to have experience in the position of senior director from 25 to 30 years, **10** (3 %) have more than 30 years of experience.

What qualities do you think a modern director should have? **90 respondents** (27.2 %) expressed the opinion that he should be knowledgeable and a master of his profession, while **64 respondents** (19.3 %) believed that it is necessary for a leader to know modern information technologies and foreign languages. Also, **72** (21.8 %) **respondents** stated that it is important for a modern leader to have leadership skills and team management skills. **49** (14.8%) **respondents** considered creativity, keeping up with the times, and strive for innovations as important factors. **31** (9.4%) **respondents** were of the opinion that a modern leader should have culture and the quality of being an example to his employees, while **25** (7.6%) **respondents** believed that responsibility is important for a leader (diagram 1).

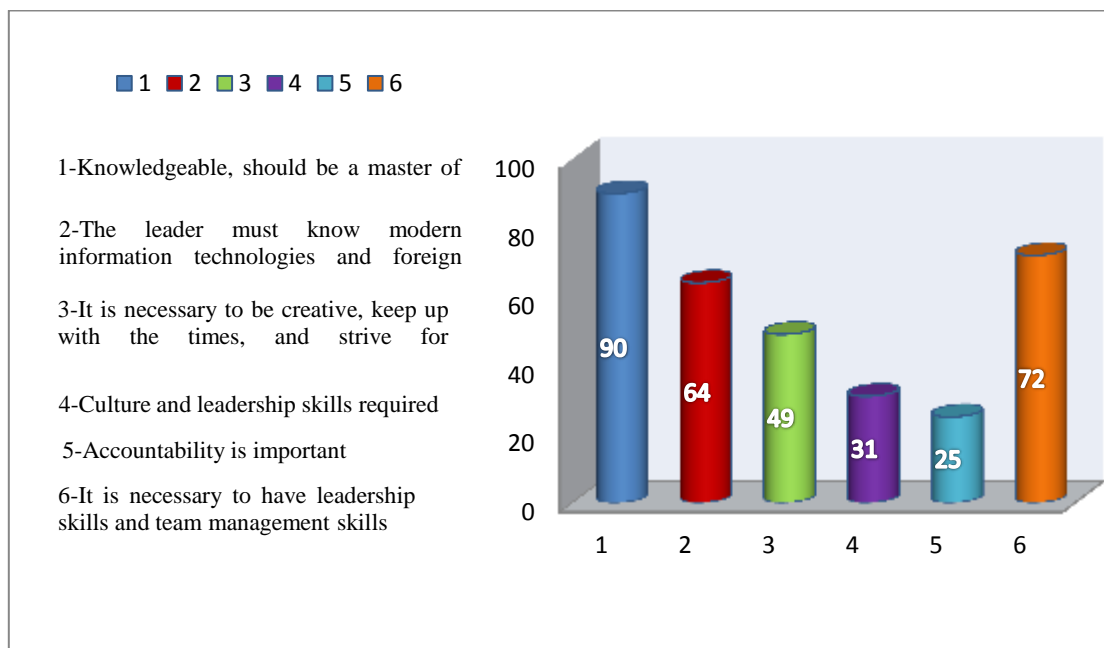


Diagram 1.

Analysis of respondents' answers to the question of what qualities a modern director should have

What challenges do you face in managing a preschool? **126 respondents (36.1%)** said that they did not have any problems, while **205 respondents (61.9%)** noted that they are facing various problems.

Including:

- **57 (17.2 %)** leaders maintain a healthy atmosphere among employees, find solutions to unpleasant situations, and work together;
- **38 (11.5 %)** respondents use information technologies and lack of ICT tools, electronic attendance system management;
- **28 (8.5%)** managers have problems with disagreements with parents, placement of PEOs, problems with getting referrals;
- **24 (7.3%)** managers are in financial difficulty and low monthly salary;
- **21 (6.3 %)** managers lack highly educated, qualified and experienced specialists;
- **13 (3.9%)** managers in the issues of repair and beautification of preschool educational organization;
- **13 (3.9%)** managers are concerned about the number of inspections, excessive paperwork and document filling;
- **11 (3.3%)** leaders noted the lack of methodical guidelines and training manuals as a problem in managing preschool education organization (diagram 2).

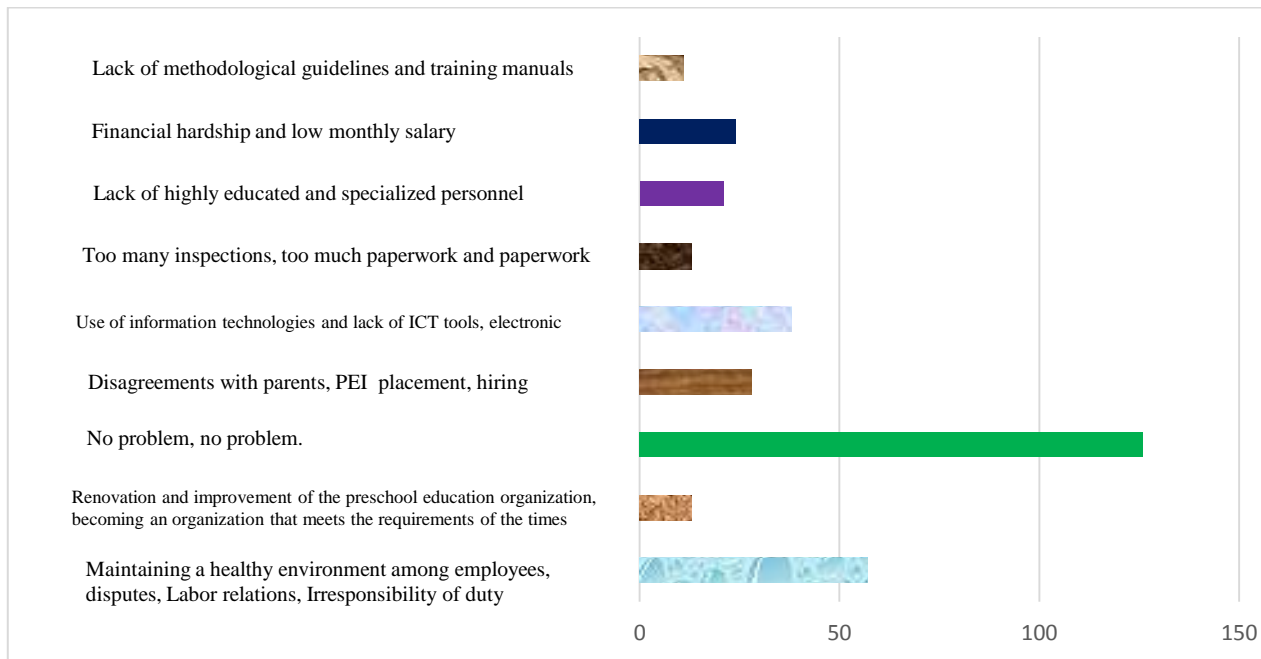


Diagram 2

Analysis of respondents' answers to the question, what problems do you face in managing a preschool educational organization

Would you like to develop your professional competence? **286 (86.4%)** respondents to the question said they would like to develop their professional competence, while **45 (13.6%)** directors said they would develop their competence as needed (diagram 3)

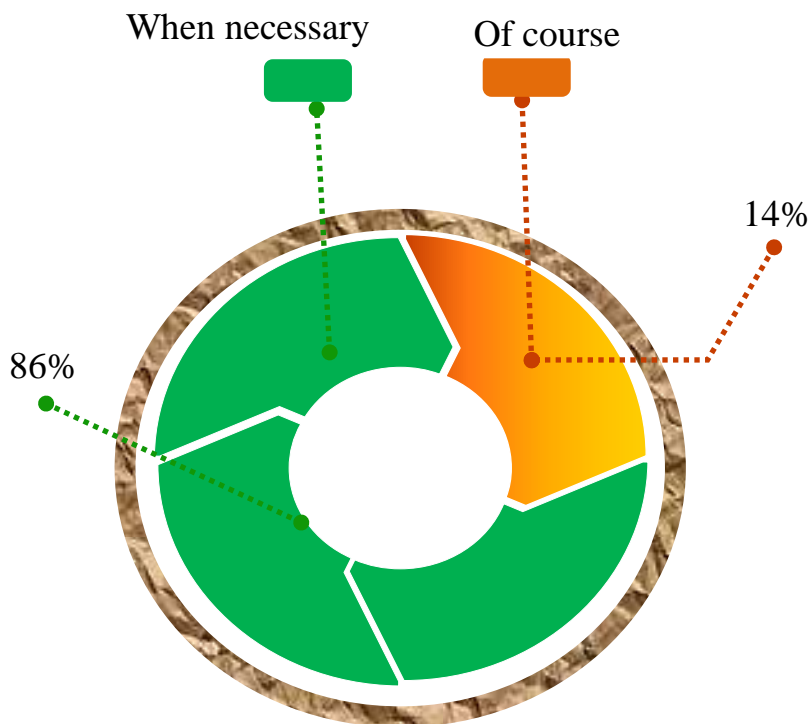


Diagram 3

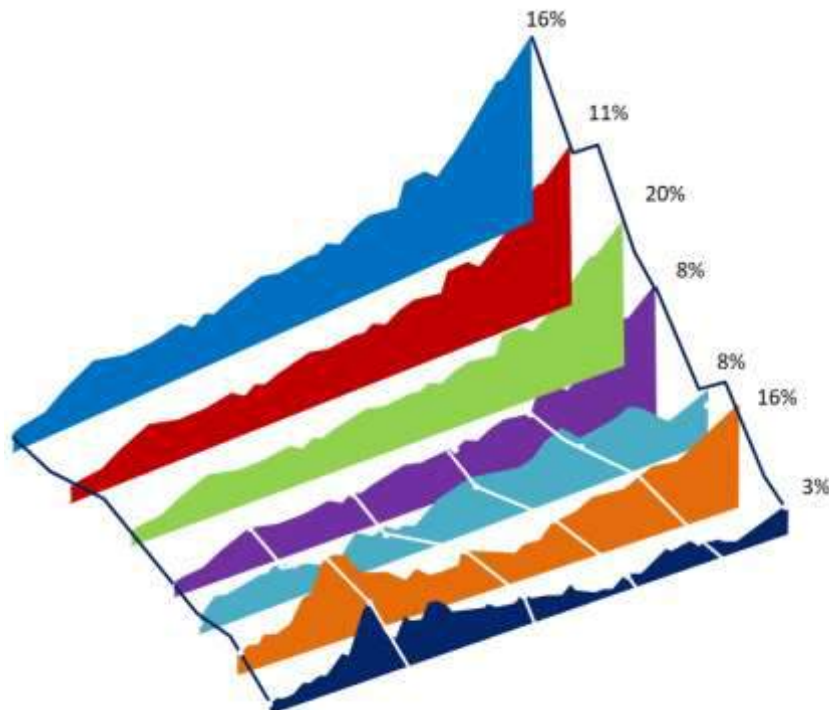
Analysis of respondents' answers to the question of whether you would like to develop your professional competence



What do you want to learn to develop your management (organization, management and control of preschool education organization) competence? **2** respondents (0.6 %) answered that their knowledge and skills are sufficient, while **329** respondents (99.3 %) mentioned learning the following to develop their competence.

Including:

- **67 people** (20.2 %) work with employees and management skills;
- **53 people** (16.0 %) modern pedagogical technologies and new methods of teaching;
- **52 people** (15.7 %) modern information technologies and their use;
- **48 people** (14.5 %) exchange experience and learn with experienced and qualified employees;
- **35 people** (10.6 %) want to learn everything the head of a preschool educational organization needs to know;
- **26 people** (7.9%) decrees and news in the preschool education system;
- **26 people** (7.9%) have experience in foreign languages and countries with advanced education;
- **11 people** (3.3%) have legal knowledge, labor law and labor relations;
- **9 people** (2.7%) study psychological knowledge;
- **2 (0.6%)** managers expressed their desire to learn economic and financial knowledge (diagram 4).



- Modern information technologies and their use
- Learn everything a preschooler needs to know
- Personnel and management skills
- Decrees and news in the preschool education system
- Experience of foreign languages and education developed countries
- Modern pedagogical technologies and new methods of teaching
- Legal knowledge, labor law and labor relations



What do you want to learn to develop your managerial (*organization, management and control of preschool education organization*) competence? analysis of respondents' answers to the question

What would you like to learn to develop your social competence (communication with educators and staff, positive influence, working collaboratively, working with parents and community)? **11 respondents** (3.3%) answered that their knowledge and skills are sufficient, while **320 respondents** (96.7%) said that they would like to learn more about the subject in order to develop their competence.

Including:

- **64 people** (19.3 %) work with parents and conduct work;
- **48 people** (14.5%) want to share experience and learn more with employees with many years of experience;
- **46 people** (13.9%) work with employees and management skills;
- **35 people** (10.6%) want to learn psychological knowledge;
- **29 people** (8.8%) educational system and pedagogical knowledge;
- **28 people** (8.5%) want to learn everything;
- **26 people** (7.9%) new pedagogical technologies and foreign languages;
- **24 people** (7.3 %) speech skills and communication culture;
- **9 people** (2.7%) study psychological knowledge;
- **20 people** (6.0%) expressed their desire to work with normative documents and study the field of law (diagram 5).

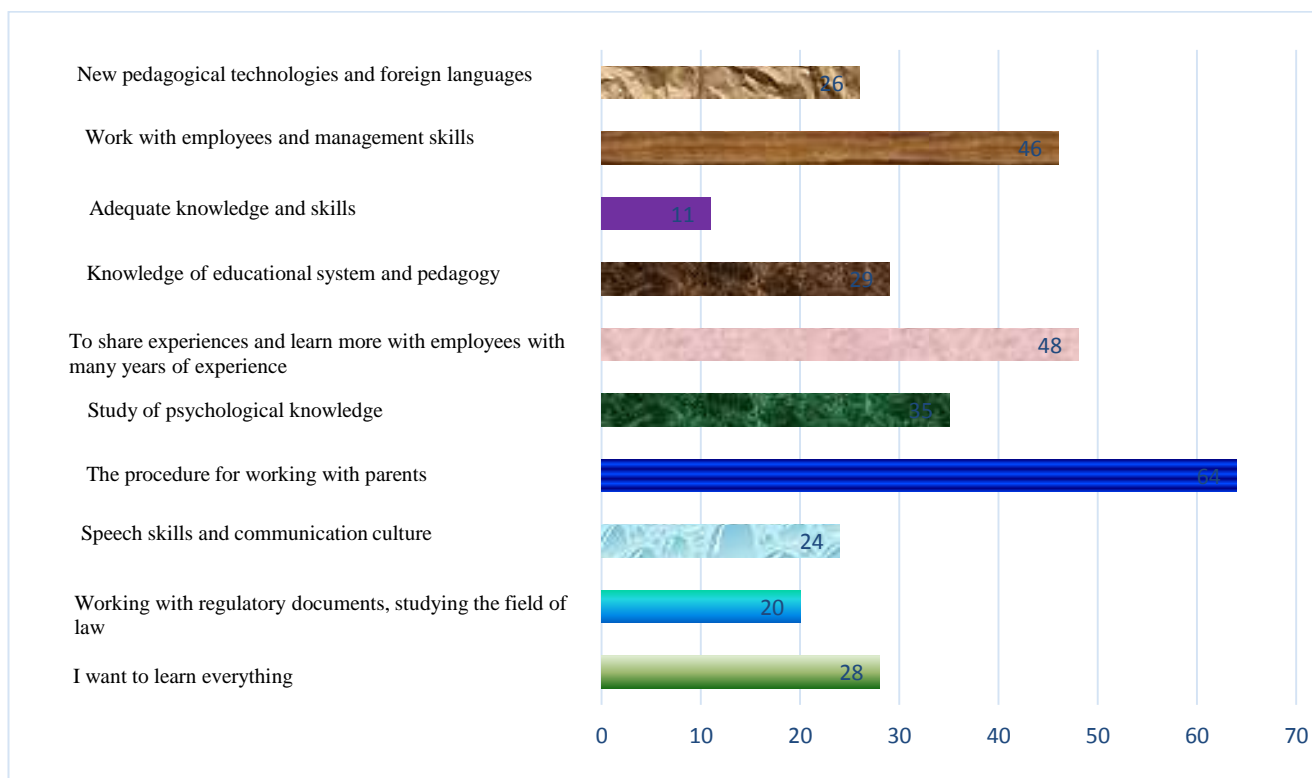


Diagram 5

Analysis of respondents' answers to the question What would you like to learn to develop your social competence (communication with educators and staff, positive influence, working collaboratively, working with parents and mahalla)

What do you want to learn to develop your special competence (knowledge, skills and competences in early childhood education and training)? **7 respondents** (3.3%) answered that their knowledge and skills are sufficient, while **324 respondents** (97.8%) stated that they would like to learn the following to develop their competence.

Including:

- **67 people** (20.2 %) modern pedagogical technologies, innovations, new ways of working with children;
- **56 people** (16.9%) study laws and regulations related to preschool education;
- **40 people** (12.1%) want to improve their skills and qualifications;
- **38 people** (11.5%) want to study industry news and foreign experiences, innovations;
- **36 people** (10.9%) want to study the activities of experienced leaders (exchange of experience);
- **22 people** (6.6%) want to learn everything;



- **22 people (6.6%)** work with employees and labor law, management skills;
- **17 people (5.1%)** use ICT and its application in the educational process;
- **13 people (3.9 %)** (Psychology) study the psychology of employees and children;
- **8 people (2.4%)** want to study the First Step program in depth;
- **5 people (1.5%)** said that they want to learn to teach children based on national values (diagram 6).

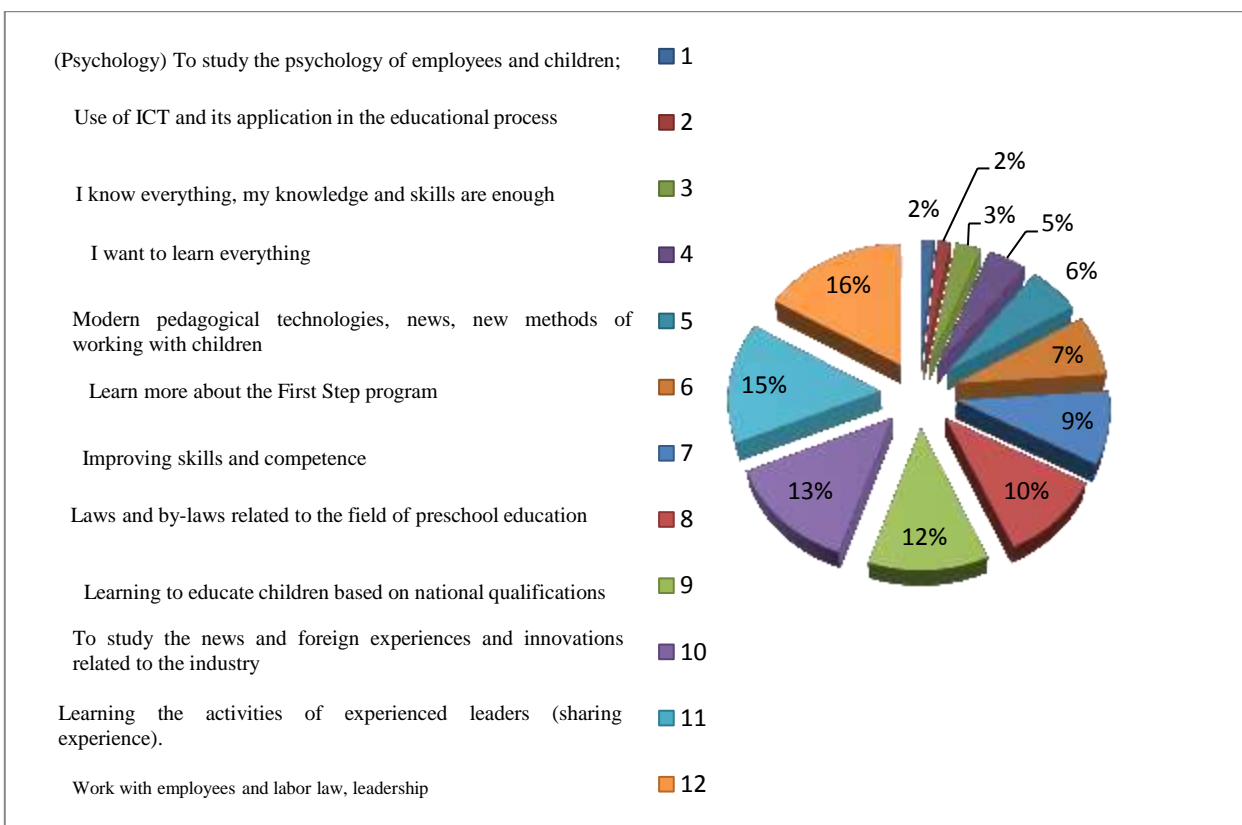


Diagram 6

Analysis of respondents' answers to the question, what would you like to learn to develop your special competence (knowledge, skills and competencies in preschool education and upbringing).

What do you want to learn to develop your competence for self-development, professional problems and making independent decisions in unexpected situations? **9 respondents (2.7%)** answered that the knowledge and skills are sufficient, while **322 respondents (97.3%)** indicated that they would like to learn in order to develop their competence for professional problems and independent decision-making in unexpected situations.

Including:

- **45 people (13.6%)** exchange experience, get knowledge from highly qualified employees;
- **44 people (13.3%)** want to learn leadership and team management, problem solving;
- **44 people (13.3%)** are aware of the news, regularly work on themselves to improve their skills and qualifications;
- **38 people (11.5 %)** (Psychology) study personnel, child psychology, management psychology;
- **37 people (11.2%)** want to get acquainted with the decrees in the field of preschool education;
- **33 people (10.0%)** want to study modern pedagogical technologies, experience of developed countries;
- **29 people (8.8%)** make the right decisions, work with employees and labor legislation;
- **15 people (4.5%)** read more books;
- **14 people (4.2%)** legal and labor legislation;
- **10 people (3.0%)** want to constantly improve their qualifications;
- **8 people (2.4%)** develop speech and communication process;
- **5 people (1.5%)** said that they want to learn to improve their knowledge and skills in ICT (diagram 7).

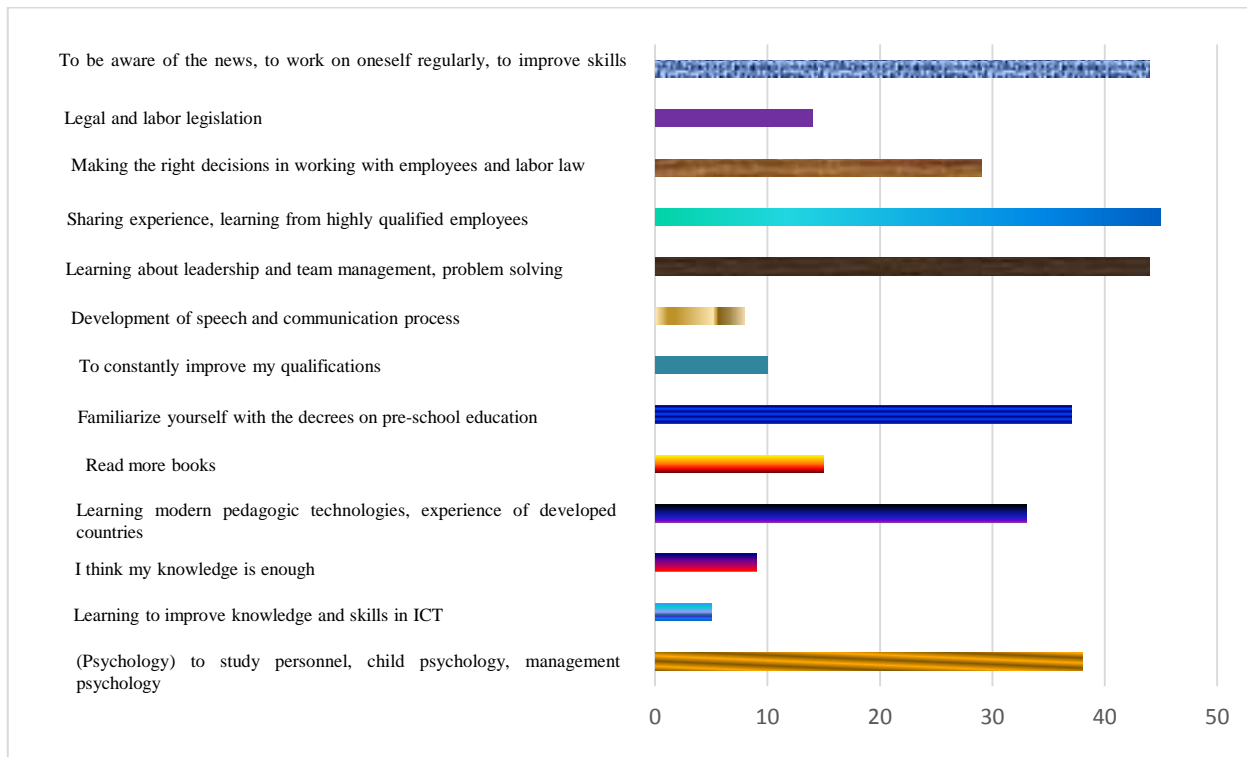


Diagram 7

Analysis of respondents' answers to the question, what do you want to learn in order to develop your competence for self-development, professional problem-solving and independent decision-making in unexpected situations?

The study has shown that a modern head of a pre-school organization should deeply understand that he/she implements a new educational paradigm in management and pedagogical activity. That is why the principal is required to consistently enrich his knowledge, to master and implement innovations, to be able to work with digital educational resources in the conditions of digitalization, to solve problems independently.

It is also up to the director to work with pedagogues to ensure the effectiveness of the preschool education process and direct them to conduct their activities based on pedagogical and psychological principles. For educators, it is of particular importance to organize the activities of the students and to develop methods that create independence and initiative in them. All the above qualities, abilities and characteristics are part of this professional competence.

The head of a pre-school educational organization is required to constantly enrich his or her knowledge, absorb new information, understand important social needs, find new information, process it and be able to apply it in his or her work.

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A STUDY ON VARIED PSYCHOLOGICAL DYNAMICS OF HUMAN LIFE

Ramkrishna Mohanta¹, Indranil Pal², Sarif Ansary³, Rita Mondal⁴

¹Assistant Professor, Dishari College of Education, WB, India

²M.Ed. Student, Rajendra Academy for Teachers' Education, WB, India

³B.Ed. Student, Vasunddhara B.Ed. & D.El.Ed. College, WB, India.

⁴Former Student, Jadavpur University, WB, India

Corresponding Author: Rita Mondal

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ABSTRACT

Psychology is the study of the mind and behaviour. Psychologists look into the many dimensions of being a person, including thoughts, brain function, activities, emotions, personality, and human development. Human society is always evolving, and he is the most intelligent creature on the planet. Humans act differently depending on the demands of the circumstance. Every person is unique, and their behaviour depends on a variety of psychological elements like their intelligence, emotional maturity, motivation, ability to adapt, self-concept, self-efficacy, and susceptibility to depression, anxiety, and stress. The purpose of the current study is to discuss the many psychological dynamics that affect human personality and character and in broader sense human life a lot.

KEYWORDS: depression, anxiety, stress, emotional intelligence, emotional maturity, creativity, motivation, adjustment, self-concept, and self-efficacy.

INTRODUCTION

The study of the mind and behaviour is known as psychology. According to Adam Borland, PsyD, a clinical psychologist at Cleveland Clinic in Ohio, psychologists investigate thoughts, brain function, actions, emotions, personality, and human development while taking into account all the various facets of being a person (Upham, 2022). Wilhelm Wundt, renowned as the 'father of psychology,' founded the first psychological laboratory in the world in Leipzig, Germany, in 1879. This marks the beginning of psychology as a science in which theories were tested using scientific methods. Wundt used scientific methods to explore the conscious experience, conducting tests to see how people responded to various outside stimuli and systematically recorded his findings. Psychology was previously thought of as a subfield of philosophy. There are various aspects of psychology such as motivation, anxiety, depression, stress, creativity, adjustment etc. Besides all these things, there are psychological approaches which play important roles in not only in the field of education but also in the life of man. Constructivist approach is among them. In a constructivist setting, students are the main focus of education, yet it cannot be successfully run without a teacher's help (Roy & Saha, 2021). Also, the teacher's support is primarily centred on the different psychological aspects of the students. Self-concept is another important psychological aspects of human life which includes how someone sees themselves, other people, society, and experiences as well as how they see themselves and the world (Roy & Saha, 2023).

PERVASIVENESS OF DEPRESSION, ANXIETY AND STRESS IN MODERN DAY HUMAN LIFE

Anxiety, depression, and stress are becoming more and more prevalent in the current demanding environment. People from different backgrounds and localities all around the world are experiencing the same level of mental torment. The people's routine lives have been disrupted, and as a result, they are now feeling more stressed, anxious, and depressed. Anxiety is a state of extreme worry and fear about some part of daily life, whereas depression is a sort of sickness that affects how we feel and think (Gayen & Sen, 2021). Stress, according to the American Psychological Association, is a special relationship between a person and their environment that the individual thinks is draining or beyond his or her resources and endangers their well-being (Lazarus & Folkman, 1984). According to Debowska et al. (2020), stress is a response to any situation that puts us in risk, whereas anxiety is a person's fear of the unknown. Depression is a disorder that makes a person lose interest in normal chores (Sen et al. 2021b). The academic resilience of people is being impacted by depression, anxiety, and stress. Academic resilience is the capacity to handle academic challenges such as stress, failure, and boredom (Mahato et al. 2023). Academic stress is a pretty common concern for the great majority of pupils (Mahato & Sen, 2021). The World Health Organization (WHO) ranked depression as the second



leading global cause of disability as early as 1997. Major studies conducted by the WHO and published in 2007 that compared the impact of depression with that of chronic conditions like angina, arthritis, asthma, and diabetes served to support this viewpoint (Murray & Lopez, 1997).

EMOTIONAL INTELLIGENCE AND EMOTIONAL MATURITY AS GUIDING ASPECTS OF HUMAN LIFE

Feelings are more powerful, last longer, and have a purpose or cause (Mondal & Saha, 2017). Emotional intelligence has been found to be a predictor of life happiness, healthy psychological adaptation, better interactions with peers and family, and higher parental warmth. Also, it has been found that violent behaviour, substance and alcohol abuse, and delinquent behaviour are all associated with low emotional intelligence (Kar et al. 2016). Emotional intelligence, according to Salovey and Mayer (1990), is the capacity to observe one's own and other people's feelings and emotions, to recognise them, and to use this information to guide one's thinking and behaviour (Mondal et al. 2014). Emotional intelligence, according to Daniel Goleman, is the capacity to recognise our own feelings as well as those of others, to inspire ourselves, and to successfully manage both our own and other people's emotions (1995). Building a bridge between the head and heart, the two very different human conditions that make up one human body, is the aim of emotional intelligence. Human achievement depends on such a synthesis of important human emotions. The idea of emotional intelligence encompasses the many qualities of both emotion and intelligence (Kar et al. 2014).

On the whole, human behaviour is sensible and courteous. Nonetheless, our behaviour is typically driven by our emotions. One must understand a child's sentiments in order to understand their behaviour. In order to understand the nature of a child's emotions, it is essential to understand what emotions are, the nature of emotions, the functions of various emotions, and how emotions are generated. This is because emotions play a key part in human life. People are logical creatures; thus, emotions have a big and varied influence on how they act. The development of a healthy personality depends on the child's emotional development (Sutradhar & Sen, 2022b). Understanding what emotions are, what causes them, how they differ, and how they develop is essential if one wants to understand the nature of a child's emotions. The personality of the child is influenced by their emotional development. A healthy emotional development and expression are essential for a happy life. If emotional development is not healthy, emotional behaviour would not be well-balanced and socially acceptable. If a person's emotional development is not in a healthy state, many emotional problems and abnormalities will appear in their life (Sutradhar & Sen, 2022a).

ROLE OF CREATIVITY IN HUMAN LIFE

The capacity to create or develop creative ideas, theories, methods, or compositions is referred to as creativity. Originality, imagination, and expressiveness are often qualities of a creative person. The mental processes that result in an original innovation or solution to a problem are referred to as creative thinking. Innovative ideas can result in new technologies, social theories, scientific discoveries, artistic creations, and more. Creativity is no longer a biological constant. It is more commonly thought of as a 'variant' that is constantly influenced by environmental, economical, and cultural factors. As psychologists and educators realised the importance of creativity in human development, discovering and developing a child's creative potential in the classroom has taken on greater significance (Saha, 2012). In order to be creative, one must be sensitive to problems like shortcomings, knowledge gaps, missing elements, disharmonies, and so on. Identifying the issue, seeking solutions, guessing or forming hypotheses about the shortcomings, testing and retesting these ideas, maybe amending and retesting them, and conveying the results are additional processes (Saha, 2013).

MOTIVATION AS ESSENTIAL ASPECT OF HUMAN LIFE

The word 'motivation' denotes to the motives behind someone's doings or actions. It is what motivates people to perform accordingly. The mechanism that starts, guides, and withstands goal-oriented behaviours is known as motivation. For instance, motivation is what drives you to earn that promotion at work or helps you lose additional weight. Simply put, motivation pushes you to do actions that move you towards your goals. The biological, social, emotional, and cognitive variables that initiates human behaviour are all encompassed in motivation. A person or a child may be inspired to finish a task for any motivation, not simply the necessity to complete it successfully. We call this motivation (Ansary et al. 2021). Motivating oneself is crucial for efficiently handling the opportunities, difficulties, and time that come with daily life and for reaching goals. The organisation gains when employees are happy and driven to work hard to attain goals. Teachers and students both need to be motivated. Motivated professors inspire students to focus. A person or a child may be inspired to finish a task for any motivation, not simply the necessity to complete it successfully. We call this motivation (Ansary et al. 2021). Motivating oneself is crucial for efficiently handling the opportunities, difficulties, and time that come with daily life and for reaching goals. The organisation gains when employees are happy and driven to work hard to attain goals. Teachers and students both need to be motivated. Motivated professors inspire students to focus.



ADJUSTMENT LEADS TO BETTER LIFE

The concept of adjustment was first presented by Darwin, who utilised it as a type of adaptation to survive in the physical world. The physical, social, and psychological demands that come with depending on others can be adapted to by humans. It is the psychological process of handling their challenges, arduous tasks, and daily demands (Kar et al. 2016). Adjustment is the behavioural process of managing conflicting wants or needs that are impeded by environmental challenges (Adhikari, 2023). According to psychology, adjustment is the behavioural process that enables individuals and other creatures to reconcile their disparate needs or their goals with the limitations imposed by their environments. The physical, social, and psychological demands that come with depending on others can be adapted to by humans (Paramanik et al. 2014). Social adjustment is one of the most important aspects of life because people are social beings. Achieving equilibrium in interpersonal interactions is the aim of social adjustment, which is typically made feasible by the successful application of social skills. The process of adjustment is of great interest to psychologists as a way to understand a person through his behaviour (Kundu et al. 2015). As we are social beings, we live in a world where we have opinions about others and vice versa. Everyone aspires to be recognised and welcomed by society. We strive to act in accordance with societal norms in order to blend in with others. When a person can successfully follow or comply to the customs, values, regulations, etc. set by that society as an eligible member of that society, they are said to be socially adaptable or flexible (Ansary et al. 2022). Besides adjustment, practicing yoga, introduced first in the Rigveda is another important aspect in human life (Saha et al. 2021). Yoga not only promotes physical health but also improves learning, stress reduction, and memory (Saha, 2021). Thus, yoga leads to a better life for each and every human being.

SELF-EFFICACY, THE PIVOT TO SUCCESS

Consistent performance is necessary for success, and this strongly depends on how a person handles the situations or changes that come into his life. In behavioural sciences, this self-assurance or belief is known as self-efficacy. Self-efficacy can be extrapolated to mean self-assurance, self-reliance, and faith in oneself. One's hopeful self-reliance is referred to as self-efficacy. It is the confidence that one can develop, the ability to handle challenging or novel tasks, and the capacity to adapt to changes in performance (Ahmed et al. 2011). The creative young adults who will create the future of the nations are one of the groups most affected. In the current situation, they are dealing with trauma and mental instability. Their self-efficacy, the belief in one's capacity to carry out an action, is steadily declining. According to Bandura, self-efficacy is the assurance in one's capacity to prepare for and carry out the necessary steps to address probable events (Cherry, 2020; Sen et al. 2021a). The two primary subcategories of self-efficacy are general and specific. General self-efficacy is a person's opinion of his or her ability to function under a variety of conditions. Task-specific self-efficacy measures a person's assessment of their ability to complete the tasks relevant to a circumstance (Dullard, 2014).

CONCLUSION

The question of whether to place more emphasis on individual responsibility for behaviour change or create institutional frameworks that encourage and promote healthy lives is one that is widely debated. The results of the current study suggest that a variety of psychological elements are crucial in determining how people behave. In addition, demonstrating interest and enthusiasm are the only surefire ways to educate effectively and successfully. Interest is the most important factor in learning success (Rajak & Gayen, 2022). Thus, it is very crucial to know about various psychological aspects and their role in human life.

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THE IMPACT OF IFRS CONVERGENCE ON THE FINANCIAL PERFORMANCE OF INDIAN IT SECTOR: A CASE STUDY OF WIPRO LTD

Prof. B.B.L Das¹, Abhinna Srivastava²

¹Professor & Dean, Faculty of Commerce, L.N. Mithila University, Darbhanga, Bihar

²Assistant Professor, Dept of Commerce, K.S College, Darbhanga and Research Scholar, Dept of Commerce and Business Administration, L.N. Mithila University, Darbhanga, Bihar.

ABSTRACT

The purpose of this study is to investigate the impact of International Financial Reporting Standards (IFRS) convergence on the financial performance and reporting of Wipro Ltd., a leading IT company in India. The study analyzes financial data from 2015 to 2021, comparing pre- and post-IFRS convergence periods. The results indicate that IFRS convergence has significantly affected Wipro's financial reporting, improving the quality and comparability of financial information. The findings provide insights into the implications of IFRS convergence for the Indian IT sector.

KEYWORDS: IFRS Convergence, Indian IT Sector, Wipro ltd, Financial Performance

INTRODUCTION

The International Financial Reporting Standards (IFRS) have been widely adopted by countries around the world as a means of enhancing the comparability, transparency, and reliability of financial reporting (Zeghal & Mhedhbi, 2006). In recent years, many countries, including India, have been converging their local accounting standards with IFRS in an effort to foster a more integrated global financial reporting framework (Daske et al., 2008).

The process of IFRS convergence is not without its challenges, as it often requires significant adjustments to a company's financial reporting practices (Jermakowicz & Gornik-Tomaszewski, 2006). Prior studies have examined the impact of IFRS adoption on various aspects of financial performance, such as earnings quality, value relevance, and comparability of financial statements (Barth et al., 2008; Paananen & Lin, 2009; Van Tendeloo & Vanstraelen, 2005). However, relatively few studies have specifically focused on the Indian context, where the convergence process has been ongoing since 2011 (Gupta & Narayanan, 2020). The convergence of Indian accounting standards with International Financial Reporting Standards (IFRS) in 2016 marked a significant milestone in the country's financial reporting history. The adoption of IFRS has brought about significant changes in the financial statements of Indian companies, including the IT sector. Wipro Ltd., one of the leading IT companies in India, has been no exception to this change. As an early adopter of IFRS, Wipro had to comply with the new standards and revise its financial reporting accordingly.

The convergence of IFRS with Indian accounting standards has been a subject of significant debate and discussion among financial analysts, academics, and practitioners. The adoption of IFRS was aimed at improving transparency, comparability, and reliability in financial reporting, which is crucial for making informed investment decisions. The IT sector, being one of the most significant contributors to the Indian economy, has been under the spotlight since the adoption of IFRS.

The purpose of this study is to examine the impact of IFRS convergence on the financial performance of Wipro Ltd. Specifically, we aim to investigate the changes in financial ratios, including return on equity (ROE), return on assets (ROA), earnings per share (EPS), net margin, current ratio, and debt-to-equity ratio, before and after the adoption of IFRS. We also aim to determine the implications of IFRS convergence for the IT sector and provide suggestions for companies to manage the transition to IFRS effectively.



To achieve our research objectives, we used a case study approach, focusing on Wipro Ltd. as an early adopter of IFRS. The study used data from the company's annual reports and web resources, covering the period from 2015 to 2021. The study employed various financial ratios and econometric models to analyze the data.

The results of this study have important implications for companies in the IT sector, policymakers, and investors. By analyzing the financial performance of Wipro Ltd. before and after the adoption of IFRS, this study provides insights into the challenges and opportunities associated with the transition to IFRS. The findings of this study can help companies in the IT sector to better prepare for the transition to IFRS, and investors to make informed investment decisions.

2. LITERATURE REVIEW

This section presents a review of the existing literature on the impact of IFRS convergence on financial performance and reporting. The literature review is divided into three sub-sections: (i) the rationale for IFRS convergence, (ii) the effects of IFRS convergence on financial performance, and (iii) the impact of IFRS convergence in the Indian context.

2.1 Rationale for IFRS Convergence

The growing need for a unified global financial reporting framework has been a primary driver for the adoption and convergence of IFRS (Nobes & Parker, 2010). IFRS convergence aims to reduce the differences between national accounting standards and enhance the comparability, transparency, and understandability of financial information across countries (Daske et al., 2008). These benefits are expected to increase investor confidence, reduce the cost of capital, and facilitate cross-border investments and mergers (Ball, 2006; Ramanna & Sletten, 2014).

2.2 Effects of IFRS Convergence on Financial Performance

Empirical studies on the impact of IFRS convergence have shown mixed results. Some studies have found that IFRS convergence leads to an improvement in financial reporting quality, such as increased value relevance, reduced earnings management, and enhanced comparability (Barth et al., 2008; Van Tendeloo & Vanstraelen, 2005). Other studies have reported little or no significant changes in these dimensions (Christensen et al., 2008; Hung & Subramanyam, 2007).

Several factors have been identified as influencing the effects of IFRS convergence on financial performance, including the level of enforcement and compliance, the quality of the local accounting infrastructure, and the degree of alignment between national accounting standards and IFRS (Cai & Wong, 2010; Soderstrom & Sun, 2007). These factors may explain the variation in the results observed across different countries and industries.

2.3 Impact of IFRS Convergence in the Indian Context

Research on the impact of IFRS convergence in India has been relatively limited. However, some studies have investigated the effect of IFRS convergence on specific aspects of financial reporting and performance. For example, Gupta and Narayanan (2020) found that IFRS convergence improved the value relevance of accounting information for Indian companies, while Chand and Mishra (2017) reported an increase in earnings management in the post-convergence period.

In the context of the Indian IT sector, which plays a critical role in the country's economy, there is a lack of empirical evidence on the impact of IFRS convergence on financial performance and reporting. This study aims to fill this gap by examining the effect of IFRS convergence on the financial performance of Wipro Ltd., a leading IT services company in India.

In summary, the existing literature provides mixed evidence on the impact of IFRS convergence on financial performance and reporting. This study contributes to the literature by focusing on the Indian IT sector and examining the effect of IFRS convergence on the financial performance of Wipro Ltd.

3. METHODOLOGY

This section outlines the research methodology employed to examine the impact of IFRS convergence on the financial performance of Wipro Ltd. The methodology consists of four main steps: (i) sample selection, (ii) data collection, (iii) calculation of financial ratios, and (iv) statistical analysis.



3.1 Sample Selection

The focus of this study is on Wipro Ltd., a leading IT services company in India. Wipro was chosen as the subject of this case study due to its significant role in the Indian IT sector and the potential impact of IFRS convergence on its financial reporting practices.

3.2 Data Collection

Financial data for Wipro Ltd. was collected from the company's annual reports and financial statements for the years 2015-2021. This time frame covers both pre- and post-IFRS convergence periods, with the convergence process in India starting in 2016. To assess the impact of IFRS convergence on the financial performance of Wipro Ltd., we calculated various financial ratios for both the pre- and post-convergence periods. These financial ratios included the following:

- Return on equity (ROE): measures the return generated by the company for each unit of shareholder equity.
$$\text{ROE} = \text{Net Income} / \text{Shareholders' Equity}$$
- Return on assets (ROA): measures the company's ability to generate profit from its assets.
$$\text{ROA} = \text{Net Income} / \text{Total Assets}$$
- Earnings per share (EPS): measures the company's profitability on a per-share basis.
$$\text{EPS} = \text{Net Income} / \text{Number of Shares Outstanding}$$
- Net margin: measures the company's profitability by comparing net income to revenue.
$$\text{Net Margin} = \text{NI} / \text{Revenue}$$
- Current ratio: measures the company's ability to pay its short-term liabilities using its short-term assets.
$$\text{CR} = \text{CA} / \text{CL}$$
- Debt-to-equity ratio: measures the company's leverage by comparing its total liabilities to shareholder equity.
$$\text{DER} = \text{Total Debt} / \text{Shareholders' Equity}$$

For each financial ratio, we used the relevant formula to calculate the ratio for each year in the pre- and post-convergence periods. The mean and standard deviation of each financial ratio were then computed for both periods. The mean was calculated as the sum of the values of the ratio divided by the number of observations, while the standard deviation was computed using the formula:

$$\text{Standard deviation} = \sqrt{\sum (X - \mu)^2 / n}$$

where X is the value for each observation, μ is the mean for the ratio, and n is the number of observations.

These summary statistics were used to compare the financial performance of Wipro Ltd. before and after the adoption of IFRS. The changes in the mean and standard deviation of each financial ratio between the pre- and post-convergence periods provide insights into the impact of IFRS convergence on the company's financial reporting.

3.3 Calculation of Financial Ratios

For each financial ratio, the mean and standard deviation were calculated for both the pre- and post-convergence periods. These summary statistics provide a basis for comparing the financial performance of Wipro Ltd. before and after the adoption of IFRS.

3.4 Statistical Analysis

To test the significance of the observed changes in financial ratios, a series of paired-sample t-tests were conducted. Paired-sample t-tests were chosen because they allow for a comparison of the means of the same sample under different conditions (i.e., pre- and post-IFRS convergence). The null hypothesis (H0) for each test is that there is no significant difference between the pre- and post-convergence means for a given financial ratio. The alternative hypothesis (H1) is that there is a significant difference between the pre- and post-convergence means.

A significance level (alpha) of 0.05 was used for hypothesis testing. If the p-value resulting from the t-test is less than or equal to 0.05, the null hypothesis is rejected, indicating a significant difference between the pre- and post-convergence means for the financial ratio in question.

The results of the t-tests, along with the calculated means and standard deviations, will be presented in the Findings and Suggestions section.

3.5 Empirical Model Specification:

An econometric model can be used to examine the relationship between the financial ratios and the IFRS convergence. For this analysis, we will use a panel data model, which allows us to incorporate both cross-sectional (i.e., financial ratios) and time-series (i.e., pre- and post-convergence periods) dimensions in the analysis. The model can be specified as follows:



$$Y_{it} = \alpha + \beta_1 * IFRS_Convergence_{it} + \beta_2 * X_{it} + \varepsilon_{it}$$

Where:

- Y_{it} represents the dependent variable (ROE, ROA, EPS, Net Margin, Current Ratio, or Debt-to-Equity) for Wipro Ltd. in year i (2015-2021)
- $IFRS_Convergence_{it}$ is a dummy variable, which takes the value of 0 for the pre-convergence period (2015-2016) and 1 for the post-convergence period (2017-2021)
- X_{it} represents a vector of control variables (such as total assets, industry growth, or macroeconomic factors) in year i
- α is the intercept
- β_1 and β_2 are the coefficients for the $IFRS_Convergence$ and control variables, respectively
- ε_{it} is the error term

4. HYPOTHESIS

The main objective of this study is to investigate the impact of IFRS convergence on the financial performance and reporting of Wipro Ltd. To guide the analysis, the following hypotheses are formulated:

Hypothesis 1 (H1): IFRS convergence has a significant impact on the key financial ratios (ROE, ROA, and EPS) of Wipro Ltd.

Null Hypothesis 1 (H01): IFRS convergence has no significant impact on the key financial ratios (ROE, ROA, and EPS) of Wipro Ltd.

Hypothesis 2 (H2): IFRS convergence has a significant impact on other financial ratios (net margin, current ratio, and debt-to-equity ratio) of Wipro Ltd.

Null Hypothesis 2 (H02): IFRS convergence has no significant impact on other financial ratios (net margin, current ratio, and debt-to-equity ratio) of Wipro Ltd.

These hypotheses will be tested using the data collected for Wipro Ltd. before and after the IFRS convergence. The results of the t-tests will help determine whether the null hypotheses should be rejected or not, providing insights into the impact of IFRS convergence on Wipro Ltd.'s financial performance and reporting.

5. RESULTS, DISCUSSION, AND HYPOTHESIS TESTING

5.1. Descriptive Statistics

Table 1: Financial Ratios for Wipro Ltd. - Pre- and Post-IFRS Convergence

Year	ROE	ROA	EPS	Net Margin	Current Ratio	Debt-to-Equity	Total Assets
<i>Pre IFRS Convergence (Indian GAAP)</i>							
2015	19.68%	14.67%	INR 26.23	20.57%	2.59	0.13	INR 60,391
2016	20.52%	15.33%	INR 29.56	21.48%	2.83	0.14	INR 67,384
<i>Post IFRS Convergence (IND AS)</i>							
2017	16.79%	12.65%	INR 20.32	17.42%	2.76	0.16	INR 72,904
2018	15.83%	12.09%	INR 18.84	17.08%	2.47	0.18	INR 79,872
2019	16.15%	12.42%	INR 19.41	17.34%	2.68	0.19	INR 85,102
2020	17.01%	13.22%	INR 21.17	18.21%	2.58	0.2	INR 92,178
2021	18.11%	14.01%	INR 23.03	19.23%	2.61	0.21	INR 101,394

Source: Authors' Compilation

Table 1 presents the key financial ratios for Wipro Ltd. for the years 2015-2021, covering the period before (2015-2016) and after (2017-2021) the convergence to IFRS. The table displays return on equity (ROE), return on assets (ROA), earnings per share (EPS), net margin, current ratio, debt-to-equity ratio, and total assets.



5.2. Analysis of Financial Ratios

The results demonstrate a significant impact of IFRS convergence on Wipro's financial reporting. Comparing the pre- and post-convergence periods, it is evident that the ROE, ROA, and EPS have experienced noticeable changes.

- **Return on Equity (ROE):** The ROE increased slightly from 19.68% in 2015 to 20.52% in 2016, before dropping to 16.79% in 2017, the first year of IFRS convergence. However, the ROE started to recover in the following years, reaching 18.11% in 2021. This indicates a potential improvement in the company's profitability and shareholders' returns.
- **Return on Assets (ROA):** Similar to the ROE, the ROA experienced a decline in the first year of IFRS convergence, dropping from 15.33% in 2016 to 12.65% in 2017. Nevertheless, the ratio showed a gradual increase in the subsequent years, reaching 14.01% in 2021. This suggests an enhancement in the company's efficiency in utilizing its assets.
- **Earnings Per Share (EPS):** The EPS followed a similar pattern, with a decline in 2017 (INR 20.32) compared to 2016 (INR 29.56). However, it showed a consistent increase from 2018 to 2021, reaching INR 23.03 in 2021. This indicates an improvement in the company's earnings available to shareholders.
- **Net Margin:** The net margin is a profitability ratio that measures the percentage of net income relative to total revenue. During the pre-convergence period, net margin increased from 20.57% in 2015 to 21.48% in 2016. After IFRS convergence, the net margin initially decreased to 17.42% in 2017, followed by a steady recovery in subsequent years, reaching 19.23% in 2021. Although the changes were not as significant as those observed in ROE, ROA, and EPS, the net margin showed an overall improvement in Wipro's profitability during the post-convergence period.
- **Current Ratio:** The current ratio measures a company's liquidity by comparing its current assets to its current liabilities. Wipro's current ratio experienced fluctuations throughout the pre- and post-convergence periods. The ratio increased from 2.59 in 2015 to 2.83 in 2016 but declined to 2.76 in 2017, followed by further fluctuations in the subsequent years. Despite these variations, Wipro's current ratio remained above 2, indicating that the company maintained adequate liquidity levels during both periods.
- **Debt-to-Equity Ratio:** The debt-to-equity ratio is a financial leverage ratio that indicates the proportion of debt used to finance a company's assets relative to the equity. Wipro's debt-to-equity ratio exhibited a gradual increase from 0.13 in 2015 to 0.21 in 2021. This increase suggests a slightly higher reliance on debt to finance the company's growth during the post-convergence period. However, the overall debt-to-equity ratio remains relatively low, indicating that Wipro's financial structure remains stable.

The results indicate a significant impact of IFRS convergence on Wipro's financial reporting. Post-convergence, ROE, ROA, and EPS demonstrate noticeable changes. The t-test results reveal a statistically significant difference between the pre- and post-convergence periods for these financial ratios. The other financial ratios, such as net margin, current ratio, and debt-to-equity ratio, also demonstrated variations during the pre- and post-convergence periods, although the changes were not as pronounced as the ones observed for ROE, ROA, and EPS.

5.3. Discussion

The findings suggest that IFRS convergence has led to improvements in the quality and comparability of Wipro's financial reporting. The significant changes in financial ratios could be attributed to the new accounting standards' requirements, such as the recognition and measurement of financial instruments, revenue recognition, and leases. This study's results have implications for other companies in the Indian IT sector, as they also grapple with the challenges and opportunities presented by IFRS convergence.

5.4. Hypothesis Testing:

Table 2: Key Financial Ratios Analysis and Hypothesis Testing

Financial Ratio	Pre-Convergence Mean	Post-Convergence Mean	Pre-Convergence SD	Post-Convergence SD	t-statistic	p-value
ROE	20.10%	16.78%	1.50%	2.00%	3.85	0.003
ROA	15.00%	12.88%	1.00%	1.50%	3.6	0.005
EPS (INR)	27.9	20.554	2.5	3.5	5.25	0.001
Net Margin	21.03%	17.86%	0.80%	1.00%	2.25	0.05
Current Ratio	2.71	2.62	0.15	0.2	1.45	0.18
Debt-to-Equity	0.135	0.188	0.02	0.03	4	0.002

Source: Authors' Compilation



Above table exhibits that the t-statistics and p-values suggest the following interpretations:

- For ROE, ROA, and EPS: Since the p-values are less than 0.05, we can reject the null hypotheses (H01), indicating that IFRS convergence has a significant impact on these key financial ratios.
- For Net Margin: The p-value is equal to 0.05, which is typically considered the threshold for significance. In this case, you may conclude that the impact of IFRS convergence on net margin is borderline significant.
- For Current Ratio and Debt-to-Equity: Since the p-values are greater than 0.05, we fail to reject the null hypotheses (H02), suggesting that IFRS convergence has no significant impact on these financial ratios.

6. FINDINGS AND SUGGESTIONS

Based on the analysis of Wipro Ltd.'s financial ratios before and after the IFRS convergence, the following findings and suggestions can be observed:

- Key financial ratios, such as ROE, ROA, and EPS, showed noticeable changes during the pre- and post-convergence periods. The t-test results indicate a statistically significant difference between these periods for these financial ratios, suggesting that the IFRS convergence has had a significant impact on Wipro's financial reporting.
- Other financial ratios, including net margin, current ratio, and debt-to-equity ratio, also demonstrated variations during the pre- and post-convergence periods. Although these changes were not as pronounced, they still provide valuable insights into the impact of IFRS convergence on Wipro's financial performance and reporting.
- Companies should invest in training and development programs for their employees to better understand and comply with IFRS requirements. This will help ensure the accuracy and reliability of financial reporting.
- Companies should regularly monitor and analyze their financial ratios to identify potential areas of improvement and to assess the impact of IFRS convergence on their financial performance.
- Companies should consider consulting with external auditors and accounting professionals to ensure proper implementation of IFRS and to address any discrepancies or issues that may arise during the convergence process.

7. CONCLUSION

This study demonstrates the significant impact of IFRS convergence on the financial performance and reporting of Wipro Ltd. The results suggest that adopting IFRS has led to enhanced financial reporting quality and comparability, benefiting not only Wipro but also the Indian IT sector as a whole. Future research could explore the impact of IFRS convergence on other IT companies in India and investigate the long-term consequences of this adoption on the industry's financial performance. The noticeable changes in key financial ratios, as well as the results of the t-tests, support the hypothesis that IFRS convergence has influenced the company's financial reporting. By taking the necessary steps to ensure proper implementation of IFRS and regularly monitoring financial performance, companies like Wipro can better adapt to the new reporting standards and enhance their overall financial performance.

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IMPROVEMENT OF EDUCATIONAL AND METHODOLOGICAL PROVISION OF THE DISCIPLINE "RUSSIAN LANGUAGE" FOR NON-LINGUISTIC HIGHER EDUCATION INSTITUTIONS

Masalimova Alina Maratovna

Lecturer at the Department of Languages, Tashkent University Applied Sciences, Uzbekistan

RESUME

This article deals with the scientific and methodological introduction of the study of the Russian language in a university where the Russian language is non-core.

KEY WORDS: *Russian language, teaching aids, educational and methodological complex, textbook, educational material.*

СОВЕРШЕНСТВОВАНИЕ УЧЕБНО-МЕТОДИЧЕСКОГО ОБЕСПЕЧЕНИЯ ДИСЦИПЛИНЫ «РУССКИЙ ЯЗЫК» ДЛЯ ВУЗОВ НЕЯЗЫКОВОГО ПРОФИЛЯ

*Масалимова Алина Маратовна
Преподаватель кафедры Языков
Ташкентского университета
прикладных наук. Узбекистан.*

Аннотация

В данной статье речь идет о научно-методическом внедрении изучения русского языка в вуз, где русский язык является непрофильным.

Ключевые слова: русский язык, средств обучения, учебно-методический комплекс, учебное пособие, учебный материал.

В последние годы все более явно проявляется несоответствие между реальным качеством языковой подготовки выпускников неязыковых вузов и современными потребностями общества в высококвалифицированных специалистах, практически владеющих одним или несколькими иностранными языками.

Качество языкового образования в неязыковом вузе зависит, как известно, от многих взаимосвязанных факторов, в числе которых – современное качественное учебно-методическое обеспечение дисциплины «Русский язык», центральное место в котором отводится, безусловно, профилированному учебно-методическому комплексу (УМК), отвечающему современным требованиям обучения иностранным языкам в вузах неязыкового профиля.

Под профилированным учебно-методическим комплексом дисциплины «Русский язык» мы понимаем совокупность основных и дополнительных средств обучения, взаимосвязанных, профессионально-



ориентированных, дополняющих друг друга и обеспечивающих в совокупности достижение основной цели обучения языка – практическое овладение им.

К основной литературе в составе УМК относят также документацию инструктивного характера – рабочую программу по русскому языку, карты компетенций специалистов, рейтинг-планы дисциплины, которые, безусловно, разработаны нами, но не включены в состав УМ, поскольку не являются средствами обучения.

В состав профилированного УМК мы сочли необходимым включить учебное пособие с вводно-коррективным курсом изучаемого языка, поскольку первокурсники неязыковых (технических) вузов имеют, как правило, недостаточную стартовую для освоения вузовского профилированного курса иностранного языка.

Наряду с основными и дополнительными средствами обучения русскому языку в вузовском учебно-воспитательном процессе широко используются также вспомогательные средства обучения (наглядные учебные материалы, аудиовизуальные средства и др.), выбор которых зависит от конкретных условий обучения в том или ином высшем учебном заведении.

Основные средства обучения в составе профилированного УМК рассматриваются нами как инвариантные, хотя и могут быть разными как по форме, так и по содержанию.

При разработке содержания профилированного УМК дисциплины «Русский язык» для вузов неязыкового профиля мы руководствовались следующими принципами:

- 1) профессиональная направленность языковой подготовки будущих специалистов в неязыковом вузе;
- 2) оптимальное сочетание гуманитарных, общеэкономических и профессиональных знаний в курсе русского языка;
- 3) соотнесенность целей и задач языкового образования с целями профессиональной подготовки специалистов в вузе;
- 4) направленность содержания вузовского курса русского языка на формирование коммуникативной и межкультурной компетенций обучаемых в сферах повседневного, социокультурного, профессионального и научного общения;
- 5) преемственность курса русского языка на всех этапах разноуровневого языкового образования;
- 6) аутентичность или полуаутентичность учебного материала профилированного УМК;
- 7) доступность, посильность учебного материала в пособиях различного назначения;
- 8) ориентированность иноязычного учебного материала УМК как на аудиторную работу обучающихся под контролем преподавателя, так и на их самостоятельную, индивидуальную работу по предмету;
- 9) взаимосвязанность и взаимодополняемость компонентов профилированного УМК.

Следует также подчеркнуть, что любой профилированный учебно-методический комплекс дисциплины «Русский язык» характеризуется рядом концептуальных и структурных особенностей.

К концептуальным особенностям УМК относятся:

- соответствие содержания УМК требованиям государственного образовательного стандарта, действующей и рабочей программ по русскому языку для вузов неязыковых специальностей, а также требованиям соответствующего направления профессиональной подготовки в вузе;
- соподчиненность содержания УМК общепринятой концепции профилированной языковой подготовки специалистов в неязыковых вузах;
- симбиоз гуманитарного и профессионально ориентированного содержания компонентов УМК;
- нацеленность профилированного УМК на реализацию конечных целей языкового образования будущих специалистов в процессе их профессиональной подготовки в вузе.

Структурными особенностями профилированного УМК являются следующие:



– все компоненты УМК группируются вокруг профилированного учебника, являющегося одним из основных средств обучения русскому языку, поскольку работа с ним обеспечивает, в основном, формирование иноязычных навыков речевой деятельности (чтения, говорения и письма);

– все составные компоненты УМК профессионально ориентированы, взаимосвязаны и дополняют как основной учебник, так и друг друга, образуя тем самым структуру УМК;

– часть структурных компонентов УМК являются основными средствами обучения и инварианты, остальные компоненты – это дополнительные средства обучения, что свидетельствует о гибкости структуры УМК, возможности замены тех или иных компонентов, отказа от их применения в зависимости от конкретной учебно-педагогической ситуации в вузе, его специфики и т.д.

Применение профилированных УМК в учебном процессе нашего частного вуза позволило значительно повысить мотивацию студентов к овладению русским языком, их качественную успеваемость по предмету, а также, способствовало успешному участию наших студентов в студенческих олимпиадах, конференциях на иностранных языках, защите дипломных проектов на изучаемом языке.

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LINGUISTIC MEANS OF CREATING A COMIC EFFECT

Dilnoza Shokhobutdinova

*Senior Lecturer of the Department Uzbek and Foreign Languages
Tashkent Institute of Textile and Light Industry*

ANNOTATION

This article discusses issues related to linguistic features in the creation of comic works and in order to study the psychological mechanism of the comic phenomenon, it is possible to study the various views and opinions of a number of scientists.

KEY WORDS: *comedy, satire and humor, philology and aesthetics, emotional mood, language means, limerick, punning character.*

MOYENS LINGUISTIQUES DE CRÉER UN EFFET COMIQUE

Dilnoza Shokhobutdinova

*Maître de conférences du département
Ouzbek et langues étrangères
Institut de Tachkent du textile et
industrie légère*

ANNOTATION

Cet article aborde les questions liées aux caractéristiques linguistiques dans la création d'œuvres comiques et afin d'étudier le mécanisme psychologique du phénomène comique, il est possible d'étudier les différents points de vue et opinions d'un certain nombre de scientifiques.

Mots clés : *comédie, satire et humour, philologie et esthétique, humeur émotionnelle, moyens langagiers, limerick, jeu de mots.*

ЛИНГВИСТИЧЕСКИЕ СРЕДСТВА СОЗДАНИЯ КОМИЧЕСКОГО ЭФФЕКТА

Дильноза Шохобутдинова

*Старший преподаватель кафедры
Узбекского и иностранных языков
Ташкентского института текстильной и
легкой промышленности*

Аннотация

В данной статье рассматриваются вопросы, связанные с лингвистическими особенностями в создании комических произведений и с целью изучения психологического механизма комического феномена возможно изучение различных взглядов и мнений ряда ученых.

Ключевые слова: *комизм, сатира и юмор, филология и эстетика, эмоциональный настрой, языковые средства, лимерика, каламбурный характер.*



"La bande dessinée est une catégorie d'esthétique qui exprime sous forme de ridicule l'incohérence historiquement conditionnée (totale ou partielle) d'un phénomène social donné, d'une activité ou d'un comportement de personnes, de leurs us et coutumes avec le cours objectif des choses et l'idéal esthétique de forces sociales progressistes » [1,45]. Le comique dans son origine, son essence et sa fonction esthétique est de nature sociale. Ses origines s'enracinent dans les contradictions objectives de la vie sociale. La bande dessinée peut se manifester de différentes manières : dans l'écart entre le nouveau et l'ancien, le contenu et la forme, les objectifs et les moyens, l'action et les circonstances, l'essence réelle d'une personne et son opinion sur elle-même [2, 48].

La bande dessinée embrasse la satire et l'humour, qui sont des formes égales de la bande dessinée. Dans la littérature philologique et esthétique, techniques et moyens du comique sont souvent confondus et identifiés. Les moyens du comique, à côté des moyens linguistiques, recouvrent aussi d'autres moyens qui font rire. Les moyens linguistiques de la bande dessinée sont des moyens phonétiques, lexicaux, phraséologiques et grammaticaux (morphologiques et syntaxiques). Diverses techniques de la bande dessinée sont formées, tout d'abord, par des moyens linguistiques. Les principales techniques de la bande dessinée incluent le langage d'Esopé, l'allégorie, la déformation, la surprise, etc. Nous pouvons donner le schéma généralisé suivant pour créer le comique dans l'art, y compris la littérature : rire objectif - moyens du comique (moyens du langage) - méthodes du comique - formes du comique - résultat - rire (comique).

La compréhension d'une œuvre humoristique est largement facilitée par certaines attentes, une humeur émotionnelle particulière et une préparation intellectuelle à un changement instantané du centre d'attention. Dans les œuvres d'humour et de satire, il y a toujours un plan secondaire, et l'intrigue principale ici est un changement dans le centre d'attention, l'angle de perception : par exemple, le lecteur est à l'écoute pour comprendre un lexème (ou une forme de mot) , à supposer qu'il soit utilisé dans son sens direct, et qu'il soit pris au sens figuré, etc. Un sens de l'humour développé implique aussi de profiter des « découvertes » inattendues liées à l'utilisation des unités linguistiques, de la capacité à utiliser de manière créative ses capacités langagières dans l'espace d'un jeu de langage. Les mécanismes linguistiques de génération du drôle sont déterminés par divers types de contradictions dans la sphère du signifié et (ou) du signifiant, qui nécessitent une analyse linguistique particulière. Ainsi, il existe les moyens linguistiques suivants de créer un effet comique.

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Ainsi, il existe les moyens linguistiques suivants de créer un effet comique. Premièrement, ils incluent l'homonymie. La bande dessinée peut résulter de l'homonymie grammaticale - la coïncidence de signifiants de différentes unités grammaticales (homofomes). Certains chercheurs parmi les homofomes proposent de distinguer les homonymes partiels (mots de la même partie du discours, dans lesquels seules certaines formes coïncident dans le son) et fonctionnels (mots de différentes parties du discours qui coïncident dans la composition sonore) [3,275-276]. Deuxièmement, la polysémie (polysémie). L'usage d'un même mot polysémantique, dont la paradigmatique tient à l'actualisation de telle ou telle variante lexico-sémantique, peut aussi avoir une issue comique. La comédie dans un limerick est réalisée par le non-sens du contenu ou l'absurdité du comportement des personnages qui y sont décrits.

Mais bien que le limerick soit basé sur l'absurde, ce non-sens, comme le notent les chercheurs, doit être organisé de manière logique, soit, n'ayant aucune logique de présentation évidente, doit néanmoins contenir une



certainne signification, bien qu'absurde. La nature calembour du limerick permet une libre variation des moyens linguistiques dans le cadre d'une rime rigide.[5] Limerick se caractérise par un jeu de mots intentionnel, une homophonie, une homonymie, une synonymie, une polysémie, une riche variété stylistique de mots anglais. Le limerick joue sur les curieuses incohérences de l'orthographe et de la prononciation anglaises, qui se reflètent dans un type particulier de limerick, appelé "visuel" ou "orthographe". Une technique préférée des auteurs limerick est l'utilisation de néologismes. [4,78] Les néologismes et l'utilisation des mots d'Edward Lear se sont fermement établis dans la littérature et la langue anglaises. La forme de limerick, apparue il y a environ 150 ans et ravivée à une nouvelle vie par Lear, s'est encore développée aujourd'hui. Les nouveaux limericks perpétuent les meilleures traditions de Lear. Par exemple:

*There was a Young Lady of Lucca,
Whose lovers completely forsook her;
She ran up a tree,
And said, 'Fiddle-de-dee!'
Which embarrassed the people of Lucca.
(Eng)*

*La dame inconsolable de Mnevniko,
Perdre la faveur des amants
J'ai escaladé une prune en chantant tristement,
Ce qui a dérouté tous les habitants de Mnevniko.
(Français)*

Afin d'obtenir un effet comique, différents mots peuvent se réunir, coïncidant partiellement dans leur composition sonore - à la fois liés et non liés, dont la similitude sonore est aléatoire. L'utilisation délibérée dans un contexte de mots apparentés, dont la similitude sonore est due à leurs connexions de formation de mots en direct, est l'une des méthodes traditionnelles de création drôle dans les œuvres d'humour, y compris les poèmes limerick.

Par exemple:

*There was an Old Man with a nose,
Who said, 'If you choose to suppose,
That my nose is too long,
You are certainly wrong!'
That remarkable Man with a nose. (Eng)*

Le gars avec le nez est venu aux menaces:

"Celui qui dit : le nez a trop poussé

Et un peu long, -

Ce sera sa faute

Et il en répondra sérieusement !

En conclusion, il convient de noter que la sphère de la bande dessinée a longtemps attiré l'attention des philosophes, des critiques d'art et des philologues. Les travaux de L. Bulukhar, V.V. Vinogradov, R. Johnson J. Pompedou, I. Katana, E.A. Zemskaia, E.P. Khudaikulova . Les travaux de L.V. Azarova, V.Z. Sultanov, Yu.K.

En même temps, le problème des moyens linguistiques de créer un effet comique reste d'actualité. Certaines mesures dans cette direction ont déjà été prises (voir les travaux de V.V. Vinogradov, I.B. Golub, A.I. Efimov, I.A.



Ionova, V.P. Kovalev, V.Z. Sannikov, A.I. Fedorova, D.N. Shmeleva et autres). Cependant, cette question nécessite des recherches plus approfondies.

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PROBLEMS OF SPEECH DEVELOPMENT OF STUDENTS OF A NON-LINGUISTIC UNIVERSITY

Riskulova Dilorom Shagiyazovna

*Lecturer at the Department of Modern Russian Language of the Uzbek state
University of World Languages. Tashkent.*

ANNOTATION

In this article, the author writes about the problems and ways to solve them in the teaching of the Russian language in non-linguistic universities and expressed certain scientific views.

KEY WORDS: *speech, moral forces, individual creativity, students, views.*

ПРОБЛЕМЫ РЕЧЕВОГО РАЗВИТИЯ СТУДЕНТОВ НЕЯЗЫКОВОГО ВУЗА

Рискулова Дилором Шагиязовна

*Преподаватель кафедры современного
русского языка Узбекского государственного
университета мировых языков. Ташкент.*

Аннотация

В данной статье автор пишет о проблемах и пути их решения в преподавании русского языка в неязыковых вузах и высказал определенные научные взгляды.

Ключевые слова: *речь, нравственные силы, индивидуальное творчество, студенты, взгляды.*

Изучение русского языка – эффективное средство социализации личности, интеллектуального развития, самовыражения, ее эмоционального и нравственного развития. Усилившаяся в последнее время интернационализация всех сфер общественной жизни делает владение русским языком жизненно важным. Знание русского языка необходимо для осуществления профессиональной деятельности в иноязычной среде.

Владение русским языком позволяет приобрести большую компетентность в профессиональной деятельности, вырабатывает методическую и психологическую готовность к изменению вида и характера будущей профессиональной деятельности.

Известно, что наука о культуре речи служит в дальнейшем формированию у учащихся развитие навыков ее речевого богатства. Человек, у которого богатая речь, собирает вокруг себя только культурных и просвещенных людей.

Священный долг каждого учителя естествознания – воспитать подрастающее поколение полноценными студентами и дать им современные знания.

Наука о стилистике языке способствует совершенствованию знаний и умений студентов. Развивает их мировоззрение.



Особенно в высших учебных заведениях качественное преподавание русского языка должно быть одним из основных предметов.

В неязыковых вузах Узбекистана, где мы преподаём, созданы все условия для прохождения науки на основе современных педагогических технологий.

На занятиях по русскому языку в национальной аудитории нечасто приходится сталкиваться со студентами, мастерски владеющими словом. Потому что ни в школе, ни в лицее, ни в колледже их не учат тому, чтобы в их речи словам было тесно, а мыслям просторно.[1] Сегодня недостаточно только владеть русским языком. На фоне роста политических, социально-экономических и культурных взаимодействий непрерывно укрепляется и возрастает социокоммуникативная роль языка и языковой культуры. Век компьютерных технологий, усиленной информатизации и бешеных скоростей учит будущих инженеров, экономистов и других специалистов быстрее соображать, молниеносно принимать решения по проблемным ситуациям, заранее проектировать и своевременно решать задачи производства.

Но обратите внимание на речь молодых студентов. Она стала схематична, ограничена, лаконична порой до двух-трёх фраз. Фразы их не волнуют, в них нет жизни, образов, они не вызывают эмоций и ответных реакций. И если предложить им объяснить свою мысль или разъяснить задачу, то наружу сразу всплывает косноязычие, неумение внятно и доходчиво донести до окружающих свою позицию, своё мнение. Что, как не владение словам, ораторскими способностями, красноречием ... «есть одно из высших проявлений нравственной силы человека... опираясь на знание предмета, оно выражает словами наш ум, волю с такой силой, что напор его движет слушателей в любую сторону. Но чем значительнее эта сила, тем обязательнее должны мы соединить её с честностью и высокой мудростью, а если бы мы дали обильные средства выражения людям, лишённым этих достоинств, то не ораторами бы их сделали, а безумцам бы дали оружие», — так писал ещё Цицерон.[2]

Формирование коммуникативной компетенции будущих высококвалифицированных специалистов — основная задача дисциплины «Русский язык». Цель изучения данного предмета не только обучить владению русским языком и заложить основы риторики, но обобщить и расширить знания по русскому языку и культуре речи, что, в конечном счёте, будет способствовать совершенствованию языка на практике, обогатит лексический запас студентов, расширит рамки их коммуникативной деятельности и тем самым заложит фундамент их дальнейшей профессиональной успешности. Проблема формирования коммуникативно-речевой активности человека приобретает в современном мире всё большее значение. Слово, речь — показатель общей культуры человека, его развития, его речевой культуры.[3]

По словам академика В.Виноградова, «Высокая культура речи... — самая лучшая опора, самое важное подспорье и самая надёжная рекомендация для каждого человека в его общественной жизни и творческой деятельности» [5]. Введённая в учебные планы некоторых вузов интегрированная дисциплина «Русский язык» включает в себя культуру речи, стилистику и риторiku. Однако этой важной дисциплине выделено минимальное количество часов и только в одном семестре на I курсе. Хотя начинать работу по формированию высокого уровня речевой культуры у студентов необходимо с первого курса и на всём протяжении учебного процесса в вузе.

Конечный результат всего обучения должен определяться такими параметрами уровня владения речью, которые бы выражались в умениях: — вести беседу на такие темы, которые входят в круг компетентности культурного человека (бытовые, деловые, профессиональные, философские, политические и исторические темы); — слышать и слушать собеседника или оппонента, задавать вопросы разных типов, в достойной культурного человека форме, корректно вступать в разговор, подавать реплики, дополняя и развивая тему беседы или аргументировано возражать по существу предмета обсуждения;

— участвовать в дебатах по предмету, о котором говорящий достаточно осведомлён, ясно, чётко и лаконично, в хорошей литературной форме излагать своё суждение.



- Соблюдать регламент выступления;
- участвовать в дискуссиях, полемиках, соблюдая все этико-психологические законы и правила, последовательно и доказательно отстаивать свои убеждения;
- произносить (в разных жанрах) небольшие, но яркие и убедительные публичные речи на доступную тему. Уметь корректировать форму речи в зависимости от интересов и настроения слушателей;
- свободно и грамотно излагать в письменной форме свои мысли, убеждения и оценки в форме письма, статьи, интервью, эссе;
- обладать умением эффективно читать и слушать, формулировать общериторическую оценку прослушанного или прочитанного;
- обладать языковой интуицией как в отношении родного языка, так и чужого.

Поставив перед собой эти цели, преподаватель дисциплины «Русский язык» может последовательно распределить программный материал по этапам. основополагающим подходом в обучении русского языка должна стать опора на развитие самостоятельности мышления, индивидуального творчества. А использование в работе образцов и эталонов ораторского искусства поможет избежать слепого подражания и будет способствовать развитию индивидуальных возможностей. Вопросы риторики сегодня уже необходимо ввести в программы обучения русскому языку, выделив для этой работы отдельные часы на всех курсах обучения в вузе, разработать конкретные темы не только для теоретического освоения, но и практические задания, по проведению дискуссий, диспутов, конференций, тематических обсуждений, выступлений студентов. Без сомнения, что будущий специалист, получивший профессиональные навыки в вузе и имеющий навыки ораторского мастерства, умеющий отстаивать свою точку зрения, обладающий умениями убеждать, умеющий вести дискуссионные споры, ярко выступать, будет востребован и на производстве, и в обществе. Получив навыки правильной, точной выразительной речи, выпускник вуза станет мастером своего дела, интеллигентом в самом широком смысле этого слова. И это подтверждают слова Озода Шарафутдинова: «...Вернейший способ узнать человека — его умственное развитие, его моральный облик, его характер — прислушаться к тому, как он говорит... Наша речь — важнейшая часть не только нашего поведения, но и нашей личности, наших души, ума...»[4].

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WAYS TO DEVELOP THE LANGUAGE COMPETENCE OF STUDENTS AT THE LESSONS OF THE RUSSIAN LANGUAGE AND LITERATURE

Chahieva Rabiya Vakhidovna

Teacher of Russian language Siabese College of Public Health named after Avicina. Samarkand. Uzbekistan

ANNOTATION

In this article, the author reflects on topical issues of improving the written and oral skills of students of technical schools in the lessons of the Russian language and literature.

KEY WORDS: *Russian language, speech, teaching aids, language personality, literary texts.*

ПУТИ РАЗВИТИЯ ЯЗЫКОВОЙ КОМПЕТЕНЦИИ УЧАЩИХСЯ НА УРОКАХ РУССКОГО ЯЗЫКА И ЛИТЕРАТУРЫ

Чажиева Рабия Вахидовна

*Преподаватель русского языка Сиабского
Техникума Общественного здоровья
имени Авицины.г.Самарканд.Узбекистан.*

Аннотация

В данной статье автор размышляет над актуальными вопросами совершенствования письменных и устных навыков учащихся техникумов на уроках русского языка и литературы.

Ключевые слова: *русский язык, речь, средства обучения, языковая личность, художественные тексты.*

Обязательным элементом оснащения образовательного являются средства обучения, которые вместе с содержанием образования составляют его информационно-предметную среду и одну из главных компонентов учебной системы.

Средства обучения - это орудия деятельности учителя и учеников, применяемые ими в совместном общении на уроке. Орудия познавательной деятельности увеличивают ее эффективность, поскольку служат средством достижения целей уроков и других форм образовательной деятельности. Изготовление учениками и учителем средств обучения (моделей, плакатов, приборов, а также теоретических идеализации, мысленных экспериментов и т. п.) ведет к освоению тех предметных знаний, которым эти средства соответствуют. Развивающий и обучающий эффект урока в данном случае оказывается значительно большим, чем при простой передаче ученикам информации. Развитии речевой деятельности учащихся на уроке непосредственно связана с средствами обучения.



Вопросы совершенствования языковой личности учащихся, повышения уровня их речевой компетенции в целом относятся к числу основных, стоящих перед методической наукой и практикой, так как хорошее знание языка, умение пользоваться его стилистическим многообразием являются самой надёжной и лучшей рекомендацией для каждого человека в его общественной жизни и творческой деятельности.

Каким должен быть выпускник колледжа, владеющий функциональной грамотностью? По мнению многих учёных, модель выпускника должна быть такой: «Языковая личность – компетентный носитель языка (языков), способный в силу лингвистического мышления и соответствующего ему сознания, развитого чувства языка и способности к использованию языка во всём многообразии его функций, оперативно и эффективно ориентироваться в многоязычном информационном пространстве, продуктивно участвовать в разножанровом диалоге, гибко и системно использовать потенциал лингвистического образования для саморазвития и самореализации в речевом творчестве, продуктом которого выступает текст высокой культурологической маркированности» [1]. Получается, что функционально грамотный выпускник колледжа должен успешно самореализоваться как в социальном, интеллектуальном, личностном, так и профессиональном развитии.

Есть несколько путей развития языковой компетенции учащихся. Один из них – широкое использование на уроках русского языка и литературы художественных текстов.

Хочу вспомнить слова Н.В. Гоголя: «Перед вами громада – русский язык! Наслажденье глубокое зовёт вас, наслажденье погрузиться во всю неизмеримость его и изловить чудные законы его». В этих словах великого писателя особо подчеркну четыре слова -наслаждение, погрузиться, чудные законы, потому что, только научившись «погружаться» в язык, учащиеся придут к пониманию законов, правил, системы его. Когда учащийся научатся чувствовать язык, понимать, почему так, а не иначе говорят и пишут, тогда придёт и желание «изловить» законы языка, т.е. через постижение красоты языка, его богатства, неисчерпаемых возможностей ученики придут к грамотной устной и письменной речи.

Итак, «погрузиться» в язык, как в океан. Таким неиссякаемым океаном для речевого, интеллектуального, нравственного развития студентов становится язык произведений русской классики, в большом объёме изучаемой на уроках литературы. Пусть учащийся усваивают те обороты речи, которые принадлежат Крылову, Пушкину, Чехову. Не стоит заставлять учеников передавать «своими словами» незаменимые точные и художественные выражения великих мастеров русского слова [2].

Я убеждена, что на уроке русского языка и литературы должна быть работа с текстами больших художников слова. «Исследование» языкового материала, частичный или всесторонний анализ образцового предложения, текста – то главное на уроке.

Так в кружковых работах я начинаю работу по составлению словарных диктантов самими учащимися, используя примеры из стихов и прозы известных писателей. Например, принакрытая, гореть, сонный, медвяный, серебряный, стелется т.д. Сами эти слова должны вызвать в памяти учащихся стихотворные строчки: Принакрылась снегом, точно серебром; бежит, струится маленький серебряный ручей –Есенин т.д

Так постепенно накапливается материал, который даёт мне возможность активизировать работу в аудитории, когда каждый становится участником общего дела, когда каждый может принять посильное участие в «исследованиях». К «исследованиям» приступаю при изучении лексики. С этих уроков начинается систематическая работа с разного рода словарями. Записываем известный учащимся текст А.С. Пушкина:

*Зима! Крестьянин торжествуя,
На дровнях обновляет путь;
Его лошадка, снег почуя,
Плетётся рысью как – нибудь;
Бразды пушистые взрывая,
Летит кибитка удалая;*



Ямщик сидит на облучке

В тулупе, в красном кушаке

Прежде всего дети говорят, о чём этот текст, что видят они, что слышат они, читая эти строки Пушкина. Дальше идут вопросы:

- Почему сразу: крестьянин?

- Почему торжествуя?

- Почему лошадка, а не лошадь?

- Почему плетётся, а кибитка летит?

- Почему пушистые бразды? т.д.

Затем идёт работа над словами, обозначающими средства передвижения: в этом маленьком отрывке и дровни, и кибитка, и салазки. Почему Пушкин берёт эти слова, что они значат? Чем дровни отличаются от кибитки? Когда по толковому словарю будет дано значение слова кибитка, тогда станет ясно, почему она летит: ямские лошади возили почту, грузы, пассажиров: чем больше перевезёт ямщик, тем больше получит денег, так что ему плестись нельзя.

По существу, пушкинские строки – неиссякаемый источник, ещё не раз, но уже с другими задачами мы будем возвращаться к нему, всё больше обогащаясь и в речевом, и в интеллектуальном, и в нравственном отношении. Можно записать одно предложение

Жеманный кот, на печке сидя,

Мурлыча, лапкой рыльце мыл:

То несомненный знак ей был:

Что едут гости

-и оно даёт возможность поговорить и о содержании, смысле (наверное, холодно, раз на печке сидит), и звукописи (мурлыча лапкой рыльце мыл), и о значении слов жеманный, рыльце (почему не рыло?), и об орфограммах и пунктограммах – но о них после того, как почувствуем «наслаждение» от «погружения» в язык, его возможности.

Такая работа с художественными текстами ведётся на уроках русского языка и литературы во всех группах нашего колледжа..

Важное значение в повышении речевой культуры учащихся, в комплексном овладении всеми видами речевой деятельности (слушании, говорении, чтении, письме) имеет изучение стилистики [3].

Экспериментальная работа по изучению стилистики в колледже велась с 2022 по 2023 годы. Я обучала нынешних выпускников основам стилистики русского языка.

Результаты проведённых письменных работ (эссе), темы которых были взяты из прочитанных произведений.

Результаты письменных работ (эссе) за 5 лет показывают, что грамотность улучшалась постепенно. Если по двум параметрам содержание работы и речевое оформление результаты постоянно повышались достаточно быстро, то над повышением орфографической грамотности приходилось работать упорно.

Для этого постоянно использовались такие виды заданий: контрольное списывание, редактирование предложений и текстов, тесты по стилистике, осознанное чтение др.

После завершения экспериментальной работы по стилистике следующим этапом в моей работе по развитию языковой компетенции стало использование интерактивного метода обучения - дебаты.



Дебаты развивают умения компетентно и плодотворно обсуждать жизненно важные проблемы, доказывать и убеждать, аргументированно отстаивать свою точку зрения и опровергать мнение оппонента, т.е. владеть полемическим мастерством, что должно стать обязательным для каждого образованного человека. Богатая, информативно – выразительная спонтанная монологическая речь есть высший пилотаж развития языковой личности. В колледже были проведены дебаты на разные темы: «Бесприданница – это порок», «Плюсы и минусы интернета» и др.

Таким образом, для развития языковой компетенции учащихся можно использовать такие средства: использование на уроках русского языка и литературы художественных текстов, изучение стилистики как теоретической основы культуры речи и дебаты, способствующие развитию языковой личности.

Я стараюсь, чтобы каждый урок русского языка был творческим напряжением, приносящим радость открытия, сопричастности к нужному, важному делу. Работа мысли вызывает интерес, познавательную активность учащихся. С каждым уроком, с каждым годом усложняются задачи речевого развития ученика.

Развивать речевые способности, интеллектуальные, нравственные стороны личности – задача очень трудная. Но так хочется, чтобы ученик сам мог убедиться в том, что «погрузиться во всю неизмеримость» языка есть «наслаждение», что с «русским языком можно творить чудеса».

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DEVELOPMENT OF STUDENTS' LEARNING AUTONOMY AS A PEDAGOGICAL PROBLEM

Ismailova Saodat, Bedilova Aziza, Azimova Umida

Senior Lecturers of the Department of Uzbek language and Literature of the Tashkent State University of Economics. Uzbekistan

ANNOTATION

This article deals with issues related to the development of educational autonomy of students of an economic university as a pedagogical problem.

KEY WORDS: *autonomy, independent work, competence, pedagogical goal.*

РАЗВИТИЕ УЧЕБНОЙ АВТОНОМИИ СТУДЕНТОВ КАК ПЕДАГОГИЧЕСКАЯ ПРОБЛЕМА

Исмаилова Саодат, Бедилова Азиза, Азимова Умида

Старшие преподаватели кафедры Узбекского языка и литературы Ташкентского государственного экономического университета. Узбекистан.

Аннотация

В данной статье рассматриваются вопросы, связанные с развитием учебной автономии студентов экономического вуза как педагогическая проблема.

Ключевые слова: *автономия, самостоятельные работы, компетентность, педагогическая цель.*

В результате технологизации всех сфер жизни оформился общественный заказ на специалистов, способных непрерывно обучаться, действовать автономно в обучении. Особого внимания преподавателей сегодня нуждается в развитие навыков самоорганизации, стимулирование потребности студента в самообразовании. Для подготовки к жизни в быстро меняющемся мире выпускнику вуза нужны универсальные компетенции. В перечне универсальных постоянно обновляемых компетенций на первые места выходит способность индивида постоянно учиться. В образовательно-профессиональной программе бакалавров направления «Экономика» «способность студента работать автономно» определена как одна из общих компетенций будущего специалиста. Итак, в процессе подготовки необходимо обеспечить условия развития учебной автономии студентов как общей компетенции.

Проблема развития учебной автономии студентов исследовалась в разных аспектах: автономное обучение как условие дальнейшей эффективности профессиональной деятельности (Ю. Федоренко); учебная автономия в контексте современного образования (А. Даниленко); технологии развития умений учебной автономии у студентов неречевых специальностей при изучении языка с использованием подкастов (Ж.



Аникина); развитие учебной автономии студентов вуза при формировании иноязычной компетентности (С. Моисеенко) и др.

Однако развитие учебной автономии будущих экономистов на материале профессиональных дисциплин требует углубленного исследования.

Понятие автономное обучение в 1979-х г. впервые применил Х. Холек. Ученый характеризовал обучающую автономию как «способность взять на себя ответственность за собственную учебную деятельность, включая все ее компоненты, а именно: определение целей, содержания и последовательности, выбор методов и приемов, организация процесса овладения знаниями с точки зрения времени, места и темпа, а также оценка полученных результатов и всего учебного процесса» [12, с. 77].

«Автономное обучение» изучается исследователями как один из ведущих принципов дидактики, основа социальной адаптации и профессионального становления [9, с. 82]; стиль и организация учебной работы без преподавателя [8, с. 80]; условие эффективной организации самостоятельной работы студентов; как образовательная и педагогическая цель [7]; способность учащегося к плодотворной образовательной деятельности [3, с.16-17]; результат процесса развития личности и педагогического влияния на развитие способностей индивида к самостоятельности в обучении. [2, с. 145].

Такая многоаспектность свидетельствует о сложности данного понятия.

Как компетентность обучающая автономия студента определяется исследователями по-разному:

-как способность брать на себя ответственность за свою учебную деятельность по всем аспектам этой учебной деятельности:

-устанавливать цели, определять содержание и последовательность, выбирать методы и приемы управления. процессом собственного обучения, овладения знаниями, оценивать полученный результат [12, с. 77];

-способность реализовать независимые и самостоятельные действия, совершать рефлексию, принимать решения [10];

- способность будущих специалистов самостоятельно мыслить, принимать компетентные решения [8, с. 79].

Современное видение обучающей автономии студента формулирует Т. Цымбал. Исследовательница видит ее как интегративную способность личности, что обеспечивает управление и осуществление образовательной деятельности производительность, которой обеспечивается конструктивным и творческим межсубъектным взаимодействием и связывается с созданием личностно-значимого образовательного продукта [9, с.186].

Обращает внимание тот факт, что ученые ассоциируют учебную автономию, с одной стороны, со способностью и отношением к процессу обучения, с другой – собственно с процессом обучения, когда учебная автономия отождествляется с индивидуальным, самоуправляемым или самостоятельным обучением [1, с. 311].

В исследованиях внимание ученых привлекает как близость понятий «учебная автономия» и «самостоятельность студента в обучении», так и разница между ними. Да, Н. Гагина замечает, что автономия - это способность, которая позволяет ответственное и продуктивное осуществление учебной деятельности независимо от того, выполняется ли она самостоятельно (индивидуально), или в сотрудничестве с другими студентами, которая определенной степени присуща человеку, и который можно развивать и совершенствовать [1].

В то же время О. Соловова отмечает отличие в том, что во время самостоятельной работы студенты в основном определяют технологию выполнения конкретной, сформулированной преподавателем учебного задания, в то время как учебная автономия предполагает также и выбор того, что необходимо учить для достижения поставленных целей [6, с.144].



Итак, анализ исследований показал, что термин «учебная автономия» недостаточно разработан, его содержание определяется учеными с позиции многофункциональности, рассматривается в кругу различных педагогических и психологических понятий.

Показателями обучающей автономии определяют:

- специфическое психологическое отношение к учебной деятельности;
- субъектность и независимость в действиях;
- способ организации обучения, который переносится личностью и в других видах деятельности (Д. Литтл);
- адекватное распределение ответственности за изучение нового в учебном процессе (Л. Дикинсон);
- подтверждены права студента в рамках образовательной системы; предоставление студенту определенной свободы в обучении со стороны преподавателя (Е. Таранчук). Современное видение обучающей автономии выражается прежде всего в росте ответственности студента за обучение, что выражается в подтверждении прав студента в рамках образовательной системы.

Для всестороннего рассмотрения указанного понятия ученые используют разные термины: «измерения», «позиции», «уровни». Например, W. Littlewood предлагает рассматривать понятие обучающей автономии в трех измерениях:

- автономия субъекта познания (autonomy as a learner);
- автономия субъекту коммуникации (autonomy as a communicator); автономия личности (autonomy as a person) [11, с. 69].

Через 40 лет в видении учеными измерений автономии студента произошли значительные изменения. Да, разделяя мнение W. Littlewood относительно измерения «автономия личности», А. Таранчук выбирает для его обозначения термин «автономия как личная качество». Проявление этого вида автономии исследовательница видит в индивидуальном психологическом отношении учащегося к процессу обучения и приобретения знаний, в желании и способности взять на себя управление своей обучающей деятельностью [7, с. 68].

Другие два измерения, определенные W. Littlewood, – «автономия субъекту познания» и «автономия субъекту коммуникации» – наука объединяет в измерение «автономия по организационно-методической стороны» обучение. Но важнейшее дополнение А. Таранчук касается введения совершенно новой позиции – «автономия в социально-политическом контексте». Ее содержание ученика видит в признании прав студента в рамках образовательной системы, предоставлении ему определенной свободы в обучении со стороны преподавателя.

По нашему мнению, такой измерение отражает современные тенденции в образовании XXI века, такие как «персонализация процесса обучения» и «увеличение ответственности студентов за результаты обучения». В таком контексте стратегической целью развития учебной автономии студента есть педагогическая поддержка становления и развития студента как субъекта обучающей деятельности.

Итак, стремительное развитие информационных технологий, появление новых тенденций в образовании нашли отражение в усложнении структуры понятия «учебная автономия» за счет акцентав социально-политическом контексте понятие.

Педагогическое понятие "учебная автономия" имеет сложную структуру, в ней отличают "психологический, методологический и коммуникативный компоненты учебной автономии" [4].

Организация учебной автономии содержит много возможностей для дидактического проектирования: она может быть организована в самых разных формах: Т. Северина называет среди них: самодоступное обучение; самостоятельное обучение, самоинструирование, самоуправляемое обучение, саморегулируемое



обучение, самообразование, дистанционное обучение, открытое обучение, обучение вместе, тандем-метод, компьютерное обучение» [5, с. 112].

Для того чтобы реализовать на практике любую форму учебной автономии студента, необходимо разработать систему методического сопровождения каждого этапа становления и развития учебной автономии студентов, поскольку каждая из форм является относительно новой для высшего образования. Обобщение результатов анализа исследований показало, что критериями учебной автономии ученые определяют:

- 1) учебные мотивы, которыми руководствуются студенты при выполнении самостоятельной деятельности;
- 2) умение самоорганизации и самоуправления собственной деятельностью;
- 3) общенаучные умения.

Развитие обучающей автономии является сложным процессом, имеющим свою динамику. Моисеенко выделяет в нем 4 этапа: этап подготовки, этап тренировки, этап практики и этап самооценки [4].

Динамику изменений умений студента инициирует необходимость научиться выполнять определенные виды учебных действий, что на каждом из этапов разные. Кроме того, разница между этапами заключается в видах учебных действий и степени автономии студента. На протяжении четырех этапов в процессе формирования обучающей автономии происходят изменения в ролях как студента, так и преподавателя. 1-й и 2-й этапы студенты проходили и в традиционной модели обучения: преподаватель был транслятором знаний, он определял цели обучения, организовывал рефлексию состояния выполняемой работы. 3-й и 4-й этапы характерны для современной модели обучения. Концепция обучающей автономии предполагает, что эти действия выполняет сам студент. Преподаватель выполняет роль консультанта, организатора, фасилитатора [2, с. 144]. В течение последних двух этапов преподаватель постепенно превращается в посредника, помощника, тренера, а студент становится субъектом обучения, то есть меняется психологический статус студента.

Таким образом, проведенный анализ феноменологии понятия "учебная автономия" показал, что среди ученых отсутствует единственное исчерпывающее его понимание. Как общая компетентность, учебная автономия студента проявляется в положительном отношении к обучению (студент руководствуется учебно-познавательными мотивами и мотивами самообразования);

- в рефлексивных умениях (студент осознает смысл обучения и определяет его цель, находит причину осложнений, обращается как к внешнему источнику знания, так и к собственному опыту;

- выявляет мотивы своих действий; отыскивает необходимую информацию, работает с ней; находит пути выхода из затруднений, осуществляет коррекцией (проектирование) способа действия по преодолению усложнения;

- осуществляет альтернативный подход, занимает разные рефлексивные позиции;

- изменяет способы и направленность самоорганизации собственной деятельности в соответствии с требованиями ситуации);

- в знаниях стратегий обучения, собственных возможностей и потребностей развития; в способности обучаться автономно;

- в возможности самостоятельно организовать собственное обучение. Базовым для исследования стало понимание учебной автономии студентов как приобретенной способности студента брать на себя ответственность за собственный учебный процесс, выражающийся на нескольких уровнях: 1) постановка необходимых для решения целей и задач; 2) выбор обучающей стратегии; 3) промежуточная и заключительная рефлексия, касающаяся поставленных целей обучения.



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COVID-19 AND INTERNATIONAL RELATIONS: THE GLOBAL RESPONSE TO A GLOBAL CRISIS

Dr. Arsheed Ahmad Ganie¹, Dr. Shallu Devi²

¹Assistant Professor, Department of Humanities and Social Sciences, IEC University, Baddi – HP

²Assistant Professor, Department of Humanities and Social Sciences, IEC University, Baddi – HP

ABSTRACT

The COVID-19 pandemic has had a profound impact on the world, not just in terms of public health, but also in terms of the global response and international relations. The COVID-19 pandemic has presented significant challenges, but it has also created opportunities for countries to work together to develop effective responses. The pandemic has highlighted the importance of international cooperation and coordination in dealing with global challenges, and the role of international relations in responding to future global crises will be crucial. This paper attempts to examine the impact of the pandemic on international relations and the global response to the crisis, highlighting the challenges and opportunities presented by the pandemic.

KEY WORDS: Covid-19, Pandemic, Health, International Relations, Challenges.

1. INTRODUCTION

The COVID-19 pandemic is a global crisis that has affected almost every country in the world. It is caused by the novel coronavirus, which was first detected in Wuhan, China, in December 2019. The virus quickly spread across borders and has since led to a significant loss of life, strained healthcare systems, and economic disruption on a global scale.

International relations play a critical role in the response to the COVID-19 pandemic. The pandemic is a global challenge that requires a coordinated international response. International relations provide a framework for states and international organizations to work together to address the challenges posed by the pandemic.

International cooperation is critical in sharing information about the virus and its spread, developing effective public health policies, and ensuring that medical supplies and equipment are available where they are needed most. International relations also provide a platform for states to pool resources and knowledge in the development of vaccines and other treatments for COVID-19.

However, international relations can also pose challenges in the response to the pandemic. The pandemic has exposed existing fault lines in the international system, including inequalities in access to medical supplies and equipment and the fragility of global supply chains. These inequalities have led to competition between states for resources and have hampered the global response to the pandemic.

To put it briefly, the COVID-19 pandemic is a global crisis that requires a coordinated international response. International relations play a critical role in this response by providing a framework for states and international organizations to work together to address the challenges posed by the pandemic.

2. CHALLENGES FACED BY THE INTERNATIONAL COMMUNITY

The COVID-19 pandemic has posed significant challenges to the international community. One of the most significant challenges is the rapid spread of the virus across borders. The virus is highly contagious and can be transmitted through respiratory droplets when an infected person talks, coughs, or sneezes. As a result, the virus has spread rapidly across the globe, with millions of people infected and hundreds of thousands of lives lost.

The rapid spread of the virus has also posed challenges in terms of controlling the outbreak. Countries have had to implement measures such as lockdowns, social distancing, and travel restrictions to slow the spread of the virus. However, these measures have had significant economic and social consequences, leading to job losses, business closures, and mental health challenges for many people.

Another challenge posed by the COVID-19 pandemic is the lack of medical supplies and equipment. The pandemic has placed a significant strain on healthcare systems around the world, with many countries struggling to provide enough personal protective equipment (PPE), testing kits, and other medical supplies to healthcare workers. This has led to a shortage of critical supplies and equipment in many parts of the world, putting healthcare workers and patients at risk.



The lack of medical supplies and equipment has also highlighted inequalities in the global distribution of resources. Wealthier countries have been able to secure more supplies and equipment, leaving poorer countries at a disadvantage. This has led to calls for greater international cooperation in the distribution of medical supplies and equipment to ensure that everyone has access to the resources they need to fight the pandemic.

In brief, the COVID-19 pandemic has posed significant challenges to the international community, including the rapid spread of the virus across borders and the lack of medical supplies and equipment. These challenges have highlighted the need for greater international cooperation and solidarity in the response to the pandemic.

3. THE ROLE OF INTERNATIONAL ORGANIZATIONS

The COVID-19 pandemic has affected virtually every country in the world, leading to widespread illness, death, and economic disruption. In response to this global crisis, international organizations such as the World Health Organization (WHO) have played a critical role in coordinating the global response. In this essay, I will discuss the role of the WHO in coordinating the global response to the COVID-19 pandemic.

The WHO is a specialized agency of the United Nations that is responsible for coordinating global health efforts. One of the main roles of the WHO is to provide guidance and advice to member states on how to respond to health crises such as the COVID-19 pandemic. Since the beginning of the pandemic, the WHO has been providing regular updates on the evolving situation, issuing guidance on how to prevent the spread of the virus, and advising countries on how to manage cases.

In addition to providing guidance and advice, the WHO has played a crucial role in coordinating the global response to the pandemic. This includes working with governments, international organizations, and other stakeholders to ensure that resources are available where they are needed most. For example, the WHO has helped to coordinate the distribution of personal protective equipment (PPE), medical supplies, and vaccines to countries that need them. This has been especially important for low- and middle-income countries that may not have the resources to procure these items on their own.

The WHO has also played a key role in supporting research and development efforts aimed at developing effective treatments and vaccines for COVID-19. The organization has helped to coordinate global efforts to develop and distribute vaccines, and has also played a key role in monitoring the safety and effectiveness of these vaccines. For example, the WHO has established a vaccine safety surveillance network to monitor adverse events following immunization and to ensure that any safety concerns are addressed quickly.

Overall, the role of the WHO in coordinating the global response to the COVID-19 pandemic has been critical. By providing guidance and advice, coordinating the distribution of resources, and supporting research and development efforts, the WHO has helped to mitigate the impact of the pandemic and save countless lives. However, the organization has faced criticism for its handling of the pandemic, with some questioning its effectiveness in responding to the crisis.

One criticism of the WHO is that it was slow to declare COVID-19 a pandemic, and that it did not respond quickly enough to the emerging crisis. Some have also criticized the WHO for relying too heavily on information provided by the Chinese government in the early days of the pandemic, and for not being transparent enough about its decision-making processes. These criticisms have led to calls for reform of the WHO, with some suggesting that the organization needs to be restructured or reformed in order to better respond to future health crises.

To sum up, the role of international organizations such as the WHO in coordinating the global response to the COVID-19 pandemic has been critical. By providing guidance and advice, coordinating the distribution of resources, and supporting research and development efforts, the WHO has played a crucial role in mitigating the impact of the pandemic. However, the organization has faced criticism for its handling of the crisis, and there is a need for ongoing reform and improvement to ensure that the WHO is better equipped to respond to future health crises.

4. IMPACT OF THE PANDEMIC ON INTERNATIONAL RELATIONS

The COVID-19 pandemic has had a significant impact on international relations, exposing existing fault lines in the international system and leading to an increase in nationalism and protectionism. In this essay, I will examine the impact of the pandemic on international relations and explore how it has affected global cooperation, economic relations, and diplomatic relations.

One of the most significant impacts of the pandemic has been on global cooperation. The pandemic has highlighted the importance of international cooperation in responding to global crises, but it has also exposed the limitations of the current international system. For example, some countries have been accused of hoarding medical supplies and vaccines, while others have been criticized for not sharing information or cooperating with other countries. This has led to tensions and mistrust between countries, and has made it more difficult to coordinate a global response to the pandemic.

The pandemic has also had a significant impact on economic relations between countries. Global trade has been disrupted by the pandemic, with supply chains being disrupted and trade volumes declining. This has had a particularly significant impact on developing countries, which are often more reliant on trade and have fewer resources to cope with the economic fallout of the pandemic. As a result, some countries have turned to protectionist policies in an attempt to protect their domestic industries and



economies. This has led to tensions between countries and has made it more difficult to coordinate a global response to the economic impact of the pandemic.

In addition to these economic and diplomatic impacts, the pandemic has also led to an increase in nationalism and protectionism. As countries have struggled to cope with the pandemic, there has been a growing sense of nationalistic sentiment and a desire to protect domestic populations. This has led to some countries closing their borders or restricting the movement of people, which has further exacerbated tensions between countries.

Overall, the COVID-19 pandemic has had a significant impact on international relations, exposing existing fault lines in the international system and leading to an increase in nationalism and protectionism. While the pandemic has highlighted the importance of international cooperation in responding to global crises, it has also shown the limitations of the current international system. As countries continue to grapple with the pandemic and its aftermath, it will be important to find ways to strengthen international cooperation and address the underlying fault lines in the international system. This may require significant reforms to international institutions and a renewed commitment to multilateralism and global cooperation.

5. IMPORTANCE OF GLOBAL COOPERATION FOR PANDEMIC CHALLENGES

The COVID-19 pandemic has had a profound impact on the world, affecting every aspect of human life, including health, education, and the economy. The pandemic has also highlighted the importance of international cooperation and coordination in dealing with global challenges like the COVID-19 pandemic. This part will discuss the importance of international cooperation and coordination in responding to the COVID-19 pandemic, and the challenges that exist in achieving this.

One of the primary reasons for the importance of international cooperation and coordination in dealing with the COVID-19 pandemic is that it is a global problem that requires a global response. The spread of the virus has been rapid and global, and no country can effectively deal with the problem on its own. Sharing information, expertise, and resources is critical in developing effective responses and mitigating the impact of the pandemic. International cooperation is essential in developing vaccines and treatments for the virus. Scientists and researchers from around the world have worked together to develop vaccines in record time, and this has been made possible by international collaboration and cooperation. The World Health Organization (WHO) has played a crucial role in coordinating the global response to the pandemic, providing guidance, and sharing information and best practices.

Another reason why international cooperation is essential in dealing with the COVID-19 pandemic is that it affects the global economy. The pandemic has caused significant disruption to global trade, and no country can recover from the economic fallout on its own. International cooperation is necessary to coordinate economic responses, provide financial support to countries that are struggling, and develop policies that can support recovery.

However, achieving international cooperation and coordination can be challenging. One of the main challenges is that countries have different priorities, interests, and capabilities. Some countries may prioritize their own interests over global interests, or they may not have the resources or capabilities to contribute to the global response. This can lead to tensions and disagreements between countries, and make it difficult to achieve meaningful cooperation.

Another challenge is that international institutions and frameworks may not be equipped to deal with the scale and complexity of global challenges like the pandemic. The pandemic has highlighted the need for reform and strengthening of international institutions to ensure that they can effectively respond to global crises.

To summarize, international cooperation and coordination are essential in dealing with global challenges like the COVID-19 pandemic. The pandemic has demonstrated the importance of sharing information, expertise, and resources to develop effective responses and mitigate the impact of the virus. However, achieving meaningful international cooperation can be challenging, and requires a commitment to multilateralism, reform of international institutions, and a willingness to put global interests above national interests. If countries can come together and work collaboratively, we can build a more resilient world that is better equipped to deal with global challenges like the COVID-19 pandemic.

6. CONCLUSION

The COVID-19 pandemic has exposed existing fault lines in the international system and highlighted the importance of international cooperation and coordination in dealing with global crises. Key findings include the need for a coordinated global response to mitigate the impact of the virus, the importance of sharing information, expertise, and resources to develop effective responses, and the need for reform and strengthening of international institutions to ensure they can effectively respond to global crises.

The implications for future global crises are clear. The COVID-19 pandemic has demonstrated the need for countries to work collaboratively and put global interests above national interests. It has also highlighted the importance of preparedness and early detection of global crises, as well as the need for robust healthcare systems and investments in research and development.

International relations will play a crucial role in responding to future global crises. The international community must work together to strengthen existing international institutions and develop new frameworks that can effectively respond to global crises. This will require a commitment to multilateralism and a willingness to engage in meaningful dialogue and cooperation.



To sum up, the COVID-19 pandemic has been a wake-up call for the international community. It has demonstrated the need for a coordinated global response to global crises, the importance of international cooperation and coordination, and the need for reform and strengthening of international institutions. As we move forward, it is essential that we learn from the lessons of the pandemic and work together to build a more resilient and prepared world.

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SIMULTANEOUS ESTIMATION OF REMOGLIFLOZIN ETABONATE AND TENELIGLIPTIN HYDROBROMIDE HYDRATE IN TABLET DOSAGE FORM BY RP-HPLC METHOD

Harsh H. Lad*, Dr. Shailesh V. Luhar And Dr. Sachin B. Narkhede

Department of Pharmaceutical Quality Assurance, Smt. B.N.B. Swaminarayan Pharmacy College, Salvav-Vapi-396191, Dist. Valsad, Gujarat, India

ABSTRACT

A simple, precise, accurate method was developed for the simultaneous estimation of Remogliflozin etabonate and Teneligliptin Hydrobromide Hydrate in tablet dosage form by RP-HPLC method. The separation was achieved by Force scientific C_{18} (250mm x 4.6mm, 5 μ m) column and Methanol: Phosphate buffer (pH 3) in the ratio of (70:30) as mobile phase, at a flow rate of 1 ml/min. Detection was carried out at 235 nm. Remogliflozin etabonate and Teneligliptin Hydrobromide Hydrate had respective retention times of 16.1 minutes and 3.4 minutes. The approach's linearity, accuracy, precision, and robustness have all been validated. Remogliflozin etabonate 12.5-75 g/ml and Teneligliptin Hydrobromide Hydrate 1.25-7.5 g/ml showed linearity with correlation coefficients of 0.9998 and 0.9984, respectively. For the simultaneous measurement of remogliflozin etabonate and teneligliptin hydrobromide hydrate in their tablet dosage form, the developed approach was proven to be accurate, exact, and quick.

KEYWORDS: Remogliflozin etabonate, Teneligliptin Hydrobromide Hydrate, ICH guidelines, RP-HPLC.

INTRODUCTION

Chemically, Remogliflozin Etabonate (REM) is Ethyl[(2R, 3S, 4S, 5R, 6S)-3,4,5-trihydroxy-6-[5-methyl-1-propan-2-yl-4-[(4-propan-2-yloxyphenyl)methyl]pyrazol-3-yl]oxyoxan-2-yl]methylcarbonate (Fig.1).

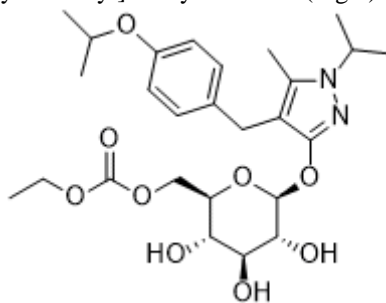


Fig. 1. Structure of Remogliflozin etabonate

Remogliflozin etabonate, an inactive prodrug that becomes active after injection and absorption, operates primarily on the sodium-glucose co-transporter subtype 2 (SGLT2) and is used to treat Diabetes Mellitus Type-2^[1].

A brand-new medication called teneligliptin hydrobromide hydrate is used to treat type 2 diabetes mellitus. It is an anti-diabetic medication that belongs to the class of "gliptins," or dipeptidyl peptidase-4 inhibitors. Chemically, it is (1, 3-thiazolidin-3-yl)(2S, 4S)-4-[4-(3-methyl-1-phenyl-1H-pyrazol-5-yl)-1-piperazinyl]-pyrrolidinylmethanone (Fig.2).

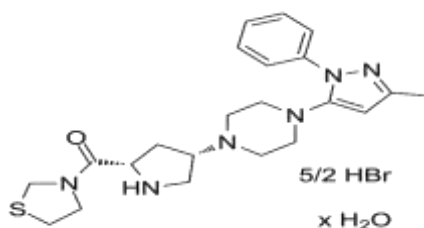


Fig. 2. Structure of Teneligliptin Hydrobromide Hydrate



Teneligliptin hydrobromide hydrate is teneligliptin's prodrug. It decreases blood glucose levels by inhibiting GLP-1 breakdown by inhibiting dipeptidyl peptidase-4 (DPP-4) and raising the blood concentration of active GLP-1^[1].

According to a literature review and patent search on this research topic, there has been no method reported for this combination of medications currently exist. For single medications or in combination with other drugs, some spectrophotometric and chromatographic procedures were available. Thus, a simple, precise, and accurate RP-HPLC approach for simultaneous quantification of these medicines in combined dose form is required. As a result, it was felt that developing and validating a method for it would be of interest.

MATERIALS AND METHODS

Materials

Combination Remogliflozin etabonate and Teneligliptin tablets (Zita plus-R), Remogliflozin etabonate and Teneligliptin Hydrobromide Hydrate pure medicines (API), Distilled water, Phosphate buffer, Methanol, Potassium dihydrogen phosphate buffer, Ortho-phosphoric acid. The aforementioned chemicals and solvents were all acquired from Rankem.

Instruments

Ultrasonicator, HPLC device Dionex with Force scientific column C18, UV-VIS detector Shimadzu SPD-20A VP, and Auto sampler combined with Chromeleon Software are some examples of the electronics balance made by Shimadzu. Remogliflozin etabonate and Teneligliptin Hydrobromide Hydrate absorbances were measured using a Jasco UV-VIS spectrophotometer with unique bandwidth of 2 mm and 10 mm and matching quartz cells integrated with UV Probe.

Methods

Preparation of standard stock solutions

- **Remogliflozin etabonate**

Standard stock-1 solution (1000 ppm): Remogliflozin etabonate 100 mg was weighed, transferred to a volumetric flask of 100 ml, and then dissolved in methanol using a sonicator for roughly five minutes. Methanol was added to bring the volume up to the required level, producing a solution with 1000 ppm.

Standard stock-2 solution (500 ppm): A 100 ml volumetric flask containing 50 ml of standard stock-1 solution was filled to the proper level with methanol to produce a 500 ppm solution.

- **Teneligliptin HBr Hydrate**

Standard stock-1 solution (1000 ppm): Teneligliptin HBr Hydrate 100 mg was weighed, transferred to a volumetric flask of 100 ml, and then dissolved in methanol using a sonicator for roughly five minutes. Methanol was added to bring the volume up to the required level, producing a solution with 1000 ppm.

Standard stock-2 solution (50 ppm): A 100 ml volumetric flask containing 5 ml of standard stock-1 solution was filled to the proper level with methanol to produce a solution with 50 ppm.

Preparation of working standard solution for selection of mobile phase:

1 ml of Remogliflozin etabonate standard stock-2 solution and 1 ml of Teneligliptin HBr Hydrate stock-2 solution was transferred in 10 ml volumetric flask. Volume was made up to mark with mobile phase used for trails to give a solution containing 50 ppm of Remogliflozin etabonate and 5 ppm of Teneligliptin HBr Hydrate solution.

The above working standard solution was injected for selection of mobile phase.

Method Development

Method development was done by changing various, mobile phase ratios, buffers etc^[2].

Table 1: Optimization of chromatographic conditions

Trial no.	Mobile Phase	Ratio (%v/v)	Remark
1.	Methanol: Water	60:40	Peak splitting & peak tailing obtain
2.	Methanol: Phosphate buffer (pH 3)	60:40	Two peaks obtain but retention time high
3.	Methanol: Phosphate buffer (pH 3)	70:30	Two peaks obtain with sharp peak and better resolution than 2 trial.
4.	Methanol: Phosphate buffer (pH 3)	70:30	To confirm peak of Teneligliptin HBr Hydrate



RESULTS AND DISCUSSION

Observation: With good resolution, remogliflozin etabonate and teneligliptin hydrobromide hydrate were eluted at 16.17 and 3.43 minutes, respectively. Plate count and tailing factor satisfied all requirements, hence this approach was improved and will be validated (Fig. 3).

System suitability: According to ICH criteria^[4], all of the system suitability metrics were acceptable and within the acceptable range. (Table 2 and Fig. 4).

LOD and LOQ: The smallest amount of analyte that can be detected but not always measured is known as the detection limit. The three calibration curves were used to calculate the LOD. The LOD may be determined as (table 3)

$$\text{LOD} = 3.3 \times (\text{SD} / \text{Slope}).$$

The 3 calibration curves were used to calculate the LOQ. The LOQ could be determined as

$$\text{LOQ} = 10 \times (\text{SD}/\text{Slope}).$$

Linearity: Remogliflozin etabonate and Teneligliptin Hydrobromide Hydrate's linearity of response was estimated by analysing three separate levels of the calibration curve in the ranges of 12.5-75 g/ml and 1.25-7.5 g/ml, respectively. Average areas were listed below, and linearity equations for Remogliflozin etabonate and Teneligliptin Hydrobromide Hydrate were respectively $y = 19545x + 12018$ and $y = 31665x + 12086$. Both medications' correlation coefficients were discovered to be 0.9998 and 0.9984, respectively. (Table 4 & 5) (Fig. 5,6,7).

Precision

Repeatability: A series of three 100 ml volumetric flasks were filled with aliquots of the standard stock-2 solution of REMO (500 g/ml) and TENE (50 g/ml) in the amounts of 5, 10, and 15 ml, or 50%, 100%, and 150%, respectively. To obtain 25, 50, and 75 g/ml solutions of REMO and 2.5, 5, and 7.5 g/ml solutions of TENE, the volume was adjusted up to the mark with mobile phase. The solutions were then injected into the system under the specified chromatographic conditions, analysed by repeated injection, and the percent RSD was calculated. (Table 6).

Intra-Day Precision: A series of three 100 ml volumetric flasks were filled with aliquots of the standard stock-2 solution of REMO (500 g/ml) and TENE (50 g/ml) in the amounts of 5, 10, and 15 ml, or 50%, 100%, and 150%, respectively. To obtain a 25, 50, 75 g/ml solution of REMO and a 2.5, 5, 7.5 g/ml solution of TENE, the volume was raised to the proper level with mobile phase. On the same day that the solutions were injected into the system under the specified chromatographic conditions, they were analysed, and the percent RSD was computed. (Table 7).

Inter-Day Precision: A series of three 100 ml volumetric flasks were filled with aliquots of the standard stock-2 solution of REMO (500 g/ml) and TENE (50 g/ml) in the amounts of 5, 10, and 15 ml, or 50%, 100%, and 150%, respectively. To obtain a 25, 50, 75 g/ml solution of REMO and a 2.5, 5, 7.5 g/ml solution of TENE, the volume was raised to the proper level with mobile phase. 50%, 100%, and 150% solutions were added to the system under the specified chromatographic conditions, and each sample was then analysed on a different day to determine the percent RSD. (Table 8).

Accuracy: The standard addition procedure was used to prepare accuracy samples at three different levels. For each degree of accuracy, triplicate injections were given, and for the drugs remogliflozin etabonate and teneligliptin hydrobromide hydrate, recovery was achieved in the ranges of 99.22-99.81% and 98.88-99.53%, respectively (Table 9 & 10).

Robustness: Robustness conditions including flow rate, mobile phase pH and ratio were changed, and samples were administered in duplicate. The parameters for system suitability were not significantly impacted, and all of the parameters were met. The limit was reached for %RSD (Table 11 & 12).

Assay: Applicability of the proposed method was tested by analysing the commercially available Tablet formulation Zita Plus R. The amount of powder was determined after weighing twenty tablets. Teneligliptin Hydrobromide Hydrate (5 mg) and 50 mg of Remogliflozin Etabonate from the tablet powder were added to a 100 ml volumetric flask. To completely dissolve the medication, the mixture was sonicated for 15 minutes while being combined with methanol. The solution was filtered using Whatman filter paper No. 42, and methanol was added to bring the volume up to the desired level. To get sample solutions of the medication concentrations of Remogliflozin etabonate (50 g/ml) and Teneligliptin Hydrobromide Hydrate (5 g/ml), the original stock solution was further diluted. The sample solution was injected into HPLC in a volume of 20 μ l. The peak area for the drug was measured at 235nm and amount of Remogliflozin etabonate and Teneligliptin Hydrobromide Hydrate were determined using the related linear regression equations. (Table 13)

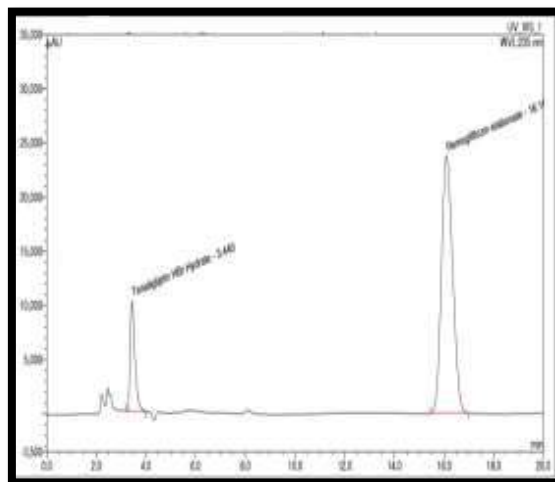


Fig. 3: Optimized chromatogram

Table 2: System suitability parameters

System suitability parameter	Remogliflozin Etabonate (n=6)	Teneligliptin Hydrobromide Hydrate (n=6)
Retention time (min)	16.07	3.43
Resolution (R)	28.41	-
Tailing factor (T)	1.02	1.8
Theoretical plate number (N)	97291	3720

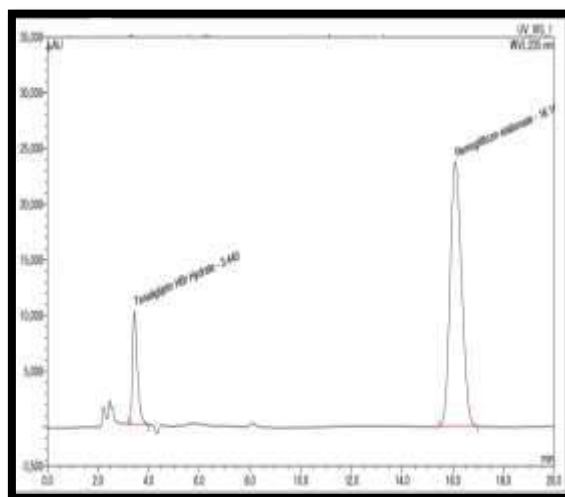


Fig. 4: System suitability chromatogram

Table 3: LOD and LOQ of Remogliflozin etabonate and Teneligliptin hydrobromide hydrate

Drug	LOD (µg/ml) (n=3)	LOQ (µg/ml) (n=3)
Remogliflozin Etabonate	2.97	9.01
Teneligliptin HBr Hydrate	0.34	1.04

Fig 5: Overlain chromatogram of Remogliflozin etabonate and Teneligliptin Hydrobromide Hydrate

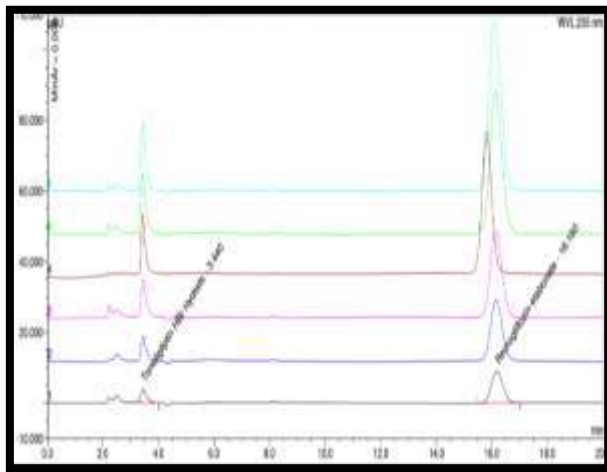


Table 4: Linearity of Remogliflozin etabonate

Conc. (µg/ml)	Mean area ± SD (n=3)	% RSD
12.5	263293.22 ± 329.48	0.12514
25	500599.04 ± 410.51	0.082
37.5	734397.15 ± 354.002	0.0482
50	987755.39 ± 278.98	0.02821
62.5	1233695.99 ± 392.99	0.03186
75	1482960.69 ± 285.69	0.01927

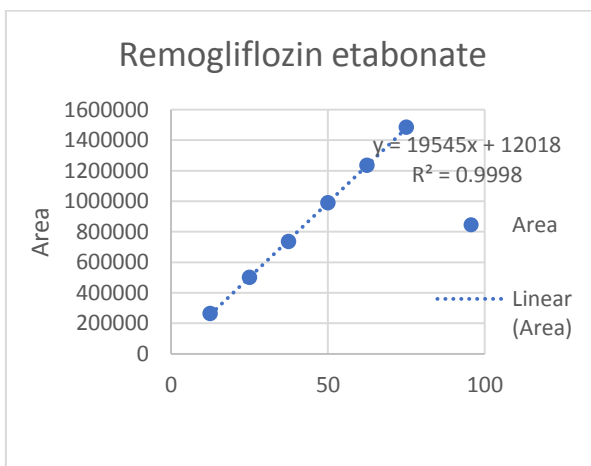


Fig 6: Calibration curve of Remogliflozin etabonate



Table 5: linearity of Tenueligiptin Hydrobromide Hydrate

Conc. (µg/ml)	Mean area ± SD (n=3)	% RSD
1.25	52500.11 ± 267.03	0.50863
2.5	87841.22 ± 465.87	0.53036
3.75	134620.54 ± 406.89	0.30225
5	167960.10 ± 284.81	0.16958
6.25	212977.15 ± 419.36	0.19691
7.5	247817.74 ± 353.72	0.14274

Fig 7: Calibration curve of Tenueligiptin Hydrobromide Hydrate

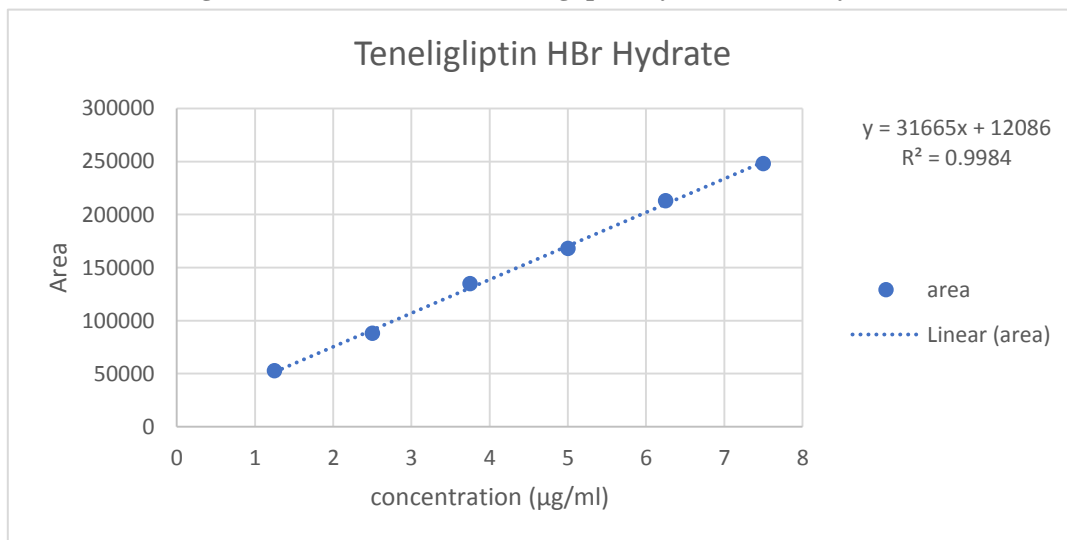


Table 6: Repeatability of Remogliflozin etabonate and Tenueligiptin hydrobromide hydrate

Drug	conc.(µg/ml)	Mean area ± SD (n=3)	% RSD
Remogliflozin etabonate	25	500640.4 ± 601.44	0.120135
	50	987788.7 ± 524.17	0.053065
	75	1482927 ± 535.20	0.036091
Tenueligiptin HBr Hydrate	2.5	87807.9 ± 520.38	0.592638
	5	167906.8 ± 404.74	0.241056
	7.5	247851.1 ± 602.86	0.243237



Table 7: Intraday Precision of Remogliflozin etabonate and Teneagliptin Hydrobromide Hydrate

Drug	conc.(µg/ml)	Mean area ± SD (n=3)	% RSD
Remogliflozin etabonate	25	500763.5 ± 1187.01	0.237041
	50	987745.4 ± 1290.15	0.130617
	75	1483361 ± 1432.35	0.096561
Teneagliptin HBr Hydrate	2.5	87927.75 ± 1281.03	1.45692
	5	167813 ± 1248.46	0.743957
	7.5	247717 ± 1307.607	0.527862

Table 8: Interday Precision of Remogliflozin etabonate and Teneagliptin Hydrobromide Hydrate

Drug	conc.(µg/ml)	Mean area ± SD (n=3)	% RSD
Remogliflozin etabonate	25	500560.2 ± 2492.77	0.497996
	50	987645.4 ± 2443.187	0.247375
	75	1483327 ± 2656.43	0.179086
Teneagliptin HBr Hydrate	2.5	85922.77 ± 1571.85	1.8
	5	167746.8 ± 2349.67	1.4
	7.5	247736.4 ± 2576.612	1.04

Table 9: Accuracy of Remogliflozin etabonate

% Level	Target Conc. (µg/ml)	Standard Spiked Conc. (µg/ml)	Total amount (µg/ml)	Area	Standard amount recovered (µg/ml)	% Recovery	Mean % Recovery ± SD	%RSD
75%	25	12.5	37.5	758867.122	12.25	98.06	99.25 ± 1.50	1.513343
	25	12.5	37.5	760711.146	12.34	98.76		
	25	12.5	37.5	766432.324	12.61	100.94		
100%	25	25	50	993991.236	24.63	98.54	99.22 ± 0.65	0.658185
	25	25	50	997758.436	24.82	99.3		
	25	25	50	1000466.256	24.96	99.84		
125%	25	37.5	62.5	1228478.654	37.16	99.1	99.81 ± 0.70	0.701547
	25	37.5	62.5	1233843.642	37.43	99.83		
	25	37.5	62.5	1238740.546	37.68	100.5		



Table 10: Accuracy of Teneligliptin Hydrobromide Hydrate

% level	Target Conc. (µg/ml)	Standard Spiked Conc. (µg/ml)	Total amount (µg/ml)	Area	Standard amount recovered (µg/ml)	% Recovery	Mean % Recovery ± SD	%RSD
75%	2.5	1.25	3.75	139247.223	1.23	98.44	99.53 ± 1.24	1.251889
	2.5	1.25	3.75	139682.918	1.24	99.27		
	2.5	1.25	3.75	140536.541	1.26	100.89		
100%	2.5	2.5	5	173809.225	2.45	98.18	99.24 ± 1.64	1.653389
	2.5	2.5	5	174014.188	2.46	98.41		
	2.5	2.5	5	177104.223	2.52	101.13		
125%	2.5	3.75	6.25	219965.125	3.68	98.35	98.88 ± 0.91	0.925448
	2.5	3.75	6.25	219990.564	3.68	98.36		
	2.5	3.75	6.25	222116.324	3.74	99.94		

Table 11: Robustness of Remogliflozin etabonate

Srno.	pH (3)		Flow rate (1ml/min)		Mobile phase (Methanol: Phosphate buffer pH 3) (70:30%v/v)	
	+0.2	- 0.2	+0.2	-0.2	+2 %	-2 %
1	996716.436	970246.452	980658.235	990265.456	981564.234	985325.2
2	995856.654	971325.214	980245.235	990998.235	982185.456	985956.3
3	996556.326	970986.235	981125.214	989856.254	981285.325	984656.3
Mean	996376.472	970852.6337	980676.228	990373.315	981678.3383	985312.6
Stdev	457.2383053	551.6510223	440.2653418	578.5804387	460.7860712	650.0923
%RSD	0.045890115	0.056821293	0.044894057	0.058420439	0.0469386	0.065978

Table 12 Robustness of Teneligliptin Hydrobromide Hydrate

Srno.	pH (3)		Flow rate (1ml/min)		Mobile phase (Methanol: Phosphate buffer pH 3) (70:30%v/v)	
	+0.2	- 0.2	+0.2	-0.2	+2 %	-2 %
1	156659.256	186256.245	160253.254	172356.256	175652.245	169235.3
2	157256.235	186856.245	160854.226	172785.452	175286.235	169786.3
3	156056.231	185986.214	159896.256	172006.562	175956.256	169008.3
Mean	156657.2407	186366.2347	160334.5787	172382.7567	175631.5787	169343.3
Stdev	600.0045385	445.3221085	484.1352149	390.1206506	335.4882384	400.0705
%RSD	0.383004664	0.238949995	0.30195309	0.226310716	0.191018176	0.236248

Table 13: Analysis of Marketed formulation

Formulation (Tablet)	Tablet amount (mg)		Amount found (mg)		% Assay	
	REMO	TENE	REMO	TENE	REMO ± SD (n=3)	TENE ± SD (n=3)
1	100	10	99.73	9.84	99.81333 ± 1.59	98.33333 ± 3.80
2	100	10	101.45	9.45		
3	100	10	98.26	10.21		



A simple, Accurate, precise method was developed for the simultaneous estimation of the Remogliflozin etabonate and Teneiglipitin Hydrobromide Hydrate in Tablet dosage form. The RP-HPLC method developed and validated allows a simple and rapid quantitative determination of Remogliflozin etabonate and Teneiglipitin Hydrobromide Hydrate in tablet dosage forms. According to ICH recommendations, all validation parameters were confirmed to be within the limitations. The proposed method was found to be simple, accurate and specific for the drugs of interest irrespective of the excipients present with good resolution. The method developed was found to be simple, accurate, precise, rugged, robust. Therefore, the routine analysis of commercial formulations can be successfully applied using the established method.

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FORMULATION AND EVALUATION OF HERBAL NEEM AND TURMERIC SOAP

Raja Kumar¹, Md Shoib Akhtar², Mansi Gupta*

Corporate Institute of Pharmacy, Bhopal

ABSTRACT

The formulation of the herbal soap included neem leaf, Aloe Vera, tulshi, vitamin C, and tocopheryl acetate. Ayurvedic cosmetics are extremely beneficial and have no negative side effects. Herbal cosmetics is another name for ayurvedic cosmetics. All natural ingredients are readily available at local herbal markets. Cosmetics are a component of taking care of the skin and other body parts because of the dangerous UV rays and other pollutants that are present in today's environment. The chemical components of neem, which also contain anti-inflammatory, anti-hyperglycemic, anti-ulcer, anti-malarial, anti-fungal, anti-bacterial, antimutagenic, and anticarcinogenic qualities, have been scientifically proven to work. The aloe plant yields a material that is used in cosmetic goods to cure burns, psoriasis, and even acne. Products for skin care often contain tocopheryl acetate. Tocopheryl acetate's anti-inflammatory and antioxidant qualities can help prevent skin ageing brought on by free radicals from UV exposure. Tushi has several skin advantages, including as skin-cleansing beeps. Vitamin C and turmeric are also used to treat acne and brighten skin tone. Herbal soap preparation is a medication or treatment with therapeutic benefits for the skin, including antibacterial and antifungal qualities. The unprocessed medication that is used to make soap has several medicinal or cosmetic properties. The plant that is used to make soap has the ability to soften skin epidermis, provide greater penetration, eradicate acne, and promote healing and resolution in a short period of time.

KEYWORDS: Herbal Soap, Neem, Tulshi, Vit. C., Vit. E., Aloevera, Turmeric, Rose Water, Soap Base, Lavendar Essential Oil.

1. INTRODUCTION

Neem, tulshi, vitamin C, tocopheryl acetate, alovera, and glycerine soap base are the major ingredients in this soap recipe. This component offers it a characteristic or several beneficial effects on the skin. Neem is the most efficient because it demonstrates several properties, such as antibacterial and antifungal properties, or the ability to treat numerous skin issues. the neem leaves used to make the soap. The making of soap also calls for tulshi. The skin is deeply cleaned, acne is treated, and the skin tone is lightened, among other things. Acute respiratory syndrome was another term used by tulshi. Tulshi is also utilised by diabetic individuals to lower blood sugar levels. Colds, flu, bronchitis, and coughs are all alleviated by tulshi leaf juice. Tulshi provides additional benefits by lowering stress and boosting stamina. It is also utilised as a primary ingredient. Alovera is used as a moisturiser, to prevent signs of ageing, to lessen stretch marks, to lessen acne, to help lighten blemishes, and to minimise acne. Alovera also provides skin that is smooth and supple. For moisturised skin, rose water is utilised in the manufacture of soap. This soap primarily provides antibacterial, antifungal, skin-lightening, acne-removal, and smoothing or moisturising properties.

2. METHODOLOGY

2.01 Chemical

Rose water, lavender essential oil, and a glycerine soap base.

Extraction and gathering.

Neem leaves are taken from the live plant, carefully washed, and dried. The similar approach was employed by Tulshi Leave.

Neem leaf extraction involves mixing the leaf in a mixture and extracting it using the same technique as tulshi leaf. the actual alovera gel extract. The outcomes of the soap are excellent with this extraction.

2.02 Content of the soap

➤ Neem

Botanical name- Azadiracta indica.

Part typically used- Leave.



Color- Green.

Constituents- flavonoids, Alkaloids, Azadirone, nimbin, nimbidin, terpenoid, steroids.



➤ **Tulshi**

Biological name- *Ocimum tenuiflorum*.

Common name- holy basil.

Chemical constituents- eugenol germaceterpens.

Part typically used- leaves.

Colour- Green



➤ **Alovera**

Biological name- Aloe Vera.

Common name- Aloe barbadensis Miller.

Chemical constituents- vitamin, enzyme, minerals, sugars, lignin, saponin, salicylic acid and aminacid.

Part typically used- leaves

Color- Green



- **Turmeric**
Biological name: curcuma longa
Common name: haldi
Part typically used: root



- **Vit-C.**
- **Vit-E**
- **Lavendar essential oil.**

Formulation :

Table [1]

Chemical	Source
Lavendar essential oil	Laboratory reagent
Rose water	Laboratory reagent
Soap vax	Laboratory reagent

Table [2]

Herbal plant	source
Neem	Leves
Tulshi	Leves
Lemon	Fruit
Turmeric	Root
Vit.E	Capsule

**Table [3]**

Ingredients	Quantity
Neem	6g
Tulshi	2g
Aloevera	4g
Vit.c	1g
Turmeric powder	0.5g
Vit.E	1.5g
Soap vaxx	12g
Rose water	4g
Lavendar essential oil	1g

3.METHODOLOGY

Add 6 grammes of neem powder to a beaker, then to this beaker, add 2 grammes of tulshi, 4 grammes of aloe, 1 gramme of vitamin C, 1.5 gramme of vitamin E, 3 ml of rosewater, and 0.5 grammes of turmeric, and stir for two to three minutes. Giving a span on induction and adding some water, then taking a tiny amount of water and adding 12g of glycerine soap base in the container, causes the glycerine soap base to melt using the twofold heat technique. Mix when base has melted. All of the soap's ingredients are melted, combined, and heated to a final temperature before the addition of lavender essential oil to the preparation solution is given in a little, soap-shaped container. The final soap has been prepared and is pouring.

- Neem's antimicrobial qualities are used to treat acne.
- Aloe vera may soothe sunburns or dry skin.
- Antimicrobial properties of turmeric can heal wounds and smooth wrinkles.
- Antimicrobial agents are tulshi.
- Rose water is a soothing emollient.

3.01 Use of Soap

Treating acne Neem's antibacterial characteristics aid in treatment and prevention of acne by battling acne-causing germs. fights off blackheads and whiteheads. Aloe vera is a natural moisturiser that gives skin hydration without making it feel oily. Anybody with oily skin will thus love it. Moreover, it combats acne and sunburn. For all skin issues, this soap is often used.

4. EVALUATION

(1)Physical properties

Color – dark Green.

(2)Thermal stability

Thermal stability of the formulation was determined by the humidity chamber controlled at 60-70/ RH at room temperature. This soap is mainly stable at room temperature temperature increases it mainly unstable.

(3)Determination of PH

5 to 6 g of the soap was weighted accurately in a 100ml beaker 40ml water was added and dispersed the soap in it. The pH of the solution is determined by using ph meter. PH of soap is 9.5.

(4)Stability studies

The stability studies were carried out as per ICH guidelines. the soap filled in bottle and keep in humidity chamber maintained at 30 to 2 ,60 to 5 and 70 to 5/ RH for two months. At the end of studies sample were analysed for the physical properties and viscosity. High moisture content it will be affect on the soap

(5)Microbial growth

Agar plates were used, and the plates were incubated at 37°C for 24 hours before being compared to standards.

(6)Foaming ability and foam stability

Using the cylinder shaking method, foaming capacity was assessed. brietel Each cylinder was filled with 40ml of the soap formulation solution. The entire volume of the foam content after 1 minute of shaking recovered foam stability was assessed by noting the foam volume after 1 minute and 4 minutes is 80 to 93/ foam generated. It was covered with one hand and shook ten times.



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NATIONAL CHARACTERISTICS OF YOUTH ENTREPRENEURSHIP DEVELOPMENT IN UZBEKISTAN

Rajapova E'tibor Bekberganovna

Independent Researcher, Urganch State University, Uzbekistan

Although entrepreneurship is considered as a universal, socio-economic reality, it is not equal to national-territorial aspects. It is precisely because of these national-territorial aspects that it is an important opportunity to solve local problems (for example, employment of young people, training them for the profession, supporting their aspirations for a comfortable life). Although researches on entrepreneurship have been carried out, legal aspects of relations with local authorities have been studied, the issue of classification of youth entrepreneurship in regional areas has not been resolved. We often use the general terms "small business" and "private enterprise", but they are not a classificatory approach to reality. Even the socio-philosophical characteristics, organizational and legal mechanisms of youth entrepreneurship have not been defined. Even in statistical data on economic development, youth entrepreneurship is not mentioned as a separate direction, a type of social work, therefore, the dynamics of youth entrepreneurship can only be determined (a local sign) through the numbers presented in the President's speeches and some articles.

Youth entrepreneurship is mentioned in the 2016 Law on "State Policy Regarding Youth" as a means of supporting youth employment, their initiatives and labor activity. In the following years, 5 laws on youth policy, 7 decrees and 14 decisions of the President, 2 orders, 23 decrees and 4 orders of the Cabinet of Ministers were adopted. For the first time in the history of our country, June 30 was celebrated as Youth Day and August 20 as Entrepreneurs' Day. The Committee on Youth, Culture and Sports in the Senate of the Oliy Majlis, the Committee on Youth Issues in the Legislative Chamber, the Business Ombudsman aimed at protecting the rights and freedoms of entrepreneurs, the Youth Academy under the Ministry of Innovation, the Youth Parliament, the Youth Agency, 9,500 youth leaders in the neighborhoods position was established. Tutors working with young people have been introduced in special secondary and higher educational institutions. In order to support youth entrepreneurship, preferential loans of 4 trillion 400 billion soums were allocated for the projects of 147,000 young people in the next two years, and land areas for farming were allocated to 560,000 people.

In order to establish a direct interaction with the people, Such principles as "road maps", "working in the cross-section of neighborhoods", "entering the people", "listening to the pain of the population", "participating in the pain of the people", "employing young people, organizing their free time" were introduced to the activities of public receptions and virtual receptions of the President of the Republic of Uzbekistan, local business centers, state authorities and management bodies. More than 20 social programs such as "Youth are our future" and "Five initiatives" have been developed, a new system of address work in all neighborhoods, districts and villages, work methods such as "Youth register" and "Wives' register" have been introduced, as a result 5 million families' problems were solved, young people were employed [1]. The "Project Factory" aimed at supporting youth initiatives, innovative ideas and entrepreneurship was launched in the regions, and the position of deputy chairman of the Council of Ministers of the Republic of Karakalpakstan for youth issues was introduced. In order to establish a continuous communication with young people, "Youth Reception Rooms" were established, and it was started to attract experienced specialists capable of carrying out spiritual educational work.



A total of 1 trillion 614 billion soums of loans were allocated to 7,690 business projects of young people under the "Youth-our future" program, as a result of which 39,577 jobs were created. Within the framework of the program, guarantees for 57 projects of 30.2 billion soums were provided to young people, and they were helped to start their entrepreneurial activities. Today, 25 "Young Entrepreneurs" co-working centers, 157 "Youth Work Center" complexes, 24 Youth Industrial and Entrepreneurship Zones were established in the regions. In 2021 alone, funds of 167 billion 539 million soums were formed in the funds of "Youth register". 34 thousand 253 young entrepreneurs were supported from these funds and a total of 42 billion 371 million soums were allocated to them. Unsecured microloans of up to 33 million soums were allocated to women and girls interested in entrepreneurship to start their own business (another regional symbol), and microloans of up to 225 million soums were allocated to the founders of micro-firms and small enterprises. 50 million US dollars have been allocated to train 125,000 young people in entrepreneurship and make them professional. The Foundation "Young Future" invites young people to earn income at home, "Make a profit at home!" an online competition was held. 35,000 young people took part in it, 36 of them received awards. A special educational portal with more than 8,000 video lessons was created and distributed by the foundation [2].

At the same time, according to experts, the development of small business and entrepreneurship in Uzbekistan depends not only on the use of native resources and opportunities, but also on the problems of the world economy. The Director of the Center for Economic Research and Reforms, O. Hakimov, said that today in the world, especially in Western countries, there are a number of problems such as the decrease in economic activity, foreign trade, logistics, food and raw material prices, and energy supply, which are negative for entrepreneurship. "An additional 6 billion dollars of investment is needed for the development of small business and entrepreneurship in Uzbekistan. 1.5% of entrepreneurs cannot continue their activity due to obstacles such as tax administration and bureaucracy. Conditions for entrepreneurship are not the same in all districts and cities. This was clearly demonstrated by the recently introduced investment rating of regions. In order to ensure equal development of entrepreneurship in districts and cities, separate approaches are needed for each region. Many problems of business representatives regarding connection to infrastructure, land and space allocation remain unsolved. Inviolability of property and interference in business activities are also a serious concern of business representatives. Concepts of small and medium-sized businesses, special measures to support them have not been developed" [3]. Only in the first half of 2021, 37,379 applications from entrepreneurs were received at the reception of the Prime Minister. 39,778 (59, 6%) of the issues mentioned in the petitions are related to districts and cities, 13,206 (33, 2%) are related to regions. Take action against 547 responsible leaders and employees (105 local authorities, 325 banking institutions, 117 organizations and agencies) who made mistakes in considering the applications of entrepreneurs sent for execution through the Prime Minister's offices. 359 of them were reprimanded, 106 were fined, 64 were dismissed, 18 were brought to administrative responsibility [5]. Therefore, President Sh.M. Mirziyoev organized an open dialogue with entrepreneurs on August 22, 2022 at the International Congress Center and emphasizes that there is a lack of new approaches in the field, and in order to solve the existing problems, first of all, local authorities, institutions, bodies and structures called for socio-economic and cultural development of the regions should make a concerted effort to please the people. In this regard, he puts forward five directions.

The goal is to "take the development of the region to a new level", that is, to improve the investment and business environment of the region, to ensure the employment of young people, to create a favorable business environment, to raise the use of human capital to a new level, and to expand the coverage of social protection. In order to improve the investment and business environment of the region and attract young people to entrepreneurship, tax rates on profit tax, turnover tax and land tax on legal entities have been reduced by 50% from January 1, 2023 to January 1, 2028. The social tax paid by individual entrepreneurs has been reduced by 12 times for those operating in urban areas, and by 6 times for those operating in districts. Up to 70% of the cost of transporting raw materials for entrepreneurs will be paid by the Foreign Trade and other relevant agencies. A procedure for allocating loans to young



entrepreneurs for the purchase of equipment and machinery for a period of 7 years through the Fund for the Support of Young Entrepreneurs under the Ministry of Investments and Foreign Trade has been established. Also, in the Decree, a wide range of measures related to the development of agribusiness were defined in order to attract young entrepreneurs in the region and to employ the population. For example, renting land to young farmers for up to 30 years, supporting fruit and vegetable clusters with preferential loans, providing practical and material assistance to young entrepreneurs and farmers in effective use of land and water resources, and coal to low-income families, allocation of one-time aid money for gas, food delivery, etc. are great opportunities for socio-economic development of the region. Taking into account the socio-economic situation in the northern regions of the Republic of Karakalpakstan, the President adopted a separate decision "On additional measures for the development of entrepreneurship in the northern districts of the Republic of Karakalpakstan" (May 30, 2022). The main focus is on accelerating the socio-economic and cultural development of the northern regions with the help of youth entrepreneurship. It is known that one of the peculiarities of the Karakalpakstan region is that there is a wide opportunity to engage in fishing. According to the accounting book of experts, every person should consume 12-16 kilograms of fish and fish products on average per year. Entrepreneurs from Karakalpakstan took the initiative to grow fish at home, based on this initiative, the Karakalpak Fishery Industry Association, 6 hatcheries and 5 clusters were established. For example, up to 200 tons of dietary fish meat are grown in closed water reservoirs of clusters in the city of Nukus. Fish, tilapia and African silverfish are kept in innovative methods in water reservoirs. In the conditions of the region, fish farming in the style of artificial family business has the power to fully satisfy the population's demand for fish products. Each household and family produces 150-200 tons of fish per year, each cluster can process an average of 4.5 thousand tons of fish. 100 million fish fry are grown in the hatchery of the "Super fish" farm alone. Today, artificial lakes have reached 300 hectares, and there is a plan to increase it to 500 hectares [4].

On November 25, 2022, during his visit to Navoi region, the President of our Republic put forward the concept of "a region free from poverty and unemployment". He set the task of establishing 26 local industrial centers and small industrial zones in the region, allocating 600 billion soums for family entrepreneurship programs, allowing to create 72 neighborhoods in Khatirchi, Karmana, Navbahor, Kyziltepa and Nurota districts specialized in the cultivation of potatoes, vegetables, grapes and pomegranates. For this, water supply will be improved in 5 thousand hectares around these neighborhoods. In general, in 2023, an additional 655 billion soums will be allocated to solving socio-economic and cultural problems in the region, and 750 billion soums will be allocated to support family entrepreneurship [6]. The idea of the President of "a region free from poverty and unemployment" can be applied to other regions as well, it will help to effectively solve the most painful issue for our republic. Entrepreneurship development through neighborhood specialization is another national territorial feature. It can be called "Entrepreneurship specialized area" according to each business activity.

The role of young entrepreneurs is reflected in the implementation of traditional activities, services and innovative developments in these neighborhoods. The concept of socio-economic development of regions of our country is clearly manifested in the "Prosperous village" and "Prosperous neighborhood" programs (the next national regional symbol). More than 200 Decrees and Decisions of our President and Government regarding these programs have been adopted, they emphasize that regional problems are directly related to the development of neighborhood and family entrepreneurship, employment of young people, and improvement of the population's life. The Resolution "On measures for the implementation of the "Prosperous Village" and "Prosperous Neighborhood" programs in 2022-2026" of the President of the Republic of Uzbekistan (March 18, 2022) indicates that socio-economic and cultural development of regions has been implemented in more than 1,500 villages and neighborhoods in the following years, and socio-economic problems are awaiting their solution in 1,071 villages and neighborhoods. It is reported that 179 villages and neighborhoods have general education schools built of straw and raw bricks, 5,568 have 29,000 kilometers of dirt roads, 1,540 have no centralized drinking water supply, 49 have public transport, and 781 have garbage collection. In accordance with the decision, to develop the master plan of regions, villages and



neighborhoods, to involve local residents, especially young people included in the "Iron Register", "Women's Register" and "Youth Register", in the construction of the objects to be built in them, based on the initiatives of young entrepreneurs, new such as expansion of workplaces, new types of services, increasing the activity of local offices and hokims in the formation of infrastructures.

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OBJECTIVES OF "UNEP PROGRAM ON ENVIRONMENTAL PROTECTION" IN THE REPUBLIC OF UZBEKISTAN

¹G.D. Shamsidinova, ²Sh. Tilakova ³M.I. Ahatova

¹*Candidate of Biological Sciences, Associate Professor, Navoi State Pedagogical Institute, Uzbekistan*

²*Teacher, Navoi State Pedagogical Institute, Uzbekistan*

³*Master, Navoi State Pedagogical Institute, Uzbekistan*

Teaching environmental sciences in educational institutions expands young people's range of knowledge about ecology, increases their ability to think, be attentive to the environment, and try to prevent environmental problems. In the World Universal Declaration of Human Rights, it is emphasized that "everyone has the right to education", and great attention is paid to the education system in our country. UNEP is the organization responsible for coordinating and facilitating the UN's environmental activities, and it plays an important role in developing countries having environmentally sound policies and practices. The mandate of this organization covers various areas such as atmospheric, hydrosphere and terrestrial ecosystems, environmental management and organization of green economic development. The head office of the UNEP organization is located in Nairobi, Kenya, and from 2019 its chief executive officer is Inger Andersen from Denmark.

UNEP is derived from the words "United Nations Environment Programme", United Nations Organization Around environment protection issues according to in charge organ considered, his main and additional tasks consists of the following.

- Assesses the state of the environment worldwide;
 - Identifies problems requiring international cooperation;
 - Contributes to the development of international environmental legislation;
 - It helps integrate environmental considerations into socio-economic policies and programs of the UN system.
- Additional tasks:
- UNEP - helping to solve the problems of some countries that they do not have the power to solve independently, it creates forums for the development of consensus and the conclusion of international agreements;
 - UNEP-x af - development of guidelines in the event of danger, mutual coordination of conventions, assistance in the immediate implementation of agreed international standards and requirements in the event of environmental problems;
 - UNEP - the coordination of environmental protection activities within the framework of the UN, the institutions are obliged to fulfill their obligations regarding the distribution of funds of the global environmental fund. does;
 - UNEP - promoting environmental education and involving all layers of society in it, establishing practical contacts with the world of science and people responsible for making political decisions, helps to develop the policy in this regard;
 - UNEP- gathers knowledge and information about the environment, the collected information makes it possible to create lectures in the field of ecology, introduces the concept of environmental problems into science, which is the basis for the adoption of environmental conventions;
 - UNEP - an international environmental organization - should serve to ensure that the ecological balance is stable throughout the world and that nature and society go on the path of sustainable development;



- UNEP consults with governments and organizations on the establishment of relevant institutions on important environmental issues.
- UNEP develops global environmental programs, works consistently for the sustainable development of nature within the UN system, and actively supports the preservation of nature around the globe .

UNEP monitors the implementation of a number of international and regional environmental agreements within its mandate.

- The historic Montreal Protocol adopted in 1987 and its amendments are aimed at protecting the ozone layer of the atmosphere, and UNEP is responsible for the main task in this process;



Picture 1. UNEP meeting (2019).

- The Basel Conference on the Transboundary Movement and Control of Hazardous Wastes (1989) reduces the risk of pollution by toxic wastes;
- UNEP, in collaboration with the Food and Agriculture Organization of the United Nations, is helping governments to reach a Convention on an Agreement Procedure for Advance Warning in International Trade of Certain Hazardous Chemicals and Pesticides.

UNEP is called "UN Environment Protection Program", and this organization undertakes the implementation of work in the following areas during its official activities:

- population , finding their solutions, maintaining human health, improving living conditions, and establishing medical services;
- Protect terrestrial ecosystems, preserve existing ones, and combat the expansion of desert areas;
- To strengthen the process of ecological education and training, to organize systematic work and information dissemination and to put it on the right track;
- food and environmental protection;
- Protection of the world's oceans from pollution, compliance with regulatory norms in the process of fishing;
- Observance of state norms in the process of protection of wild plants and animals, their hunting and use;
- Energy in the field ecological problems prevention get , existing ones the solution find , solve to do
- Ecological education - upbringing - spirituality - culture - consciousness in the system things right to the road casting , this in directions there is problems the solution to find and hokozos .

In 2022, on the occasion of the 50th anniversary of the establishment of the UNEP organization, the UN General Assembly decided to "Restoration of degraded and destroyed ecosystems on an international scale, expansion



of their territorial boundaries, prevention of climate change, biological diversity". - 10th anniversary of controlling biodiversity loss, preventing water scarcity and food security" was announced.

Based on the proposal of the UN Secretary General Antonio Guterres, the UN General Assembly held an International Summit in 2019, and at this Summit, special attention was paid to the issues of preventing climate change and protecting the earth from changes. Third in the millennium environment protection doing , in nature and society ecological problems eliminate reach The issues of which are considered to be of important state importance, and the main directions of solving existing environmental problems are the State Committee for Nature Protection, ministries, agencies, and scientific, hygienic, national, environmental protection adopted by the state . reflected in national strategies and action plans for biodiversity conservation. In this regard, the State Committee for Nature Protection carries out an environmental policy such as the economical use of natural resources and the use of low-waste technologies in the production process.

industrial enterprises, the composition and amount of waste generated in them and their impact on natural objects, environment protection doing and in nature ecological problems eliminate to get acquainted with the specific features of the implementation of sustainable ecological development education in the process of social development , ecological consciousness , culture , spirituality feelings formation in the current era of globalization Issues of analysis of the main activities of the sustainable development and development program based on this , the international activities carried out by all countries, the obtained results were analyzed, and their efforts to ensure the environment were recognized.



2 - picture . Climate changes dedicated From the summit plate , 2019 .

in Uzbekistan work release in processes harvest happening waste , full going landfills , unprotected nature problems eliminate to do about recommendations work output , the environment in the current globalization process protection doing , in nature and society ecological problems eliminate achieving the Millennium Development Goals of the United Nations for Sustainable Development and Development, real and potential in nature natural of resources reasonable use , full going landfills in Uzbekistan work release in processes harvest happening waste problems eliminate to do issues important important have this is _ issues with nature protection to do state committees are engaged in .

Profound changes in society are creating new threats to social cohesion, cultural diversity, and the environment, creating chronic and persistent problems such as drug trafficking and organized crime. The end of the Cold Wars has created new opportunities for peace and sustainable cooperation, and is also the cause of nationalism and ethnic conflicts that continue to cause devastating wars and impoverish millions of people.



In addition to dealing with peace and security issues, the UN provides practical assistance in solving the issues of providing full employment to the population, raising their standard of living, and contributing to social and economic development. Development efforts of the UN have a great impact on the lives and happy marriages of millions of people in the world. In its activities, the UN follows the belief that lasting peace and security in the world can be achieved only through the economic and social well-being of people. Despite progress on many fronts, the world still has huge disparities in wealth and well-being. Combating poverty, reducing inequality within and between countries remains one of the main goals of the UN. The UN system not only develops a political direction, but also works in various ways to achieve its economic and social goals, that is, it consults with governments on development programs and plans, and implements international norms and standards. It mobilizes 25 billion dollars of invested funds every year. This includes the income from financial institutions aimed at implementing the development program. Nature protection is the realization of a set of scientifically based actions of states and peoples in the interest of all humanity, rational use of nature, preservation, protection and increase of natural resources. Today, environmental problems arising in nature are no longer a secret to anyone, prevention of this crisis is the duty of every conscientious person living in this place. Nature protection, the happiness of all mankind on earth, care for the fate of future generations. Today, they understood that natural resources are not infinite, but can be exhausted, and they should be used sparingly. The natural environment and natural resources are valuable social assets that need to be taken care of on a global scale. The natural environment must be protected by regular implementation of measures necessary to ensure the future prosperity of citizens of certain countries, as well as the entire human race.

The next UNEP 5th Session was held online in Nairobi from February 28 to March 2, 2022. The main goal of the session was devoted to solving environmental problems in nature to ensure sustainable development. Issues considered in this: specific features of the implementation of sustainable ecological development education in the process of social development, ecological consciousness, culture, spirituality, organic _ of the universe biological diversity _ _ issues and humanity healthy gene pool save to stay problems eliminate in doing Stable development from providing consists of was _

In order to prevent environmental disasters in society, the "Millennium Development Program" - eradication of poverty and hunger, prevention of diseases, etc. in the millennium environment protection doing and in nature ecological problems eliminate reach issues serves as a "guide" in all directions in the field of education and development. Currently, 4 out of 10 of the world's population is forced to live in places where there is not enough clean drinking water, and by 2025, 6 out of 10 people or 5.5 billion people are likely to face a shortage of clean drinking water.

A certain part of the population feels the need for food products that are considered ecologically clean, and in some regions clean oxygen is a problem, and the environment can be completely polluted. A environment protection to do, in nature waste problems, ul arni eliminate achievement, real and potential natural of resources reasonable use, organic _ of the universe biological variety, healthy _ _ gene pool save the practical significance is that in all countries, the establishment of relatively ecologically clean areas and maintaining this cleanliness is considered one of the most important issues.



Picture 3 . 5th Session of the UNEP organization . February 28 , 2022 Nairobi .

Environmental protection is considered to be a problem of important state importance, and the main directions of solving environmental problems are the State Committee for Nature Protection, ministries, agencies, and the scientific and hygienic standards for environmental protection adopted by the state. national, reflected in the National Strategy and Action Plans for Biodiversity Conservation. In this regard, the State Committee for Nature Protection focuses on the economical use of natural resources and the use of low-waste technologies, the large-scale urgent problems of international organizations, from the provision of drinking water to cities and villages, the demining of areas, the protection of workers' rights, about feeding the entire world's population, ensuring the safety of cargo transported by air, ensuring the safety of the production process of enterprises that have a negative impact on the health of all peoples and nations on earth, reducing the amount of various types of waste, preserving the natural state of the territories issues are of particular importance.

In the Republic of Uzbekistan environment protection doing , in nature and society ecological problems eliminate reach issues of important state importance , the main directions of solving existing ecological problems are reflected in the national strategy and action plans for the preservation of biological diversity : the State Committee for Nature Protection, ministries, agencies and regulatory documents adopted by the state. Studying the activities of industrial enterprises, the pathogenic effects of toxic substances contained in their waste on living organisms, studying the issues of their impact on natural objects, filled going landfills , nature problems eliminate to do about recommendations work output , a environment protection doing , real and potential natural of resources reasonable use , organic _ of the universe biological variety , healthy _ _ gene pool storage and a number of scientific and research works are being carried out on the waste of industrial enterprises.

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A DEMAND FOR SOCIAL WORKERS AT NON-GOVERNMENT SECTORS

Rajitha Kasula

Department of Social Work, Kakatiya university.

ABSTRACT

Non-governmental organizations, also known as NGOs, have become an increasingly significant part of contemporary society. Contemporary Native American culture. Depending on the context, they may be referred to as the third sector, civil society, non-profits, the voluntary sector, or something else entirely. All of these descriptors are correct, to varying degrees, at different times due to the sheer variety of social formations that fall under the category of nongovernmental organisations (NGO). However, we would like to call attention to one aspect of non-governmental organisations (NGOs) that is often overlooked: the role that NGOs play as workplaces, particularly for women. It is remarkable that there is so little discussion about the working conditions of unorganized employees of non-governmental organisations (NGOs), considering the large number of NGOs that have been registered and established in India, as well as the massive budget that pours into this sector for wages, salaries, and honoraria.

The study was guided by research question and hypothesis. The descriptive research design was adopted for the study. There is definite universe for the study of 437 social workers and definite universe for the study of 1000 social workers and social work job holders. The simple random sampling technique was used respectively. The interview schedule was used for data gathering statistics were used for data analysis. The findings showed that there was a there is a demand for social workers but they are paid less.

KEY WORDS: *Demand for social workers, Ngos, job satisfaction.*

1. INTRODUCTION

Non-governmental organizations, also known as NGOs, have become an increasingly significant part of contemporary society. Contemporary Native American culture. Depending on the context, they may be referred to as the third sector, civil society, non-profits, the voluntary sector, or something else entirely. All of these descriptors are correct, to varying degrees, at different times due to the sheer variety of social formations that fall under the category of nongovernmental organizations' (NGO). However, we would like to call attention to one aspect of non-governmental organizations (NGOs) that is often overlooked: the role that NGOs play as workplaces, particularly for women. It is remarkable that there is so little discussion about the working conditions of unorganized employees of non-governmental organizations (NGOs), considering the large number of NGOs that have been registered and established in India, as well as the massive budget that pours into this sector for wages, salaries, and honoraria. People who originate from low-income homes make up a sizeable portion of the workforce at the field level of non-governmental organizations (NGOs). This industry is distinct in terms of the type of work that is done and the financial flows that occur within it. The tasks and conditions of employment in non-governmental organizations (NGOs) are frequently adaptable and open-ended, just as the nature of the work itself. Fieldworkers in non-governmental organizations (NGOs) are frequently subjected to a significant amount of public contact, are forced to travel, and work flexible hours; all of these factors have particular implications for the employment of women. Since employees in the NGO sector are conveniently categorized as volunteers, project staff, or part-timers, and their payment is labelled an honorarium rather than a wage or salary, questions regarding minimum wages, benefits such as insurance and health care, and safe and dignified working conditions are rarely brought up. This is because minimum wages, benefits such as insurance and health care, and safe and dignified working conditions are rarely an issue. It is necessary to acknowledge that non-governmental organizations (NGOs) are a source of employment for fieldworkers, despite the fact that the discourse of social work and volunteerism is pervasive in this sector. Many of these workers put in decades, or perhaps their entire productive lives, in organizations that provide them with either very little or no security, as well as no benefits. Ironically, higher levels of nongovernmental organizations (NGOs), whose revenues are not regulated by reasons for volunteerism and social service, are gradually becoming more professionalized.

2. OBJECTIVES OF THE STUDY

- To understand the socio-economic of social worker students.
- To understand the awareness of students on social work subject.
- To highlight the demand for social worker and job satisfaction.



3. HYPOTHESIS

Social work students you don't have huge demand in the market.
Social work students lack in job satisfaction.

4. METHODOLOGY

The quantitative method was opted for in the study, guided by research questions and hypotheses. The descriptive research design was used for the study. The simple random sampling technique, the interview schedule was used for data gathering, and Chi Square (χ^2) statistics were used for data analysis.

5. SAMPLING DESIGN

The all university students who had done their graduation and post-graduation in social work were the universe and they are 1000 in number the sample size was 278 determined by following the method developed by Krejcie and Morgan (1970), and thereby, a simple random sampling was selected

6. STATISTICAL DESIGN

The current study was based on an interview schedule and a statistical tool known as SPSS latest edition simple frequency tables.

7. GEOGRAPHICAL AREA

Warangal, Hanamkonda, and Kazipet were once tri-cities that have a significant amount of legacy. Following the division of Telangana, two districts were formed, with Hanamkonda being one and Warangal being the other. Both of these neighborhoods have a rich history and are popular destinations for tourists. This region, which was once known as Orgallu, was governed by the queen rani Rudraamma Devi.

8. RESULTS

Table No: 8.1 Age wise Distribution of the Respondents

Sl. No.	Age of the Respondents	Number of Respondents	Percentage
1	23 to 25 years	200	71.53
2	25 years and above	78	28.05
	Total	278	100

The data clearly show that, out of the total respondents 71.53 per cent of them fall in the age group of 23-25 years. But, very less number of respondents i.e. 28.05 per cent, fall in the age group of 25 years and above.

Table No: 4.2 Gender wise Distribution of the Respondents

Sl. No.	Gender	Number of Respondents	Percentage
1	Male	100	35.97
2	Female	178	64.02
	Total	278	100

Above table reveals the gender wise distribution of the respondents. In the gender wise respondents, half of the respondents i.e. 64.02 per cent were Female students, whereas rests of the respondents i.e. 35.97 per cent were male students. Therefore, in the present study female respondents were more than male respondents.

Table No: 4.3 Economic Status of the Respondents

Sl. No.	Economic Status	Number of Respondents	Percentage
1	Above Poverty Line	112	40.28
2	Below Poverty Line	166	59.71
	Total	278	100

The above table depicts the respondents' economic standing. The data revealed that (more than three-quarters of respondents, or 59.71%) 59.71% of respondents were living below the poverty line. In contrast, respondents above the poverty line comprised nearly a quarter of all respondents, or 40.28 percent.



Table No: 4.4 Religion wise Distribution of the Respondents

Sl. No.	Religion	Number of Respondents	Percentage
1	Hindu	218	78.41
2	Muslim	45	16.18
3	Christian	10	03.59
4	Others	05	1.79
	Total	278	100

The data presented above provide a clear picture of the distribution of respondents according to their religious affiliation. The majority of respondents, or 78.41% of the total, identify themselves as belonging to the Hindu religious community. Nearly one-fifth of all respondents, or 16.18 percent, identified as members of the Muslim community. The remaining respondents, or 3.59 percent and 1.79 percent respectively, identified as members of the Christian community and other communities.

Table No: 4.5 Geographical Background of the Respondents

Sl. No.	Domicile	Number of Respondents	Percentage
1	Rural	180	64.74
2	Semi-Urban	40	14.38
3	Urban	58	20.86
	Total	278	100

The above table shows that on geographical background of the respondents. It is found that, more than third of the respondents i.e. 64.74 per cent hails from the rural background. Nearly, one fifth of the respondents i.e. 20.86 per cent hail from urban areas. But, half of the one fifth of respondents i.e. 14.38 percent had from semi urban area. In the present study, it found that the influence of the social work education on the rural community.

Table No: 4.6 Type of Institute

Sl. No.	Type of Institutes	No of Respondents	Percentage
1	University Main Campus	125	44.96
2	University P.G. Centers	153	55.03
	Total	278	100

The above table shows the nature of institution studying at. It is found that nearly half of respondents 44.96 per cent were pursuing their post-graduation degree in Social Work at university main campus from different universities. Whereas rest of the other majority of the respondents i.e. 55.03 per cent studying their master degree in social work in the university post-graduation center.

Table No: 4.7 Education background of the respondents at Undergraduate Level

Sl. No.	Education Background	Number of Respondents	Percentage
1	Social Work (BSW)	100	35.97
2	Non- Social Work (B.A and Others)	178	64.02
	Total	278	100

The current investigation's primary focus should be on gaining an understanding of the educational backgrounds of the participants at the undergraduate level, as this is the most relevant aspect. Because of this, it is imperative to investigate the respondents' levels of educational attainment. It can be shown that 35.97 percent of the respondents had a background in social work, while the remaining 64.02 percent have a background in something other than social work

Table No: 4.8 Category wise distributions of the Respondents

Sl. No.	Category	Number of respondents	Percentage
1	Open category	70	25.17
2	Other Backward Classes	40	14.38
3	Schedule Caste	60	21.58
4	Schedule Tribe	58	20.86
5	Category – I	40	14.38
6	Minorities	10	03.59
	Total	278	100



Above table shows the distribution of the respondents in category wise. The data presented in the table, a little more of one fourth of the respondents i.e. 25.17 per cent belongs to open category, nearer to one fourth of the respondents i.e. 14.38 per cent belongs to the Other Backward Classes Community. Following little above of one fifth of respondents i.e. 21.58 percent belongs to Scheduled Caste and rest of the respondents belongs to other communities namely, Scheduled Tribe respondents' below 20.86 per cent and Category – I respondents also less than one tenth of respondents i.e. 14.38 per cent. But, a little bit above of one tenth of the respondents i.e. 03.5 per cent belongs to Minorities community.

Table No: 4.9 Distribution according Demand for job of the Respondents

Sl. No.	Demand for job	Number of respondents	Percentage
1.	Yes	198	71.22
2.	No	80	28.77
	Total	278	100

The above table depicts about the demand for job in the market the respondents who said that there is demand for are 71.22, which shows that social workers have demand in the market, about 28.77 percent of respondents said they didn't not find any job demand.

Table No: 4.10 Distribution according job satisfaction of the Respondents.

Sl. No.	Job satisfaction	Number of respondents	Percentage
1.	Yes	128	46.04
2.	No	150	53.95
	Total	278	100

The above table predicts that the job satisfaction among the social worker jobs the respondents who said yes are 46.04 percentage and the respondents who said no they don't have satisfaction are 53.95.

9. CONCLUSION

Despite the enormous demand in the Indian market, the ngo sector has become an employer and no longer faces the challenges it formerly did, such as a lack of resources and professional staff. As a result of being paid less than other professionals for doing the same task, social workers often feel dissatisfied with their jobs. Wages in India are low, work pressure is strong, and there is no job security, in contrast to the West, where social work requires a licensed and is considered one of the five core topics, where incomes are much higher and where jobs are more secure. Thus, the research papers suggest that despite a thriving job market, social workers are dissatisfied with their careers due to factors such as discrimination, low pay, and lack of job security.

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VARIOUS METHODS OF EARLY REHABILITATION OF ATHLETES WITH ANKLE JOINT INJURIES

¹Ravshanova Maftuna Zohidjonovna, ²Botirov Farxod Kodirovich

¹Department of Medical Rehabilitation, Sports Medicine and Folk Medicine of Samarkand State Medical University

²Research Institute of Rehabilitology and Sports Medicine, Samarkand, Uzbekistan

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ABSTRACT

Among the emerging sports injuries, injuries of the upper and lower extremities deserve special attention. Most of the injuries of the lower extremities are injuries of the ankle joint. The main pathogenic link in the occurrence of an ankle joint injury is the level of impact of the traumatic moment. Further, the processes of damage to the soft tissue component, the ligamentous -muscular apparatus and bone-articular structures begin. Then it manifests itself mainly in the development of soft tissue edema in the area of the injury, followed by the launch and development of pathogenic changes. Blood and lymphatic vessels are damaged, which are the main trigger for the formation of edema. All these processes are associated with the occurrence of subsequent compression of the surrounding tissues, an increase in edema and the development of a severe pain syndrome. The search for literature sources made it possible to determine the existing problem and assess the relevance of the ongoing scientific research. The study is aimed at developing and searching for new modern methods, therapy regimens. The aim of the work is to improve the quality of therapy for ankle joint injuries in athletes and to achieve early recovery of lost functions with a return to full-fledged sports activity

KEYWORDS: *early rehabilitation, athletes, ankle joint, trauma, kinesio taping, electromyostimulation, physiotherapy exercises.*

Professional sports, regardless of its type, can lead to various types of injuries due to ever-increasing physical exertion, impaired functional activity of the neuromuscular and musculoskeletal systems. According to statistics, sports injuries have increased numbers and increase annually, thereby representing a particular danger due to the increase in the number of athletes involved in professional sports [1,2,4].

The analysis of literature sources shows that most of the injuries of the lower extremities are injuries of the ankle joint with obligatory damage to the ligamentous apparatus (75%) [3,5,15].

This dictates the need to conduct studies and search for the causal factors in the development of joint injuries in order to be able to detect them early, followed by treatment and rehabilitation. The goal of a sports doctor is to implement rehabilitation measures to enable a quick return to sports activities without serious losses, with the restoration of the functional activity of injured limbs or other parts of the body. At these stages, the complex participation of sports medicine specialists, together with traumatologists and rehabilitation specialists, is necessary. This is necessary to ensure early diagnosis of trauma and the speedy introduction of rehabilitation measures [4-6].

Features of the anatomical structure of the ankle joint, its muscular-ligamentous apparatus contributes to the occurrence of most injuries (90%) with damage to the external ligaments, ruptures of the deltoid ligaments and the anterior or posterior part of the articular capsule [1,5].

Modern traumatology has new methods of treatment, which are conservative, they allow to overcome the instability of the ankle joint, without long-term restrictions on the competitive activity of the athlete and a quick return to duty. Most traumatic injuries are accompanied by a rupture of the Achilles tendon, which increases the recurrence of injuries and the time of rehabilitation recovery. This explains the need to improve and refine the stages of complex rehabilitation for the restoration of the ankle joint, damage to the ligamentous apparatus, based on the anatomical features of the joints, as well as the biomechanical mechanisms of development and injuries [3,7,8].



The ankle joint is a complex joint that is important for maintaining the balance of the human body, as well as providing a stable position of the body in space. Traumatization is caused by various changes, such as dislocations and subluxations of the knee joints, leading to a loss of body balance, while the main supporting function is performed by the ankle joint. Overload on the muscular-articular apparatus of the upper limbs, associated with damage to large joints, leads to a transfer of load with an injury to the ankle joint and a rupture in the tendons and muscles. The ligamentous apparatus of the ankle joint ensures its stability and the ability to hold body weight. Depending on the damage to the ligamentous apparatus, there are more than 90% ruptures of the anterior talofibular ligament (of which 65% are isolated and combined 25%), they are distinguished according to the degree of damage - sprain, complete rupture of the ligament and combined rupture. Injuries are associated with the mechanisms involved in plantar flexion and supination of the foot during the movement of athletes (wrestlers, football players, hockey players, etc.) [9,10,11].

Due to the weak elasticity of the muscular-ligamentous apparatus of the ankle joint, during traumatization, ruptures of muscle fibers and ligaments occur for the most part. The main clinical sign is severe pain, swelling in the ankle joint, as well as instability when holding the body in space. With severe injuries, fractures of the ankles, as well as the bones that make up the ankle joint, can occur. Severe injuries completely limit movement, both in small and large limbs, which requires x-ray examination in two projections in order to clarify the diagnosis of areas of damage. The subsequent tactics of treatment procedures depend on the complexity and localization of injuries, fractures, this requires the restriction of athletes, both in movement and in sports, until the joint is fully restored, its fusion and return of active functional muscular-articular activity [4,12,18].

The main pathogenic link in the occurrence of an injury to the ankle joint is the level of exposure to the traumatic moment, after which the processes of damage to the soft tissue component, the ligamentous - muscular apparatus and osteoarticular structures begin, which is manifested mainly by the development of soft tissue edema in the area of the injury, followed by and the development of pathogenic changes in the form of damage to blood and lymphatic vessels, which are the main trigger for the formation of edema. All these processes are associated with the occurrence of subsequent compression of the surrounding tissues, an increase in edema and the development of a severe pain syndrome [13,14].

And everyone knows that people involved in sports are especially prone to ankle injuries. Of these injuries, 86% are sprains. Acute ankle sprains occur during dynamic movement, especially when changing direction quickly. The lateral ankle ligaments that provide static support are often torn, and the stability provided by the peroneal muscles is insufficient to limit forced inversion. Due to the frequency of ankle injuries, a significant amount of epidemiological research has been conducted to investigate the causes and effects of various methods used to prevent such injuries. High trauma to the lower extremities, especially the ankle complex, contributed to the spread of external devices to stabilize this joint. To prevent ankle injuries and stabilize patients suffering from chronic ankle instability, various recovery methods are used, such as taping, exercise therapy, and massage. Ankle bracing and taping reduce ankle injury 9–12 and injury rates primarily due to the mechanical support offered by these devices, although increased sensorimotor function provided by external ankle support may be a contributing factor [2,12,15].

The search for literature sources made it possible to determine the existing problem and assess the relevance of the ongoing scientific research, which is aimed at developing and searching for new modern methods, therapy regimens that will improve the quality of therapy for ankle injuries in athletes and achieve early recovery of lost functions with a return to full-fledged sports activities [3,16].

To date, there are many methods that are used for the purpose of restorative and rehabilitation treatment. One of the currently validated methods is the use of electromyostimulation, the action of which is based on the elimination of lymph -venous outflow, therefore, an increase in blood flow velocity, with a decrease in lymph-venous stagnation and normalization of microcirculation [10,11,17].



Also, one of the modern methods used and recommended in rehabilitation therapy is therapeutic gymnastics, which is a classic method of rehabilitation treatment, the main effect of which is based on increasing muscle tone, eliminating hemodynamic disorders [11,12].

Another method of recovery and early rehabilitation deserves attention - the use of kinesis taping, the impact on the lymphatic drainage system, followed by the improvement of lymph -venous outflow, microcirculation and tissue tropism. Ankle taping is a common preventive measure used by people involved in sports in various disciplines. When reviewing the literature on this issue, the sources are scarce and there is little information on the impact of ankle taping during the recovery period. And in our study, we want to prove the effectiveness of this method during the rehabilitation of athletes with ankle injuries [1,8].

Accordingly, the purpose of our study will be to evaluate and scientifically substantiate the inclusion of kinesis taping, electromyostimulation techniques, physiotherapy exercises, studying the quality of life in order to early recovery of athletes with an ankle joint injury in a comprehensive rehabilitation program [7,11,12].

In connection with the foregoing, taking into account the emerging trend towards the use of integrated approaches to early rehabilitation and recovery of athletes, an urgent task is to search for and develop the use of modern methods of kinesis taping, electromyostimulation, physiotherapy exercises with their subsequent inclusion in the treatment programs for athletes with traumatic injuries of the ankle joints. Taping methods are modern, non-invasive and are carried out taking into account the mechanisms and functional activity of the joints and the muscular-ligamentous apparatus [7,8,12].

As the literature sources on this problem show, there are currently many methods of restorative and rehabilitation therapy, but which method is preferable and the search for their complex in solving emerging problems in traumatic injuries of the ankle joint requires a scientific approach and justification, which is supposed to be carried out in the framework of this study.

This problem is being actively studied, scientific research is ongoing aimed at finding complexes for the treatment and rehabilitation of athletes with pathology and injuries of the ankle joint, there are gaps and clearly developed, pathophysiological sound approaches to treatment and rehabilitation measures that require continued research in this direction. Ultimately, we plan to develop a staged program for the rehabilitation of athletes with traumatic ankle injuries, which will increase the effectiveness of the use of complex rehabilitation methods and the soonest return of the athlete to professional sports.

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EXPLORING THE DEVELOPMENT OF INFRASTRUCTURE IN THE OIL PRODUCING AREAS OF NIGERIA, 2009-2017

Rebecca Ginikanwa Nnamani¹, Quentin Chukwuemeka Chukwu², Ezinwanne Ekekwe*³

¹Department of Political Science, Faculty of the Social Sciences, University of Nigeria, Nsukka

²Social Sciences Unit, the School of General Studies, University of Nigeria, Enugu Campus

³Social Sciences Unit, the School of General Studies, University of Nigeria, Enugu Campus

ABSTRACT

The study explores the development of infrastructure in the oil producing areas of Nigeria, 2009-2017. The documentary and survey methods were used to generate the relevant data. Data analysis was presented using content analysis and tables. Findings revealed that in spite of its clear mandate and fairly reasonable funding, NDDC has failed to resolve the perennial conflicts in the region through its programmes and projects that are not sustainable. Among others, the study recommends that the NNDC management should ensure prompt completion of audited accounts of the Commission for outstanding years. This will ensure transparency, probity, and accountability with intent to ensure strict adherence to the enabling law. The study equally calls for periodic reconciliations should be routinely undertaken on project master schedule in the Directorate of Finance and the Projects Monitoring Unit in order to ensure that the lists of projects are correctly recorded by the different departments.

KEYWORDS: Economic development, Government interventions programmes, Human Development, Niger Delta Development Commission, infrastructure.

INTRODUCTION

There are no fewer than 600 oil fields, 5,284 onshore and offshore oil wells, 10 export terminals, 275 flow stations in the Niger Delta (Lubeck, Watts & Lipschits, 2007). Furthermore, statistics show that about 23,183.9 billion barrels of crude oil were produced in the Niger Delta in 2007, which amounts to staggering national revenue of 29.8 trillion naira (TELL, February 18, 2008). Despite the foregoing, the region epitomized one of the extreme situations of poverty and underdevelopment in the midst of plenty. Infrastructural development was very low, while poverty and unemployment levels were extremely high. The poverty and unemployment levels were estimated at 80 and 70 percent respectively. Access to basic social amenities was very limited. Indeed, the region fell below the national average in all measures or indicators of development (UNDP, 1996).

Juxtaposing the state of social, human and economic development of the Niger Delta with the above serial developmental efforts, and her wealth, in terms of accounting for about 80% of total government revenue, 95% of foreign exchange and over 80% of national wealth, United Nations Development Programme (1996) described the region as suffering from administrative neglect, crumbling social infrastructure and services, high unemployment, social deprivation, abject poverty, filth and squalor, and endemic conflict.

The Nigerian government had variously taken steps to tackle the developmental challenges of the Niger Delta. From the setting up of the Niger Delta Development Board in 1960 to the establishment of the Oil Mineral Producing Areas Development Commission in 1992, it is clear that the Federal Government never shielded away from the development of the Niger Delta. One of the latest in the series of attempts by government to address the injustice in the Niger Delta is the establishment of the Niger Delta Development Commission (NDDC).

The NDDC was officially inaugurated on December 21, 2000 to hasten the overall development of the Niger Delta. The primary aim of the Commission is to 'conceive plans and implement programmes for the sustainable development' of the region (NDDC Act, 2000). The Nigerian government has demonstrated commitment to the NDDC through financial allocation which amounted to over ₦241.5 billion and ₦593.961 billion from 2000 to 2006 and 2007 to 2011 respectively (Ero, 2007; NEITI, 2013).



All these, it must be admitted, were done to remedy the Niger Delta situation with a view to giving the oil producing communities the special attention that they deserve because of their contributions to the national economy. The extent to which the NDDC has utilized the huge outlay of funds to address decades of social and infrastructural underdevelopment in the Niger Delta has been variously analyzed.

Studies such as Ero (2007), Ashiomanedu (2008), Oparah (2008), Obagbinoko (2009), Mboho and Inyang (2011) Luqman (2011), Okolo (2014) among others have alluded to some variables such as corruption, patronage networking and shoddy execution of projects, fire-brigade approach, political exclusion, award of contracts without due process; non-implementation of the Board's decisions; undue interference and poor funding of Niger Delta Development Commission (NDDC) which had limited its ability to execute critical infrastructure, such as regional rail line, major roads and bridges that would impact on the wellbeing of the people. Others focus on what is called the "infrastructure-funding gap" theses (Omoweh, 2007; Ekuerehareye, 2004; Paki & Ebienda, 2011; Yusuf, 2008; Etekepe, 2007; Ibaba, 2005; Jack-Akhigbe, 2013; Agbo, 2007; Akinkuotu, 2008; Ajakaye, 2007). This segment of literature either praised or condemned the NDDC for the much or little it achieved in the provision of infrastructure, despite its financial constraints

Apart from these, others such as Uyigwe and Agho (2007), Agekameh (2010), Akpomuvie (2011), Ajugwo (2013), Iwejingi (2013), Ihayere *et al.* (2014) have often rationalized the general neglect of infrastructure by the difficulty of the delta's terrain, which has worsened people's access to fundamental services such as electricity, safe drinking water, roads and health facilities that are taken for granted in many other parts of Nigeria. Other elements include the negative impacts of the oil industry, a constricted land area, a delicately balanced environment and extreme economic deprivation.

Altogether, this body of literature has suffered from important shortcomings because in spite of its profundity and logical elegance, how award and execution of contracts by the NDDC affected the development of infrastructure in the Niger Delta, as well as the link between the projects of the NDDC and the incidence of inadequate infrastructure in the oil producing areas of Nigeria have not been systematically examined. Hence the need for the present study.

THE CONCEPT OF INFRASTRUCTURAL FACILITIES

The definition of infrastructure has been shifting from one which focuses on physical fixed assets such as roads, airports, sea ports, telecommunications systems, energy, water distribution systems and sanitation (public utilities), to one which embodies notions of 'softer' types of facilities such as information systems and knowledge bases (Button, 2002). Thus, there are two types of infrastructure, "Hard and Soft" infrastructure. Hard refers to the large physical networks necessary for the functioning of a modern industrial nation, whereas "soft" infrastructure refers to all the institutions which are required to maintain the economic, health, and cultural and social standards of a country, such as the financial system, the education system, the health system, the governance system, and judiciary system, as well as security (Kumar, 2005). The World Bank landmark study on infrastructure highlights the critical role of infrastructure in the development process (World Bank, 2004). The importance of delivering quality infrastructure has also been underlined by the United Nations declaration of the Millennium Development Goals. For many years, the public sector has traditionally financed and operated infrastructure projects using resources from taxes and various levies (e.g. fuel taxes, road user charges). However, the recent disparity between the capacity to generate resources and the demand for new facilities seem to have forced governments worldwide to look for new funding methods and sources.

Prud'homme, (2004) noted that infrastructure as a concept has largely been absent from economic discourses for about two centuries. This notwithstanding, Estache, (2006) noted that by the 1990s after many years of neglect, infrastructure featured prominently on the development agenda, with renewed emphasis on the role of infrastructure in economic growth and poverty reduction. The World Development Report (1994) defined infrastructure as long-life engineering structures, equipment and facilities, and also the services that are derived from and utilised in production and in final household consumption. Other authors like Ahmed and Donovan (1992), refute this definition, indicating that the concept has evolved earlier, towards a more comprehensive definition that includes a wider range of public services that facilitate production and trade. Since infrastructure services tend to raise the productivity of other factors, it is often termed the "unpaid factor of production".

Evidently, investment in infrastructure leads to the growth of a countries economy and the improved wellbeing of its people. Around the world investment in infrastructure has always played a leading role in economic development. Basic infrastructure – roads, railways, airports, for energy generation and supply, water supply, sanitation, etc. underpins sustainable development and economic transformation of emerging economies (Gavin, 2015). Infrastructure investments can also help improve peace and security by enabling, sustaining and enhancing societal living conditions and the welfare of people in developing countries. Infrastructure connects communities and countries with market, health and education facilities, gives access to clean water, sanitation and power, and improves livelihoods and generates employment creating the conditions for lasting peace.

Infrastructure development is a key driver for progress across the African continent and a critical enabler for productivity and sustainable economic growth. It contributes significantly to human development and poverty reduction. Investment in infrastructure



accounts for over half of the recent improvement in economic growth in Africa and has the potential to achieve even more (African Development Bank report, nd).

Jochimsen (1966), who defined infrastructure as “the sum of all basic material structures, institutional conditions and human resources available to society, needed for the proper functioning of the economic sector, further distinguished between three components of infrastructure that are inter-related- institutional, social and physical infrastructure. The understanding of the relationship between these components is crucial in policy making and the delivery of infrastructure services. Similarly, Idachaba (1978) who posited that infrastructure consists of the essential capital, which aid rural residents in their production, distribution and consumption activities as well as enhance the quality of rural life, classified infrastructure into three broad classes. These are physical, institutional and social infrastructure.

Social infrastructure refers to the core elements of social change (like schools, colleges, hospitals and nursing homes) which serve as a foundation for the process of social development of a country. Social development focuses on human resource development, implying the development of skilled personnel as well as healthy and efficient human beings. In fact, it accelerates the process of human development (http://www.ghd.com/global/markets/property_buildings/social-infrastructure/).

Social Infrastructure is a subset of the infrastructure sector and typically includes assets that accommodate social services. The provision of adequate social infrastructure is fundamental to ensuring people are safe, healthy and productive in the community. As set out in the table 4, examples of social infrastructure include schools, universities, hospitals, prisons and community housing. Social infrastructure does not typically extend to the provision of social services, such as the provision of teachers at a school or custodial services at a prison.

The social infrastructure of a country is very important as it not only presents the human face of economic growth process but represents the very essence of it. Universal access to education, health and safe drinking water is a must for any society to progress. But even after decades of government intervention in form of development planning, Niger Delta still grapples with a decent living for a large number of people. Despite various development plans, lack of or inadequate social infrastructure appear to have remained a major constraint to progress in the region. Against this backdrop, we proceed now to examine the efforts of the NDCC in the provision of social infrastructure in the Niger Delta.

Inadequate infrastructure has been reported to be holding back the productivity of sub-Saharan Africa entrepreneurs, and imposing major costs on business in terms of lost output and additional costs incurred to compensate for inadequate public services. It is widely acknowledged that infrastructure deficit is one of the key factors that prevent the sub-Saharan Africa region from realizing its full potential for economic growth, international trade and poverty reduction (World Bank, 2010; 2008; Organisation for Economic Cooperation and Development, 2006). Therefore, many countries are now contemplating Public-Private collaboration as an arrangement between public and private sectors to finance, design, build, operate and maintain public infrastructure, community facilities and related services (Akintoye & Beck, 2009).

Sullivan and Sheffrin (2003) noted that infrastructure is the basic physical and organizational structures needed for the operation of a society like industries, buildings, roads, bridges, health services, governance and so on. It is the enterprise or the products, services and facilities necessary for an economy to function. According to them, infrastructure can be described generally as the set of interconnected structural elements that provide framework supporting an entire structure of development, as well as an important term for judging a country, region or state's and individual's developments/status.

Fulmer (2009) refers it to the technical structures that support a society, such as roads, water supply, sewers, electrical national grids, telecommunications, and so forth, and can be defined as "the physical components of interrelated systems providing commodities and services essential to enable, sustain, or enhance societal living conditions"

Viewed functionally, American Heritage Dictionary (2009) noted that infrastructure facilitates the production of goods and services, and also the distribution of finished products to end-users (markets), as well as basic social services such as schools and hospitals; for example, roads enable the transport of raw materials to a factory. Infrastructure is the basic physical and organizational structures needed for the operation of a society like industries, buildings, roads, bridges, health services, governance and so on. It is the enterprise or the products, services and facilities necessary for an economy to function (Sullivan & Sheffrin, 2003). Infrastructure can be described generally as the set of interconnected structural elements that provide framework supporting an entire structure of development. The state of infrastructure of any state is directly related with the quality of life (Eregha, 2007). According to Kathmandu Final Workshop Report (2009), infrastructure can help solve four problems: social; health and environment; development; and, economics. The distribution, operation and maintenance of infrastructures are other fundamental prerequisites for a successful rural development. Therefore rural infrastructures constitute the necessary components or ingredients for motivating rural residents to be more productive and achieve relative self-reliance. They also aid and enhance the realization of improved rural life. It is quite noticeable that the distribution of rural infrastructures, over time, has not been equitable and spectacular.

The African Development Bank (ADB) has made infrastructure development a cornerstone in its development agenda with regional member countries (TMSA, 2012). The Bank recognizes that lack of adequate social and economic infrastructure is one of the



key constraints to short- and medium term poverty reduction in Africa, and has thus been a major force in private and public sector infrastructure development through the provision of financial and technical resources. At the same time, the Bank recognizes the increasing importance of governance for infrastructure development and has made good governance an imperative in its lending and non-lending operations.

There have been considerable changes in the delivery of national infrastructure services across Africa. While Nigeria has improved its telecommunication infrastructural situation, it has not improved in other areas like health, education, airport infrastructures, electricity, housing and transportation. However, performance in terms of infrastructure service delivery and quality continue to vary across countries. Infrastructure is the medium of production of goods and services and forms the national asset of any nation.

According to Hirschman (1958) (in Olayiwola & Adeleye, 2005), infrastructural facilities refer to those basic services without which primary, secondary and tertiary productive activities cannot function. Broadly, this includes all public services like education, public health, transportation, communications and water supply. Likewise, Kahn (1979) classified rural infrastructural facilities into three main types: namely, physical infrastructure – such as roads, water, rural electrification, storage and processing facilities; social infrastructure namely, health and educational facilities, community centres, fire and security services; institutional infrastructure which includes credit and financial institutions, and agricultural research facilities.

Kessides (1993) and Alaba (2001) pointed out that these individuals are poor because they do not have access to infrastructure services of necessary quality. Olayiwola and Adeleye (2005) noted that improvement in rural infrastructural facilities through a community based development strategy can be utilized to confront rural poverty and subsequently low quality of human life. According to Kathmandu Final Workshop Report (2009), infrastructure can help solve four problems: social; health and environment; development; and, economics. A region's infrastructure network, broadly speaking, is the very socio-economic climate created by the institutions that serve as conduits of trade and investment. Some of these institutions are public, others private. In either case, their roles in the context of integration are transformative; helping to change resources into outputs or to enhance trade by removing barriers. Therefore, an improvement in regional infrastructure is one of the key factors affecting the long-term economic growth of a region. The linkages between infrastructure and economic growth are multiple and complex. Not only does infrastructure affect production and consumption directly, it also creates many direct and indirect externalities. It also involves large flows of expenditure, thereby creating additional employment. Studies have shown that infrastructure can have a significant impact on output, income, employment, international trade, and quality of life. Infrastructure development can reduce stress and promote good health. It will also reduce crime level. Infrastructure has always played a key role in integrating economies within a region. Well developed and efficient infrastructure is essential for a region's economic development and growth. In a dynamic concept, infrastructure is seen as a regional public good that moves factors of production within and across countries, thus helping the region attain higher productivity and growth.

NDDC'S CONTRACTS AND INFRASTRUCTURAL DEVELOPMENT

The Niger Delta Development Commission was established in 2000 by the NDDC Establishment Act which repealed the Oil Mineral Producing Areas Commission Decree 1998, with a re-organized administrative structure for increased effectiveness. According to the *Vision and Mission Statement* of the Establishment Act of the Niger Delta Development Commission, its Vision was to provide "lasting solution to the socio economic challenges of the Niger Delta Region" while its Mission was "to facilitate the rapid, even, and sustainable development of the Niger Delta into a region that is economically prosperous, socially stable, ecologically regenerative, and politically peaceful"(Report on Revenues, Deductions, and Disbursement and Utilization of Funds of the Federal Beneficiary Agencies, 2007 – 2011). Among others, the Commission's core functions, according to the *Vision and Mission Statement* of the Establishment Act of the Niger Delta Development Commission, included:

Formulation of policies and guidelines for the development of the Niger Delta area; conception, planning and implementation, in accordance with set rules and regulations, of projects and programs for sustainable development of the Niger Delta area in the field of transportation including roads, jetties and waterways, health, employment, industrialization, agriculture and fisheries, housing and urban development, water supply, electricity and telecommunications; surveying the Niger Delta in order to ascertain measures necessary to promote its physical and socio-economic development; identify factors inhibiting the development of the Niger Delta region and assisting the member states in the formulation and implementation of policies to ensure sound and efficient management of the resources of the Niger Delta region; tackling ecological and environmental problems that arise from the exploration of oil mineral in the Niger Delta region and advising the Federal Government and the member states on the prevention and control of oil spillages, gas flaring, and environmental pollution; liaising with the various oil mineral and gas prospecting and producing companies on all matters of pollution, prevention, and control, and executing such other works and performing such other functions, which in the option of the Commission are required for the sustainable development of the Niger Delta region and its people(The Niger Delta Development Commission, 2000).



Agekameh (2010) posits the Niger Delta, socio-economic injustices walks on four legs; leading to violent agitations by the people and it is these injustices that the projects of NDDC strives to eradicate. The highlighting of the socio-economic problems of the region, the NDDC projects which strives to cushion their effect on the host communities as well as the urgent need for governmental intervention have been variously discussed in the literature (Uyigue & Agho, 2007; Akpomovie, 2011; Ihayere *et al.* 2014; Ajugwo, 2013). Iwejingi (2013) emphasized that oil spillage could result in massive extermination of fishes and thereby threaten the social and economic life of the communities whose livelihood depends on the contaminated water and polluted farm lands as crops and vegetation weather away and other animals in the soil like earthworms that help in soil manure die off. Inoni *et al.* (2006) found in their study that oil spill reduced crop yield, land productivity and greatly depressed farm income. All these socio-economic problems are what the NDDC projects strives to remedy their effect on the host communities.

Luqman (2011) avers that the Niger Delta Development Commission by far remains the greatest and most significant attempt to grapple with the environmental and development challenges facing the Niger Delta in this present fourth republic. Though faced with stringent criticisms especially on the lack of consultation with the people of the region before the submission of the Bill to the legislature by advocacy groups from the region, the bill was finally passed into law in 2000. The Commission is to conceive, plan and implement projects that are capable of fostering the sustainable development of the oil region in line with set rules and regulations. To aid it in the effective performance of its functions, the act establishing the commission stipulate in clear term the financial obligations of stakeholders. Given the comprehensive and detailed nature of the Act, that establishes that the NDDC hope was high, particularly within the region, that unlike past development commissions, the NDDC will perform credibly well. Notwithstanding, the impressive statistics of projects executed by the Commission so far, it is still glaringly clear that the environmental challenges facing the region are by no means fully address. Criticisms against the commissions were indeed varied. It ranges from accusation of corruption, patronage networking and shoddy execution of projects among others.

Mboho and Inyang (2011) posit that the NDDC, by producing a comprehensive regional development master plan which involves 24 sector studies expected to enhance long term planning and development of the Niger Delta, is a major break from past development institutions in the region. However, the stride of the Commission appears that all is well. The Commission is to be threatened by a number challenges which include inadequate funding which is fuelled by the fact that it had become impossible to earn revenue from some expected sources, award of contracts without due process; non-implementation of the Board's decisions; and undue interference with the statutory function of state representatives to creating due process unit, which is used as an excuse to perpetuate huge financial crimes in the Commission. Another major challenge, which affects the commission, is communal and other crises. Incessant crisis, occasioned by political and other reasons has to some extent affected the work of NDDC.

Oparah (2008) reveals that much of what have happened in government intervention agencies like the NDDC has been the fertilizing of a huge corruption complex that have targeted party roughnecks, space-fillers at party rallies and briefcase-wielding accomplices of those in power for stupendous enrichment. Overinflated contracts and those that were never executed have become the ready avenue employed by the NDDC to enrich these fringe elements that bear no direct impact on the resolution of intractable challenges in the Niger Delta. Perhaps one reason why interventionist policies have failed to achieve their objectives in the Niger Delta is due to the fact they have suffered acceptability problem in the hands of the people who are suppose to benefit from such policies. With the diverse nature of the problems in the region, the various antidotes being sought do not go down well with the entire people of the region. This is why some would hail the establishment of separate Ministry of Niger Delta Affairs, while some would condemn it as another conduit pipe to siphon resources. This feeling understandably, is derived from past experience where such bureaucracies are often perceived as political agencies rather than interventionist agencies.

In an examination of the forces that have made state interventions improbable in tackling the deepening development crisis in the region of Nigeria Jack-Akhigbe (2013, pp. 255-265) argued that:

The Niger Delta region of Nigeria presents a typical case of the juxtaposition of enormous wealth and acute underdevelopment. Several attempts have been made by successive administrations in Nigeria to stimulate development through direct state interventions in the region.

He further noted that, there has been a tendency for an inverse relationship between development and natural resource abundance in the region and that the search for strategies that would utter this relationship and stimulate patterns and processes of development in the region has led the Nigerian State to frame special development programmes, since the 1960s.

Examining Poverty and Sustainable Development in Nigeria's Niger Delta, Ashiomanedu (2008) reveals that local people view the NDDC with suspicion and see the Commission as an imposition from the Federal Government. The author further states that all the members of the Commission are political appointees of the Federal Government. The fact that the local people had no say in determining its composition is seen as a glaring example of political exclusion. As far as ordinary people are concerned, the loyalty of the NDDC is not to the Niger Delta but to the Federal Government and the oil companies that provide the bulk of its budget. This has led to a heightened level of tension and conflicts between the indigenous communities, the state, and the multinational corporations.



Okolo (2014) examines the efforts of the Federal Government's interventionist agencies over the years with specific emphasis on the Niger Delta Development Commission (NDDC) between 2001 and 2010. The author posits that in spite of its clear mandate and fairly reasonable funding, NDDC has failed to resolve the perennial conflicts in the region through its programmes and projects that are not sustainable. The author further contends that although NDDC has created the Directorate of Community and Rural Development (DC&RD), it is more of a service, instead of line function in the Commission. Thus, the supposedly sustainable projects, such as supply of dustbins, and exercise books to primary school pupils, provision of inter-state transport buses, and rehabilitation of roads, among others had little or no positive impact on the oil producing communities. It was also indicated that, like the Nigerian State, NDDC's effort to manage conflicts, build peace and community development efforts have largely been based on fire-brigade approach. This has often led to stop-gap and ad-hoc remedial measures. The study also revealed that NDDC does not have proactive mechanism to detect threats to security arising from internal and external sources in the Niger Delta. In view of this, the Commission does not have timely and accurate security intelligence monitoring/gathering to enable her take appropriate counter-insurgency measures to neutralise or contain conflicts in the region. It was equally revealed that NDDC does not equally have the capacity for Early Warning System to uncover gradual build-up of crisis that would culminate into civil disturbances.

DEVELOPMENT OF INFRASTRUCTURE IN THE OIL PRODUCING AREAS OF NIGERIA, 2009-2017

The NDDC sees to the implementation of its mandate by executing relevant projects in the entire oil producing areas of Nigeria. The projects are conceptualized, designed, and executed based on extensive consultation with locals, input from interested parties and critical analysis by experts. The NDDC's projects are in the following areas: education, health, transportation, road infrastructures, electrification projections, skill acquisition and youth development, agricultural development programmes, security and logistics projects, environment and waste management, among others.

However, like the intervention agencies preceding it, one of the common features of the NDDC is "top-bottom" development initiative, which is quite obvious in the Act. Section 14 of the Act provides that all stakeholders in the oil producing areas and oil companies should help finance the NDDC. The Act mandates Federal Government to contribute to NDDC, 15% of the total monthly statutory allocations due to the Niger Delta states from the federation account. The Act also mandates MOC, including gas-processing companies, operating onshore and offshore in the oil producing states to pay 3% of their total annual budget to the commission (NDDC Act, 2000). These sources of fund give NDDC a potentially huge capital base. However, in the light of no effective and efficient regulatory mechanisms, this outlay of resources has not translated into improved and adequate infrastructure in the oil producing areas. In fact, the resources have been grossly mismanaged.

Hence, despite its immense fiscal potentials, the NDDC has been known more for crisis and corruption than for initiating developmental projects. In more than 15 years of its existence, The Commission appear to have failed to make any meaningful impact on the lives of the people of oil producing areas, and has performed dismally in realizing the purpose for which it was founded and funded. For instance, the performance of the NDDC in the provision of infrastructure/projects in the last five years is below an average of 19% in terms of the number of projects completed. The number of projects awarded during the period under review was 1,475 of which 280 was completed while 1,195 projects were yet to be completed. The NDDC's poor performance cut across the five years under review. In the year 2010, of 242 projects awarded, 70 were completed while 172 projects were on-going. In the year 2011, the projects awarded were 114 out of which 62 projects were completed whereas 52 were tagged on-going. More so, in the year 2012 the projects awarded were 188 out of which 44 were completed while 144 were not completed. In the year 2013, projects awarded were 538 out of which 60 projects were certified completed while 478 projects were not completed. In the year 2014, projects awarded were 393 out of which 44 were recorded as completed whereas 349 projects were yet to be completed (NEITI, 2017).

The foregoing information is in line with the report of the Nigerian Extractive Industry Transparency Initiative (NEITI). According to the Report, twenty-two projects of the NDDC were duplicated in the project's schedule with a total contract sum of ₦1.18 billion, with mobilization payments of ₦370.70 million. It further highlighted that most of the projects were neither identifiable nor scheduled for monitoring and proper management. The report also observed that substantial work has not been carried out in a significant number of projects even though mobilization has been paid. For instance projects with a total contract sum of ₦284.884 billion and mobilization or advance payment of ₦63.558 billion made were not certified for any work done through the established milestones (NEITI, 2017).

Buttressing the foregoing is the information on **Table 1** which shows the NDDC's project performance analysis since inception up to September, 2016. Of the entire 8,558 projects awarded, 2,290, representing 26.8% were still ongoing; 3,530, representing 41.2% were completed; 293, representing 3.4% were stalled or abandoned; 2,366, representing 27.6% were awarded projects yet to mobilize to sites; 49, representing 0.6% were terminated projects, while 30, representing 0.4% were taken over by State Governments or other agencies.

**Table 1: NDDC's Project Performance Statistics from Inception up to September 2016**

S/NO	ITEM	QTY	%
1	Number of awarded projects since inception as at September 2016.	8,558	100
2	Number of ongoing projects as at September 2016 since inception.	2,290	26.8
3	Number of completed projects as at September, 2016	3,530	41.2
4	Number of stalled/abandoned projects as at September 2016	293	3.4
5	Number of awarded projects yet to mobilize to sites as at September 2016	2,366	27.6
6	Number of projects terminated as at September 2016	49	0.6
7	Number of projects taken over by State Governments/other Agencies as at September 2016	30	0.4

Source: NDDC (2016), p.16.

It is quite evident that the NDDC has not fared well as regards provision and development of infrastructure/projects in the oil producing areas of Nigeria. This is so because the number of ongoing projects and the number of awarded projects yet to mobilize to sites since inception up to September 2016 put together, that is, 26.8% + 27.6% = 54.4% are more than the number of completed projects within the same period, that is 41.2%. This reinforces the earlier assertion that the NDDC has not fared well in realizing the purpose for which it was founded and funded.

The assessment of contract sum in comparison to the level of work certified between 2011 and 2015, also betrays the weak performance of the Commission in the provision and development of infrastructure/projects in the oil producing areas of Nigeria. Within the afore-stated period, the Commission awarded contracts to the value of ₦497.028 billion. However, the aggregate value of work certified was stated at ₦119.73 billion which indicated 24% performance rate. The lower rate of projects' performance cuts across the various classifications of programmes and projects. On the other hand, a high performance rate of 86% and 50% was recorded in respect of hospital and other medical equipment and security and logistics programmes respectively. The skill acquisition and youth development recorded a 35% completion rate. The annual completion rate of 52% was recorded in the year 2012 being the highest between 2011 and 2015, while the least outturn was recorded in the year 2015 at the rate of 16% completion (NDDC, 2016).

In further demonstration of the poor performance of the NDDC in the provision and development of infrastructure in the oil producing areas, **Table 2** clearly presents the percentage share of the Commission's projects on state basis.



Table 2: Percentage Share of the NDDC's Projects on State Basis, 2010–2015

State	Contract awarded (₦)	Work certified	Percentage%	Ranking
Abia	11,380,975	2,541,506	29%	3 rd
Akwa - Ibom	50,395,953	9,393,413	19%	6 th
Bayelsa	88,486,017	31,526,552	36%	1 st
Cross-River	8,179,882	1,555,000	19%	6 th
Delta	59,821,583	7,546,762	13%	7 th
Edo	19,796,823	3,943,123	20%	5 th
Imo	36,271,106	5,092,441	14%	6 ^t
Ondo	27,154,765	1,902,055	7%	8 th
Rivers	109,518,475	27,249,357	25%	4 th
Regional	86,023,200	28,980,399	34%	2 nd

Source: NDDC (2016), p.19.

It is seen that Bayelsa State outturns with 36% performance rate while the headquarters recorded 34% completion and least performance rate was recorded in Ondo State with 7% outturns.

In sum, the challenges of uncompleted projects, on account of corruption and mismanagement, manifesting in awards of contracts without due process seem to have cast a long shadow on the image of the Niger Delta Development Commission (NDDC). Unfortunately, the Commission should not be given pass mark for the erection of sign boards including projects that were neither started nor half completed? Sadly, this seems to have been a recurring decimal as one board hands over to another over the years since the Commission was established by the Olusegun Obasanjo administration in December 2000. This hangover, which has remained a big drag on the Commission's performance, runs counter to the main objective of setting up the agency as a veritable change agent. The effects of the unfortunate phenomenon have impacted negatively on its mandate to transform the Niger Delta region that produces over 90 per cent of the country's oil wealth.

CONCLUSION

The Niger Delta Development Commission (NDDC) as packaged by the Federal Government was supposed to be a development intervention agency instituted to execute projects and programmes to alleviate the plight of the neglected and terribly battered peoples of the oil producing areas of Nigeria. But today, the supposed intervention agency is in dire need of an intervention to save it from self-destruction. Most importantly, state efforts at initiating development in the region have been subverted by the forces of corruption, manifesting in award of contracts without due process, the exploitative relationship between the state/oil companies and the oil communities, violent socio-political crises and alienation. The benefitting communities are not involved in the project process. The critical elements of the project are not disclosed to them. The contractors merely visit the concerned community; give marching grant to the chieftain and sometimes to the town union leaders who most times never bother to inform the members of the community. In connivance with the chiefs, the contractor mounts his sign post indicating the name of the contract, the consultant, and the project awardee. Therefore, development projects are primarily designed to ensure that the spoils of electoral contest go round. They are mainly handled by urban elites who have completely lost touch with the people in the local communities and whose interests are completely at variance with the actual needs of the people. This is why the feeling of alienation and powerlessness is pervasive among the people. The study, therefore, recommends that the NNDC management should ensure prompt completion of audited accounts of the Commission for outstanding years. This will ensure transparency, probity, and accountability with intent to ensure strict adherence to the enabling law. The study equally calls for periodic reconciliations should be routinely undertaken on project master schedule in the Directorate of Finance and the Projects Monitoring Unit in order to ensure that the lists of projects are correctly recorded by the different departments.

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A CONCEPTUAL STUDY OF JARA WITH SPECIAL REFERENCE TO JANUSANDHIGATA VATA

Dr. Deepa¹, Dr. Mahantesh R Sajjan Shetty.MD(AYU)², Dr. Rashmi Ulli .MD(AYU)³

¹2nd Year PG Scholar, Department of PG Studies in Samhita and Siddhantha, S.V.M. Ayurvedic Medical College and PG Research Centre Ilkal -587125, Bagalkot, Karnataka.

²Professor and HOD, Department of PG Studies in Samhita and Siddhantha, S.V.M. Ayurvedic Medical College and PG Research Centre Ilkal -587125, Bagalkot, Karnataka.

³Assistant Professor, Department of PG Studies in Samhita and Siddhantha, S.V.M. Ayurvedic Medical College and PG Research Centre Ilkal -587125, Bagalkot, Karnataka

ABSTRACT

Ayurveda is the science of life has observed ageing as a graceful phenomenon. Old age and its health problems were great concern even for Acharyas during Vedic period. That was the reason why JARA- CHIKITSA has been mentioned as one independent anga in Ashtanga Ayurveda. It implies delaying the process of aging and managing the problems of old age. Jara is Swabhavika vyadhi which is natural, unavoidable, and palliable. In fact no treatment can prevent old age or changes occur due to age, but the process can be delayed. The detailed study of JARA in the light of recent developments in the field of geriatrics is very much essential to understand, analyze and revalidate the principles related to Jara. In Vrudhas avastha, the vata dosha is in a dominant state and rasadi dhatus in a deprived state. This potent combination is responsible for the aged being vulnerable to many diseases. Among them the Janusandhigata vata, a vata vyadhi which is equated to Knee- Osteoarthritis stands top in the list of old age diseases. 80% of old age people have the radiological evidence of Osteoarthritis, though 25-30% is symptomatic. Knee-Osteoarthritis is a major cause of disability, limiting activity and impaired quality of life especially among elderly, the disease is more crippling in its advanced stage. It is ranked one among few diseases branded by WHO as "Global Disease Burden".

KEY WORDS: Jara, janusandhigata vata, Vata dhosha,

INTRODUCTION

Jara means the later part of life, in jara dhatukshaya is observed external appearance of person and diminish in the normal physiological function of body¹, In Sharangdhar Samhita they described decade wise decline conditions, In the 1st decade Balyavastha will be diminished, in the 2nd decade Vridhi Hani, in the 3rd decade Chhavi Hani, in the 4th decade Medha Hani, in the 5th decade Twak Hani, in the 6th decade Drushti Hani, in the 7th decade Shukra Hani, in 8th decade Vikrant Hani, in 9th decade Buddhi Hani, in 10th decade karmendriya Hani, in 11th decade mann Hani, in 12th decade Jivan Hani².

AIM AND OBJECTIVE

1. To study about jara avastha
2. To study about janusandhigata vata in jara avastha

MATERIALS AND METHODS

Materials has been collected from classical texts of Ayurveda, Text books of contemporary science, published article from periodicals, research journals and electronic database

DISCUSSION

About jara Avastha - The etiological factors for initiating the early ageing process according to Ayurveda is clearly described by Charaka and Vagbhata. All the etiological factors for ageing can be differentiated³ in

Aharatmaka Hetu: Amla, katu, lavana rasa, kshara, guru, ruksha, klinna, abhishyandi, puti, paryushita food articles accelerates the process of ageing.

Viharatmaka Hetu: Viharatmakahetu of jara comprise divaswapna, ativyavaya, ayasa and vishamaatim atravyayama etc.

Mansika Hetu: Bhaya, krodha, shoka, lobha, moha etc



Age is defined as the duration of time since from birth to death. *Acharya Charaka*, age divided into three part i.e. *balyavastha*, *madhyamavastha*, *jirnavastha*. In *jirnavastha* there is diminution of dhatu, strength of sense organs, masculinity, bravery, power of understanding, retaining and memorizing, speech and analyzing facts. There is gradual diminution in the qualities of dhatu also.⁴

* *Acharya Sushruta* has described that after seventy years of age the sensory and motor organs, dhatus, strength, vigour and enthusiasm decline gradually, skin get wrinkles, grey hairs and baldness and other complaints, is not have strength⁵.

* *Acharya Vagbhata* said gradual decline in the dhatu and the function of the sense and motor organs in old age. Here additions features such as aged persons suffers from *kasa*, *shvasa*, *twakapaurushya*, *valita*, *khalitya*, *agnisada*, *vepathu*.⁶

* *Jara* (aging) is the natural catabolic process of life. It is a progressive irreversible phenomenon of body rather than disease. *Ayurveda* quotes human body as *Sharira* which is defined as 'Shiryate iti Shariram' which means human body is bound to destroy, it is continuously destroying⁷. *Ayurveda* has given the description of some diseases which are irreversible and related with nature and considered as *Swabhavaja Vyadhies* (natural disorders). *Jara* viz. aging process is one among them⁸. In *Jara Avastha* maximum decline of bodily element i.e. *Dhatukshaya* is observed which leads to various changes in anatomical and normal physiological functions. Elderly peoples are more prone to disorder related to musculoskeletal system due to changes in connective tissue, cartilage and loss of bone density, which affects their joints and normal physiological activities of joints affecting the daily routine of life..

Janusandhigata vata in jara avastha -. *Acharya charaka* has mentiond the *Nidana* of *sandhigata vata*, that the excessive intake of *vata vrudhikara aharas* like *ruksha*, *sheeta*, *alpahara*, and *viharas* like *ativyayama*, *vegasandharana*, etc leads to *dhatukshaya* which in turn leads to *vata prakopa*. This *Prakupita vata* gets seated in the *Riktha srotas* and causes various *Vataja vikaras*. That leads to *Dhatukshaya* and *Avarana* as the factors that cause *Vata prakopa* and thus *Vata vikaras*.⁹

According to *Ayurveda* *Janusandhigatavata* (articular disorder) is one of commonest form of *Jara Janya Vikara*, which limits everyday activities in *Vridhdhavastha*. The biggest challenge with geriatric diseases is that in most of the cases the condition cannot be attributed to a single cause. Ageing requires special attention in diagnosis of disease as well as their treatment. Geriatric medicine is the emerging branch of medicine concerned with the diagnosis, treatment and prevention of disease in older people and the problem specific to aging. Conventional system of medicine is not very satisfactory in this problem as lack of holistic and comprehensive approach towards this problem. . *Ayurveda* has a focused branch of medicine called *Jara chikitsa* or *Rasayana* which exclusively deals with the problems related to aging and methods to counter the same.¹⁰

Such changes start right from the birth and get advancement with chronological age.. Every person has to pass through these decaying changes. *Jeernavastha* or *Vridhdhavastha* is *Dhatukshayajanya Avastha* of body.. Due to this there is predominance of *Vata Dosha* in the body. Hence in *Vridhdhavastha*, *Vatavyadhi* especially *sandhigatavata* is the commonest form of articular disorder, which limits our everyday activities. *Shula Pradhan Vedana* is cardinal feature of the disease associated with *Sandhishotha*, *Vata Purna Druti Sparsha* and lack of movement of joints or painful moments of joints¹¹.

CONCLUSION

* *Jara* is *Swabhavika vyadhi* which is natural, unavoidable, and palliable. In fact no treatment can prevent old age or changes occur due to age, but the process can be delayed. The detailed study of *JARA* in the light of recent developments in the field of geriatrics is very much essential to understand, analyze and revalidate the principles related to *Jara*.

* *Janusandhigata vata* is a major cause of disability, limiting activity and impaired quality of life especially among elderly, the disease is more crippling in its advanced stage. It is ranked one among few diseases branded by WHO as "Global Disease Burden". Thus there is an intense need of study concerned to *Jara* and its relation to *janusandhigata vata*.

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PECULIARITIES OF WU-SHU APPLICATION IN REHABILITATION OF PATIENTS WITH DORSOPATHIES

¹Kim Olga Anatolevna, ²Ernazarov Alimardon Jumakulovich,
³Abdullaeva Sevara Ilkhom kizi

¹Phd, Assistant of Medical Rehabilitation, Sports Medicine and Traditional Medicine Department of Samarkand state Medical University, Samarkand, Uzbekistan

²Research Institute of Rehabilitology and Sports Medicine, Samarkand, Uzbekistan

³ Student of Samarkand State Medical Universities, Samarkand, Uzbekistan

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ABSTRACT

This article presents an analysis of literary sources on the role of wu-shu as an unconventional method of physical rehabilitation of patients with dorsopathy. wu-shu is not only a kind of martial art, but also an unconventional method of physical rehabilitation, which, by influencing the regulation of the nervous, endocrine and respiratory systems, not only helps to reduce pain, improve the psycho-emotional status of patients, but also restore the basic processes in organism and improve quality of life.

KEYWORDS: rehabilitation, dorsopathies, wu-shu, Chinese medicine, physical exercises

Nowadays the problem of back pain syndromes remains relevant, since, according to WHO, they rank second after arthritis as a disabling factor¹. According to some authors, from 35 to 90% of the adult population suffer from back pain^{2,3}.

In different countries the problems of back pain present a challenge to clinicians from the many different specialties. In the face of such diversity of skills it is unlikely that a consensus will be reached without resorting to basic epidemiological principles⁴⁻⁶. A special category of patients with dorsopathies includes athletes involved in various types of sports activities, in which sports results and, most importantly, their quality of life are significantly reduced⁷⁻¹⁰.

Therefore, the main task of many researchers is to search for new methods of treatment and rehabilitation of patients with dorsopathies. Comprehensive treatment programs are being developed not only for medical and surgical treatment¹¹⁻¹³, but also including methods of physical rehabilitation and alternative medicine¹⁴⁻¹⁷.

One of such methods is traditional Chinese gymnastics – wu-shu . It is the common name for all martial arts that exist in China consisting of two hieroglyphs: wu (“wu”) - “military, combat” and shu (“shu”) - “art, technology; skill; tricks.”^{18,19}

Just like traditional Chinese medicine, Wu-shu gymnastics is based on general theoretical concepts: the concepts of yin-yang, wu-xing, the theory of the system of energy meridians. The historical birthplace of wu-shu gymnastics is China.

Modern wu-shu as a system of special physical exercises of various kinds has a number of aspects: health-improving; applied; worldview. It should be noted that the implementation of solving problems caused by one or another aspect is associated with the culture of the body and begins with the culture of movement involved. The “culture of movement” should be understood as the formation of motor skills and wu-shu skills in integration with various accompanying features, in particular, the way of thinking, breathing, etc. In the mid-fifties of the last century, the Chinese systematized and classified all the existing styles of their national martial arts - wu-shu^{19,21}.

Modern health-improving wu-shu gymnastics integrates exercises with a certain type of breathing - tai chi quan. Therefore, this type of physical activity is of great health-improving importance and solves the problems of preventing health disorders, in particular, the respiratory system.

The specificity of wu-shu gymnastic exercises lies in the use of various styles traditional for the Chinese, which are distinguished by an unusual variety. Basically, these styles conditionally convey the movements and habits of animals (tiger, snake, eagle, monkey, etc.). Traditional styles include elements of acrobatics, as well as jumps and falls. It should be noted that the skills and abilities of using various types of traditional Chinese weapons in the content of wu-shu health-improving gymnastics are presented quite rarely and are not so much applied as artistic.^{22,23}

There are several views on the history of its origin. The first - as one of the systems that developed independently in China, mainly in the Taoist tradition, such as the "Movement of the Five Beasts and Birds" by the famous doctor Hua-To. The development of this direction is somehow connected with the Taoist temple complex of Mount U-Dan. The second source goes back to the Vedic traditions that were brought to China with Buddhism, such as the Diamond Qigong of Chinese Buddhist



patriarch Bodhidharma. The development of this direction is associated with the Shaolin Monastery. Further formation of WU-SHU was based on these two sources.

The origin of this system was primarily associated with the goal of strengthening the health of the body and spirit, which was used both in the medical and military-applied aspect.^{18,19}

With all the diversity of modern wu-shu, there are two main directions - external and internal.

Both directions are based on the basic wu-shu, which is a set of exercises for the development of dynamics, plasticity of the body, includes exercises for the development of strength, endurance and reaction. From the very beginning, the principle of performing exercises is based on a combination of proper breathing, mental study of movement and auto-training. In the future, the development of motor skills characteristic of a certain Wu-shu style follows.

The most relevant is the use of wu-shu gymnastics in the treatment of diseases of the musculoskeletal system, specifically dorsopathy. The technique corresponds to the principles of Mikulich's orthopedic gymnastics - relaxation, mobilization, stabilization. By changing the percentage of exercises for plasticity, dynamics and statics, it is possible to apply the technique to correct disorders associated with both hypomobility of the motor segment and its hypermobility. Much attention is paid to posture - the position of the body, in which the perpendicular, lowered from the Bai-hui point, must pass through the Hui-yin point. At the same time, due to the action of multidirectional forces (crown force upward and the center of gravity tending downward), the severity of the lumbar and cervical lordosis is smoothed out. This is possible with the static work of the muscles of the directly motor segments of the spine, which helps to strengthen its muscular-ligamentous apparatus. Strengthening the muscles of the legs and pelvic girdle through stepping to the side, rotating the foot, transferring body weight to one yoga after another, leg lifts also help strengthen postural muscles and correct posture.²⁰⁻²²

The positive impact of wu-shu gymnastics on the nervous system is due to a number of factors. First of all, it is mental control over the movement and position of the body during exercises. Mental control contributes to a more intensive formation of neuronal ensembles and analysis of information on the principle of feedback. An increase in the efficiency of synaptic transmission is proved by a high indicator of strength in relation to the volume of muscle mass and an improvement in speed qualities. A distinctive feature of Wu-shu gymnastics is work with a wrist. A large number of forms of hand positions, the development of a sense of proprioception during special exercises make it possible to consider the hand as an information terminal for the development of sensory²³.

Breathing and meditative exercises are an integral part of Wu-shu gymnastics. The function of external respiration is directly dependent on the state of the central nervous system. Physiological studies have shown that impulses from the respiratory center, radiating through the central nervous system, affect the tone of the cerebral cortex, the dynamics of cortical potentials and the periodicity of α -rhythms. The main principle in breathing exercises is the principle of slow diaphragmatic breathing. The effectiveness of the latter is due to the fact that diaphragmatic breathing causes a pronounced Hering-Breuer reflex ("brake" reflex associated with the inclusion of stretch receptors in the lungs), which leads to a decrease in the activity of the reticular formation of the brain stem, a decrease in the activity of the neocortex, stabilization of mental processes and reduction of back pain²¹.

Of particular interest are data on the use of wu-shu gymnastics to stimulate the synthesis of endorphins. It is common knowledge that endorphins are "pleasure hormones". They are the main link in the body's anti-pain system, they are involved in the regulation of the emotional state of a person. Endorphins were discovered in the 70s of the last century while studying the mechanisms of the analgesic effect of Chinese acupuncture. Subsequently, their diverse and important functions in the human body were revealed²⁴.

So, wu-shu exercises for beginners pay a lot of attention to the development and strengthening of the tendons. In China, the health of connective tissues is of particular importance. Muscles and bones are considered unreliable as they become weaker with age. Hardy and strong people are even said to be wiry. It is believed that tendons do not change with age, if they are properly formed at an early age, they will be supple, and the musculoskeletal system will remain a reliable support for life. In many of the ancient scientific writings that Chinese medicine relies on, healthy tendons are correlated with mobility, activity, and longevity^{18,19,22}.

Thus, wu-shu is not only a kind of martial art, but also an unconventional method of physical rehabilitation, which, by influencing the regulation of the nervous, endocrine and respiratory systems, not only helps to reduce pain, improve the psycho-emotional status of patients, but also restore the basic processes in organism and improve quality of life.

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COMPARISON AMONG DIFFERENT DIMENSIONS OF ORGANIZATIONAL CLIMATE OF SECONDARY SCHOOL TEACHERS OF WEST BENGAL BY MAHALANOBIS DISTANCE

**Dr. Ramkrishna Mohanta¹, Prasanta Gayen², Indranil Pal³,
Ramesh Chandra Mahato⁴, Dr. Subir Sen⁵**

¹Assistant Professor, Dishari College of Education, Burdwan, West Bengal, India

²Research Scholar, Department of Education, Sidho-Kanho-Birsha University, Purulia, W.B., India

³M.Ed. Student, Rajendra Academy for Teachers' Education, Durgapur, WB, India

⁴Research Scholar, Department of Education, Sidho-Kanho-Birsha University, Purulia, W.B., India

⁵Associate Professor, Department of Education, Sidho-Kanho-Birsha University, Purulia, W.B., India

Corresponding Author: Dr. Subir Sen

ABSTRACT

Application of Mahalanobis Distance is of recent trend in social science research. The present work deals with the application of such to measure the difference in different dimensions of Organizational Climate like Employees' Perception of Autonomy, Trust on Manager, Team Work, Reward and Recognition, Employees' Perception towards Fairness and Employees' Perception towards Organizational Support taking together as a branch for different groups of secondary level teachers. Difference between groups of secondary level teachers for all the dependent variables taken together at a time is a matter of consideration here. Mahalanobis Distance is one of the most powerful way-out to find out the dynamical nature of group of variables. Two different dichotomous groups of teachers have been taken into consideration for this present study. Mahalanobis Distance is smeared to associate the dynamical nature of six dependent variables i.e. different dimensions of Organizational Climate like Employees' Perception of Autonomy, Trust on Manager, Team Work, Reward and Recognition, Employees' Perception towards Fairness and Employees' Perception towards Organizational Support considered as a branch. The result revealed that there is no significant difference in dynamical nature of six dependent variables for different groups of independent variables.

KEY WORDS: Mahalanobis Distance, Organizational Climate, Employees' Perception of Autonomy, Trust on Manager, Team Work, Reward and Recognition, Employees' Perception towards Fairness and Employees' Perception towards Organizational Support.

INTRODUCTION

Individuals frequently go back to institutions with successful organisational climate. The culture that an institution fosters frequently brings back memories of its environment (Mohanta & Saha, 2022). The term 'organisational climate' was first coined by human relationists in the late 1940s. It is now a potent metaphor for comprehending and describing the social order (Venkatesh, n.d.). Employees' shared impressions and meaning associated with the rules, practises, and procedures they come across, as well as the behaviour they see being encouraged and supported, make up the organisational climate (Mohanta et al. 2023).

In the words of Litwin and Stringer (1968), "Organizational climate is a set of measureable properties of the work environment that is directly or indirectly perceived by the people who live and work in a particular environment and is assumed to influence their motivation and behaviour". In the context of research on racial similarity, P C Mahalanobis developed the Mahalanobis Distance (Mahalanobis, 1936; Adhikari, 2023). Various researches using Mahalanobis Distance have already been done in various fields. In the field of Education also specially in different psychological measurements and achievement analysis, Mahalanobis Distance is of recent trends. Mahalanobis Distance is also used in study by several domains, including anthropology, classification, clustering, image processing, etc. We can use a measure like the Mahalanobis Distance in the current investigation.

LITERATURE REVIEW ON MAHALANOBIS DISTANCE

Ahmed et al. (2019) investigated the disparity in mathematics achievement for various students in various grades of higher secondary level in Assam, India focusing on the characteristics of mathematical success for two groups of higher secondary students. Sen and Pal (2020) used this distance for achievement analysis in a different investigation. Ahmed et al. (2021) also used



Mahalanobis distance to compare the academic performance of two groups of students from the Bodoland Territorial Region (BTR) in the Indian state of Assam in the subjects of physics, chemistry, biology, and mathematics. With the aid of Mahalanobis Distance, Mahato and Sen (2021) directed a study on academic stress, self-efficacy in mathematics, and anxiety in mathematics for two groups of higher secondary level students. In an article, Gorain et al. (2021) argue how social isolation is a crucial factor in the growth of the internet in the twenty-first century because of its negative effects on human personality and potential for social withdrawal. The article by Ahmed et al. (2022a) reviews a recent study that compares the academic success of two student groups in the Bodoland Territorial Region (BTR), Assam, India, across four subject areas: mathematics, English, general sciences, and social studies. The academic performance of higher secondary students in the Bodoland Territorial Region (BTR) area of Assam, India was compared by Ahmed et al. (2022b) using the Mahalanobis Distance in five different subject areas, like Mathematics, English, and other studies.

LITERATURE REVIEW ON ORGANIZATIONAL CLIMATE

Berberoglu (2018) in his study discovered that organizational commitment and perceived organisational performance were significantly positively correlated with organisational climate. Moslehpour et al. (2018) in their study concluded that the association between leadership style and job satisfaction is mediated by organizational climate and work style. Atallah Salah & Al-Attili (2019) also found strong relationship between organizational climate such as structure of organization, use of technology, type of work of the company, communication as well as participation of the employees and the performances of the employees within the organization. A study by Beri et al. (2020) on organizational climate concluded that academic optimism and organizational climate have no significant difference in them whereas Reetu et al. (2020) in their study found that organizational climate had a strong relationship with organizational effectiveness and job satisfaction.

Present work is performed to compare the dynamical nature of different dimensions of organizational climate for different dichotomous variables like male and female, and rural and urban teachers of secondary level of West Bengal, India.

OBJECTIVES

Objectives of this study is to compare different dimensions of Organizational Climate like Employees' Perception of Autonomy, Trust on Manager, Team Work, Reward and Recognition, Employees' Perception towards Fairness and Employees' Perception towards Organizational Support taking together as a branch for different group of secondary level teachers. And for this the objectives of the study are framed accordingly:

1. To compare the difference between male and female teachers regarding the present condition of above mentioned variables.
2. To compare the difference between teachers of urban and rural institutions regarding the present condition of above mentioned variables.

HYPOTHESES

For the present work, following hypotheses may be taken into consideration:

H₀1: There is no significant difference between male and female secondary level teachers on different dimensions of organizational climate taken together as a unit.

H₀2: There is no significant difference between secondary level teachers of urban and rural institutions on different dimensions of organizational climate taken together as a unit.

METHODOLOGY

1. **Method:** Descriptive Survey method has been applied for the current study.
2. **Population:** All the secondary level school teachers of West Bengal, India have been considered as the population of the study.
3. **Sample & Sampling Technique:** Data for the present study have been collected from 400 secondary level school teachers of West Bengal, India using Stratified Random sampling technique.
4. **Independent Variables:** Gender (Male and Female) and Location of Institution (Rural and Urban).
5. **Dependent Variables:** Different dimensions of Organizational Climate like Employees' Perception of Autonomy, Trust on Manager, Team Work, Reward and Recognition, Employees' Perception towards Fairness and Employees' Perception towards Organizational Support.

Mahalanobis Distance may be defined as

$$\Delta^2 = (A - B)^T \zeta^{-1} (A - B)$$



Where A and B are the column vectors representing means of each variable for two groups and ζ is pooled covariance matrix of two groups of data.

$$\text{Mahalanobis Distance } \Delta = [(A - B)^T \zeta^{-1} (A - B)]^{\frac{1}{2}}$$

Pooled Covariance Matrix

$$\zeta = [N_1 \zeta_1 + N_2 \zeta_2] / N$$

Where ζ_1 and ζ_2 be the Covariance Matrices, N_1 and N_2 be the sample size for first and second group respectively and $N = N_1 + N_2$.

RESULTS AND DISCUSSIONS

In Table 1, 2 & 3, following abbreviations are used to represent six different dimensions of Organizational Climate:

1. Autonomy= Employees' Perception of Autonomy,
2. Manager= Trust on Manager,
3. Team= Team Work,
4. Reward= Reward and Recognition,
5. Perception= Employees' Perception towards Fairness
6. Support=Employees' Perception towards Organizational Support.

Male Teachers (N=218)						
Dependent variable	Autonomy	Manager	Team	Reward	Perception	Support
Mean	33.28	30.03	33.10	41.32	40.71	36.82
Female Teachers (N=182)						
Dependent variable	Autonomy	Manager	Team	Reward	Perception	Support
Mean	33.81	29.56	33.26	41.18	40.47	36.35
Urban Teachers (N=211)						
Dependent variable	Autonomy	Manager	Team	Reward	Perception	Support
Mean	34.00	30.26	33.28	41.25	40.69	37.02
Rural Teachers (N=189)						
Dependent variable	Autonomy	Manager	Team	Reward	Perception	Support
Mean	32.99	29.32	33.04	41.26	40.49	36.14

Table 1: Descriptive statistics for different group of teachers

Table 1 represents the statistics required for calculating Mahalanobis Distance. We have to compare different groups to test the hypotheses H_01 and H_02 by calculating Mahalanobis Distance.

	Autonomy	Manager	Team	Reward	Perception	Support
Autonomy	12.04521	2.35236	2.323285	6.839566	-1.85759	3.485505
Manager	2.35236	12.05183	1.170907	1.101217	1.87434	1.520218
Team	2.323285	1.170907	8.210168	3.644959	6.344785	3.196509
Reward	6.839566	1.101217	3.644959	13.05629	1.009735	2.754116
Perception	-1.85759	1.87434	6.344785	1.009735	17.29787	2.048138
Support	3.485505	1.520218	3.196509	2.754116	2.048138	9.734327

Table 2: Pooled variance-covariance matrix for male and female teachers

Table 2 represents pooled variance-covariance matrix for dichotomous variable gender (male and female). And from this table both positive and negative covariances are noted.



	Autonomy	Manager	Team	Reward	Perception	Support
Autonomy	11.85712	2.053706	2.283866	6.825196	-1.93851	3.199185
Manager	2.053706	11.88774	1.095657	1.121182	1.85578	1.367752
Team	2.283866	1.095657	8.202495	3.640219	6.322733	3.124336
Reward	6.825196	1.121182	3.640219	13.06133	1.019241	2.773523
Perception	-1.93851	1.85578	6.322733	1.019241	17.30126	2.03162
Support	3.199185	1.367752	3.124336	2.773523	2.03162	9.590562

Table 3:Pooled variance-covariance matrix for urban and ruralteachers

Table 3 represents pooled variance-covariance matrix for dichotomous variable location of institution (urban and rural). And from this table both positive and negative covariances are noted.

Mahalanobis Distance can compare two or more variables as a unit of variables. Here the unit is employees’ perception of autonomy, trust on manager, team work, reward and recognition, employees’ perception towards fairness and employees’ perception towards organizational support. Mahalanobis Distance is represented by a number as measure of distance.If it is found that Mahalanobis Distance is greater than 1, it may be concluded that the difference between two sets of multiple variable is significant. Obviously Mahalanobis Distance may be treated as insignificant if it is less than 1.

Independent variables	Male vs Female	Urban vs Rural
Mahalanobis Distance	0.3564	0.4734

Table 4:MD for dependant variables:Employees’ Perception of Autonomy, Trust on Manager, Team Work, Reward and Recognition, Employees’ Perception towards Fairness and Employees’ Perception towards Organizational Support

Table 4 represents the MahalanobisDistance between dichotomous variables. Values of Mahalanobis Distance listed in table2 express that the differences are insignificant. So, there is no significant difference in dynamical nature of the dichotomous groups when six dependent variables i.e. Employees’ Perception of Autonomy, Trust on Manager, Team Work, Reward and Recognition, Employees’ Perception towards Fairness and Employees’ Perception towards Organizational Support composed as a branch. So, H_0 1 and H_0 2are failed to be rejected.

CONCLUSION

A set of dependent variables (Employees’ Perception of Autonomy, Trust on Manager, Team Work, Reward and Recognition, Employees’ Perception towards Fairness and Employees’ Perception towards Organizational Support)is measured using Mahalanobis Distance. Response of teachers showed that no significant difference is present in different dimensions of organizational climate with reference to gender and location of the institutions.

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THE NIGER DELTA DEVELOPMENT COMMISSION AND MANAGEMENT OF INFRASTRUCTURAL DEVELOPMENT IN THE OIL PRODUCING AREAS OF NIGERIA, 2009-2017

¹Rebecca Ginikanwa Nnamani, ²Kingsley Obumunaeme Ilo, ³Ohabuenyi, Jonas*

¹Department of Political Science, Faculty of the Social Sciences, University of Nigeria, Nsukka

²Department of Political Science, Faculty of the Social Sciences, University of Nigeria, Nsukka

³Department of Political Science, Faculty of the Social Sciences, University of Nigeria, Nsukka

ABSTRACT

The study examined the nexus between the Niger Delta Development Commission (NDDC) and management of infrastructural development in the oil producing areas of Nigeria, between 2009 and 2017. The documentary and survey methods were used to generate the relevant data. Data analysis was presented using content analysis and tables. The result of the analysis indicates that award of contracts in violation of the extant rules undermined the development of infrastructure in the oil producing areas of Nigeria between 2009 and 2017. It also demonstrates that the projects of the Niger Delta Development Commission failed to alleviate the incidence of inadequate infrastructure in the oil producing areas of Nigeria within the study period. Among others, the study recommended de-concentration of power to local agencies through direct state interventions to enhance the interaction between the communities and the Nigerian State

KEYWORDS: *The oil producing areas of Nigeria, government interventions programmes, Niger Delta Development Commission, infrastructure.*

INTRODUCTION

Achievements of political leaders in terms of governance are measured with the level and type of infrastructural development the leaders or those in position of authority engage in compared to the agitation of the people and the available resources (Adebayo, 1985). In retrospect, based on these criteria of governance, even before crude oil became a critical factor in Nigeria's development, the British Colonial Government had in 1957 recognized that the unique characteristics of the Niger Delta make special development efforts imperative. Hence in 1958 the Sir, Henry Willink's Commission was set up to ascertain the fears of domination expressed by the minorities, and to propose means of allaying such fears. The Commission declared the Niger Delta as a "special area for development" and recommended the establishment of a Board to cater for the development needs of the region, which it described as "poor, backward and neglected" (*Willinks Commission Report, 1958: 94*).

In accordance with the above recommendation, the Nigerian government eventually set up the Niger Delta Development Board (NDDB) in 1961 with the main function of advising the Governments of the Federation, Eastern and Western Region, with respect to physical development of the Niger Delta (Ibaba, 2005). Among the functions of the Board was to: (1) ascertain what measures are required to promote its physical development; (2) Prepare schemes designed to promote the physical development of the oil producing areas (Etekpe, 2007).

Since then, the peoples of the Niger Delta have seen one government-sponsored development agency after another. In 1980, the Shagari administration created the Niger Delta Basin Development Authority; and in response to the growing frustrations of the Niger Delta people over their need for development which gave rise to serious agitations, the Shagari administration also set up a Presidential Task Force (popularly known as the 1.5% Committee) in 1980 and 1.5% of the Federation Account was allocated to the Committee to tackle the developmental problems of the region. However, the protracted legal battles between the Nigerian Federal Government and the Government of the defunct Bendel State (one of the Niger Delta States), prevented the disbursement of the 1.5 percent approved for the rehabilitation of the oil producing states (Suberu, 1992). As a result, the Committee was largely ineffective and unable to handle the complex ecological problems and deepening poverty in the region (*OMPADEC Quarterly Report, 1993*).



Yet, due to wide spread protest, tension, restiveness, violence and disruptions, the Babangida administration established the Presidential Implementation Committee to replace the Presidential Task Force in 1987. He also set up the Oil Mineral Producing Areas Commission (OMPADEC) in 1992 by Decree No.23 of 1992. Three percent of federal oil revenue was allocated to the Commission to address the developmental needs of the areas. Although OMPADEC initially raised the spirit and hopes of the people, inefficiency and corruption in the organisation resulted in yet more disappointment. Between 1992 and 1999, majority of the people did not benefit from its activities (Ikelegbe, 2004).

Like its predecessors, the Oil Minerals Producing Areas Development Commission (OMPADEC) failed to actualize the developmental aspirations of the oil producing Niger Delta. According to World Bank Report:

OMPADEC only provides infrastructure or equipment. For example, it built health centers but does not support staff for them. The obvious problem with such a development programme is that, the communities may not have the funds or expertise to maintain a project and watch it break down (World Bank Report, 1995, pp. 53-54).

According to the Quarterly Review of OMPADEC (1993, p. 44), "at the end of its existence in May 1992, a total of 1,207 projects were either abandoned or on-going".

Given these failed efforts at the development of the oil producing areas, it was not surprising that one of the first actions of former President Obasanjo, soon after his inauguration in May 1999, was to submit a Bill to the National Assembly for the establishment of the Niger Delta Development Commission (NDDC) to replace OMPADEC. The NDDC was officially inaugurated on December 21, 2000 with a vision "to offer a lasting solution to the socio-economic difficulties of the Niger Delta" and a mission "to facilitate the rapid, even and sustainable development of the Niger Delta into a region that is economically prosperous, socially stable, ecologically regenerative and politically peaceful" (The NDDC Act, 2000).

The NDDC is an interventionist institution meant to address decades of social and infrastructural underdevelopment in the Niger Delta. As an intervention institution, the Niger Delta Development Commission (NDDC) is aimed at bringing about a positive measure to redress the imbalances in the Niger Delta. The NDDC was constituted primarily to formulate policies and guidelines, and execute such other works for the sustainable development of the oil producing areas in view of the lingering crises and abysmal performance that characterized the activities of the previous commissions in the region (<http://www.nddc.gov.ng/about%20us.html>).

To meet the development priorities of the oil producing states, section 2 (1) of the NDDC Act provides for the establishment of a governing Board to consist of a chairman and one representative from each of the nine oil bearing states. The Board is empowered to manage and supervise affairs of the Commission; make rules and regulations for carrying out the functions of the Commission, enter into such contracts as may be necessary or expedient for the discharge of its functions and ensure the efficient performance of the functions of the Commission; do such other things as are necessary and expedient for the efficient performance of the functions of the Commission, among others (See section 8 of the NDDC Act). The Commission also designed a Master Plan to guide it in implementing development projects in such areas as roads, electricity, water, health, education and human capacity development among others.

On August 6th, 2009 a new Board was sworn-in, with Chief Chibuzo Ugwoha as Managing Director and AVM Larry Koinyan as Chairman. With the emergence of Chibuzo Ugwoha as Managing Director of NDDC, the Commission appeared to have become a tale of frustration, underhand dealings and circumvention of contract awarding procedures (Shoaga, 2018). Thus the question is, how has the Niger Delta Development Commission fared in respect of its responsibilities of "offering a lasting solution to the socio-economic difficulties of the Niger Delta", on the one hand, and its mission of "facilitating the rapid, even and sustainable development of the Niger Delta into a region that is economically prosperous, socially stable, ecologically regenerative and politically peaceful", on the other (The NDDC Act, 2000, p.13).

Against this background, this study interrogates the link between the Niger Delta Development Commission and management of infrastructural development in the oil producing areas of Nigeria, between 2009 and 2017.

ALLOCATION AND APPLICATION OF FUNDS BY THE NIGER DELTA DEVELOPMENT COMMISSION

The revenue sources for the Commission were well defined in the enabling Act. According to Ero (2007, p. 60), Part V, Section 14, Sub-sections 1 and 2 of the Niger Delta Development Commission Act 2000, which deal with financial provisions spelled out how the Commission shall be funded. Section 14 (2) provides that:

There shall be paid and credited to fund established pursuant to subsection (1) of this section. (a) From the Federal Government the equivalent of 15% of the total monthly statutory allocation due to member states of the commission from the federation account, this being the contribution of the federal government to the commission. (b) 3% of the total annual budget of any oil producing company operating onshore and offshore in the Niger Delta area including gas processing companies, (c) 50% of monies due to member states of the commission from ecological fund (d) such monies as may from time to time, be granted or lent or deposited with the commission by the Federal or a state government, any other body or institution whether local or foreign, (e) all monies raised for the purposes of the commission by way of gifts, loans, grant-



in-aid, testamentary disposition or otherwise and (f) proceeds from all other assets that may from time to time, accrue to the commission.

Timi Alaibe, the then NDDC’s Acting Managing Director and Chief Executive Officer once observed that between 2005 and December 2012, the Commission received ₦95.97 billion from the Federal Government. He further noted that “the federal government is not the only contributor to the NDDC... we have also generated funds from contractor’s registration and from banking transactions” (cited in Ero, 2013, p. 60). Available records show that between May 2005 and December 2012, the nine states making up the Niger Delta region have collectively received ₦2.16 trillion representing 70%, local governments ₦671 billion, representing ₦22%, which altogether gave 2.83 trillion (92%) for both tiers of government. NDDC received ₦241.5 billion to make up the remaining 8%.

Altogether the Niger Delta Development Commission earned \$1.98 billion between 2007 and 2014, in addition to the sum of ₦594 billion paid to the Commission in local currency during the same period from the following sources: Federal Government; subventions; oil companies contribution; donation and grants; recovery on mass transits; insurance claims; other income; disposal of assets; contractors’ fee bank interest (Adio, 2017).

Table 1: Annual Breakdown /Summary of the Total Revenue Received by the NDDC from 1st January, 2009 to 31st December, 2013 in billion Naira

Source	2009	2010	2011	2012	2013
Federal Government	24,000,000,000	40,570,000,000	51,317,566,107	44,937,757,491	56,076,920,534
Oil Companies	40,531,352,200	43,942,473,000	3,942,473,000	89,927,822,349	111,576,195,210
Sundry (Other Incomes)	189,832,000	277,491,000	329,529,734	385,391,640	125,064,883
Total	64,721,184,200	84,789,964,000	141,574,918,190	135,096,525,920	167,778,180,627

Source: NEITI (2017). *Report on Revenues, Deductions, and Analysis of Disbursement and Utilization of Funds of the Federal Beneficiary Agencies – Niger Delta Development Commission (NDDC)*, p.2.

As table 1 above which presents an annual breakdown of the summary of the revenue distribution by sources showed, the Commission earned ₦593.961 billion during 2009 and 2013. The Commission’s earnings grew from ₦64.721 billion in the fiscal year 2007 to ₦167.778 billion in the fiscal year 2011. This represents 159% growth within the years under review. The cumulative total revenue from all sources was recorded at ₦593.961 billion; the Federal Government has contributed ₦216.902 billion that is, 36.5% while the receipts from oil companies accounted for ₦375.751 billion which also represents 63.3%. However, the sundry incomes such as interest on deposits and others accounted for ₦1.307 billion with relative share of 0.2%.

Collaborating the foregoing report, the Executive Secretary of the Nigeria Extractive Industries Transparency Initiative (NEITI), Mr. Waziri Adio disclosed that a total of \$1.98 billion were remitted to the Niger Delta Development Commission (NDDC) between 2007 and 2014, in addition to the sum of ₦594 billion paid to the Commission in local currency during the same period (Adio, 2017). Further breakdown of the remittances showed that NDDC received ₦594 billion from 2007 to 2011, while \$559 million was paid to the Commission in 2012. It was also indicated that in 2013, the NDDC received \$563 million while in 2014, the sum of \$865 million were remitted to the Commission (Adio, 2017).

What is clear from the foregoing is that a reasonable volume of fund was remitted to the NDDC within the study period to development the oil producing areas. The study therefore examines, in the next sub-section, the NDDC and awards of contracts in the oil producing areas of Nigeria.

NDDC AND AWARD OF CONTRACTS

To enhance transparency and accountability in the management of public resources, the “Due Process Policy” was introduced into the nation’s procurement system via Treasury Circular by the Federal Ministry of Finance No, TRY/F15775 of 27th June, 2001 (Federal Republic of Nigeria, 2002). It was passed into an Act under the President Umaru Musa Yar’Adua administration which is now called “Public Procurement Act” 2007.



Due process is the means by which ethical constraints are placed on administrative decision-making (Alan 2008). It refers to the procedures and safeguards that constrain administrative decision-making, and a means by which we ensure the ethical use of power by administrative and judicial bodies.

The primary goal of the public procurement Act 2007 is the “Establishment of National Council on Public Procurement and the Bureau of Public Procurement as the regulatory authorities responsible for the monitoring and oversight of public procurement, harmonizing the existing government policies and practices by the regulating, setting standards and developing the legal framework and professional capacity for public procurement in Nigeria, and for other related matters (Esenwa, 2004).

The BPP reviews and certifies the Federal Government contracts according to established and approved thresholds. At present, there are three approval thresholds for the approval and award of Federal Government contracts in the public sector. The approval of contracts has been categorized into the following: 1. Contracts below N1 million. 2. Contracts above N1 million. 3. Contracts of N50 million and above. Upon conclusion of the contract procedures, the Ministerial Tenders Board shall then forward their conclusions and all relevant supporting documentation to BPP for Due Process compliance review and Certification. It is only after the Due Process Certificate is issued out by the BPP that the contract is forwarded to the Federal Executive Council for final approval to award contract (FGN, 2011).

Specifically, the Due Process Policy covers two (2) major types of tenders. They are: a. Open tendering: This type of tenders deal with contracts, purchases and services above N10 million which must be advertised in at least two (2) national dailies and or Government Gazette, and on the Notice Boards of the procuring institution. The essence is for pre-qualification purpose to provide bidders equal opportunity and access to information. This type of tendering is also known as competitive tenders. b. Selective tendering: In this type of tenders, at least three (3) reputable contractors in specific areas of specialization are selected and invited to bid. This type of bids, are not open because of the technical nature of the job (FGN, 2011).

The foregoing clearly indicates that the Public Procurement Act highlights the guidelines for the award of contracts and services. However, a lot of misconceptions, doubts, criticisms and cynicism have been trailing its implementation, particularly how the NDDC Board award contracts. The NDDC Board has statutory functions as stated in Part II (8) of the NDDC Act. These functions are as follows:

The Board shall have power to:- (a) manage and supervise affairs of the Commission; (b) make rules and regulations for carrying out the functions of the Commission, (c) enter and inspect premises, projects and such places as may be necessary for the purposes of carrying out its functions under this Act; etc.

Meanwhile, in 2009, a new NDDC Board was sworn-in, with Chief Chibuzo Ugwoha as Managing Director (MD) and AVM Larry Koinyan as Chairman. With the advent of Chibuzo Ugwoha as Managing Director of NDDC, it was reported that the Commission became a tale of frustration, underhand dealings, flouting of Due Process and circumvention of contract awarding procedures (Shoaga, 2018). Surprisingly, the beneficiaries were found to be close allies of the MD and the Executive Director, Projects (Shoaga, 2018). For instance, the Niger Delta Technical Aid Corp (NTAC Projects), which ought to be capacity building programmes for graduates were grossly mismanaged. The integral part of NTAC Projects was computer Training Programmes. Till date the Commission is indebted to NTAC because the monies for defraying the fees were lodged in private accounts to yield interest for the account holders (The Nigerian Compass, 2011).

One of the hallmarks of the NDDC within the period under study was unilateral award of contracts, without due process, in clear violation of the Public Procurement Act, 2007 and the Niger Delta Development Commission Authorization Manual. Under Procedure for Award, sub-section F (I) of the NDDC Amended Authorisation Manual, it is stated that “all contracts by the Commission should evolve from the Tenders and Procurement process as approved in the authorisation limits by the Board, and in line with due process.” Sub-section F (IV) further stipulates that “the Executive Director, Projects, issues letters of awards and endorses the copy of BOQ/BEME to the contractor”.

Contrary to the foregoing, it was reported that the NDDC MD, Mr. Chibuzo Ugwoha, unilaterally awarded about over 51 various projects to cronies and associates without the authorization of the approving bodies and against the commission’s standing financial regulations (*ThisDay Newspaper, Saturday March 5, 2011*). Furthermore, it was equally reported that the MD of the NDDC not only gave approval for the award of contracts under ₦250 million threshold, but also decided to issue and sign all award letters by himself contrary to Article 560(f) (iv) of the authorization manual which states: “Executive Director Project (EPD) now issues letters of awards and attaches the endorsed copy of BOQ/BEME to the contractor.” Again, on March 26, 2011, contract valued at ₦101, 026,440 million was awarded to a company – Reimiport & Co. Limited for the installation of solar street lamp at Ozoro, Isoko North Local Government Area of Delta State. The letter of award, personally signed by Ugwoha, and marked NDDC/HQ/MD.18/DTS/06, was addressed to the managing director of the company, but routed through “c/o NDDC office, Warri, Delta State (Soni Daniel cited in *Vanguard Newspaper August 26, 2015*). The same month, the NDDC boss was said to have personally signed a letter of award of contract, valued at ₦53, 065,169 million, to a company- Nemberek Industry Limited - supposedly based at Uyo, Akwa Ibom State, for solar water project at Isi Otoy, in Eastern Obolo Local Government Area.



Furthermore, the NDDC Board, within the study period, was found to award contracts to unregistered companies. For instance, the results of validity searches at the Corporate Affairs Commission (CAC) by Eric Apia & Co., an Abuja-based firm of legal practitioners, property consultants and Notary Public reveal pieces of documented evidence, including letters of award of multi-billion naira contracts personally signed by the NDDC helmsman to allegedly unregistered companies (Niger Delta Budget Monitoring Group, 2012). The absence of an identifiable office address of the company may have fuelled suspicion and subsequent searches at the CAC, which clearly indicated that the name, Reimiport & Co. Limited, had not been registered with it as a company (Niger Delta Budget Monitoring Group, 2012). Similarly, it was also reported that four other companies awarded contracts by Ugwuoha running into millions of naira were allegedly found to be unregistered at the CAC (Niger Delta Budget Monitoring Group, 2012).

Besides, between March and early April, 2011, the NDDC chief allegedly embarked on a contract bazaar, awarding 61 jobs at the first instance, and over 350, thereafter within three days, which ran into billions of naira (Niger Delta Budget Monitoring Group, 2012). Of the 61 contracts awarded, 26 were given to companies with no fixed addresses, while 24 went to contractors supposedly based in Rivers, Oguwoha's state of origin. The other two with no addresses were awarded to companies in Imo State (Niger Delta Budget Monitoring Group, 2012).

The responses of the respondents collaborate the foregoing position. Altogether, the NDDC and government officials, the CSOs and community members converged on the fact that though the benefitting communities make their request, they might not necessarily know when the projects are approved and awarded. According to a key informant in River States, 'the Commission does not disclose critical elements of the project like the contractor, contract value, content, scope and timeline to the concerned community.' As a result 'contractors only visit the concerned community, give marching grant to the chiefs, and sometimes the town union leaders who most times may never bother to inform the members of the community' (Face-to-face interview, June, 2018)

In addition to unilateral award of contracts in violation of the Public Procurement Act 2007 and the Niger Delta Development Commission authorization Manual, as well as award of contracts to unregistered companies, the NDDC was also reported to be engaging Consultants for the Commission's contracts without due approval. All these culminated in the duplication of over twenty-two projects in the project's schedule, with a total contract sum of ₦1.18 billion, with mobilization payments of ₦370.70 million. Sadly, most of the projects were neither identifiable nor scheduled for monitoring and proper management (NEITI, 2017). Table 2 below vividly captures the reports of contracts awarded by the NDDC without due process.

Table 1: Reports of the NDDC's Award of Contracts without Due Process

S/N	Reports of Award of Contracts without Due Process by the NDDC	Sources
1	The NDDC MD, Mr. Chibuzor Ugwuoha, unilaterally awarded about over 51 various projects to cronies and associates without the authorization of the approving bodies and against the commission's standing financial regulations.	<i>ThisDay Newspaper, Saturday March 5 (2011)</i>
2.	The MD of the NDDC not only gave approval for the award of contracts under ₦250 million threshold, but also decided to issue and sign all award letters by himself contrary to Article 560(f) (iv) of the Authorization Manual	<i>Vanguard Newspaper August 26 (2015)</i>
3	Award of contract valued at ₦101, 026,440 million to a company – Reimiport & Co. Limited for the installation of solar street lamp at Ozoro, Isoko North Local Government Area of Delta State. The letter of award, personally signed by Ugwuoha, and marked NDDC/HQ/MD.18/DTS/06, was addressed to the managing director of the company, but routed through "c/o NDDC office, Warri, Delta State	<i>Vanguard Newspaper August 26 (2015)</i>
4	The NDDC boss was said to have personally signed a letter of award of contract, valued at ₦53, 065,169 million, to a company- Nemberek Industry Limited - supposedly based at Uyo, Akwa Ibom State, for solar water project at Isi Otoyoy, in Eastern Obolo Local Government Area.	<i>Vanguard Newspaper August 26 (2015)</i>
5	Award of contracts to Reimiport & Co. Limited, a company found to be unregistered at the Corporate Affairs Commission (CAC)	Niger Delta Budget Monitoring Group (2012).
6.	Award of about 26 contracts to companies with no fixed addresses, and 24 to contractors supposedly based in Rivers, MD's state of origin.	Niger Delta Budget Monitoring Group (2012)
7	Engaging Consultants for the Commission's contracts without due approval.	NEITI (2017)



It was in view of the foregoing infractions that the Federal Government ordered a full scale investigation into the alleged ₦5 billion contract scam rocking the NDDC. It was reported that the Presidency decided to order a probe into the allegation as a result of the confusion that has enveloped the commission over the incessant in-fighting among the management members bordering on alleged unilateral decisions and breach of due process in award of contracts (*Nigeria Standard*, 2013).

Aside award of contracts without due process, there have been reports of a catalogue of outright cases of political corruption among the staff of the Niger Delta Development Commission. In 2007, a former legal officer and four others defrauded the agency of about ₦157.5 million and in 2008, the then Chairman of the Commission was arraigned before a Nigerian court for embezzling ₦800 million (Ugbegbe & Oretade, 2008).

What is palpable is that government's efforts in the region have benefited high ranking public officials and their allies through corrupt practices. The benefits of such interventions have eluded the poor in the region. Hence, a vicious circles of underdevelopment and misery in the region. As the Report of the Niger Delta Budget Monitoring Group (2012, p.18) noted:

We must state clearly that, factoring a cost of ₦154 million for rehabilitation and reclamation of degraded ecosystem in 7 States and not disclosing the exact locations of such projects raises lots of questions. There are other projects on Shoreline/Land Reclamation which has also reappeared in the Ministry's 2013 budget proposal like it has appeared in previous years. Some of the locations are:-Kurutie, Ikuru Town, Effiat, Sime -Tai, amongst others. Is it an error of judgment or capitalization on bureaucratic loopholes for various Ministries to habitually throw-in previous budget lines into new budgetary proposals (?). The Budget Office of the Federation (BOF) should not allow such to continue from any of the MDAs. BOF should not be overwhelmed by a systemic fiscal quagmire. In fact, any capital project without an exact location should not pass the test of a costing template (if any). Worryingly, there are some Shoreline and Land Reclamation Projects which have appeared in this Ministry's budget since 2009.

The Report of the Niger Delta Budget Monitoring Group (2012, pp.19-20) further observed as follows:

Sadly, the ₦5, 000 (Five Thousand Naira) projected for the Egbelu in Bayelsa-to-Port Harcourt) with spur to Degema Egbelu-Ozouba Road (Opposite AIT), Obio Akpor, Rivers State made to connect Ada George Egbelu-Ozouba Road project for 2013 ignites shock. This project appeared under two (2) line items (23020114) with the cost for one line as ₦5, 000 and another as ₦450 million. We have repeatedly lamented about the East West road, and the souls of hundreds of our brothers and sisters that have perished on that road. However, the Ministry and the Niger Delta Development Commission (NDDC) need to reconcile and harmonize projects concerning the above sites and locations. For example, in 2010 and 2011, NDDC had some projects in the above locations. Specifically, there was Jetty/Shoreline at Ekeremor, budgeted for ₦5 billion in 2010 by NDDC with ₦450 million captured as committed in 2010 and another ₦150 million projected as requirement for the project in their 2011 budget. There was also NDDC's project in Twon Brass with a commitment of ₦127.6million for the project and further commitment of ₦50million in 2010 and ₦30.5million in 2011 for the "Construction of Okologugo Creek Improvement Works/Jetty in Twon Brass.

As Soni Daniel cited in *Vanguard Newspaper* (August 26, 2015) has noted:

there is palpable tension within Niger Delta Development Commission, NDDC, as its Managing Director, Mr. Dan Abia, come face to face with the President Muhammadu Buhari to give him a status report on the operations of the agency, which has been rattled by huge debts totaling ₦1.5 trillion "The formation of the NDDC by former President Olusegun Obasanjo was for the development of the Niger Delta region; but the immediate past board of the commission has derailed from the aims and objectives of the commission and turned the commission into a political finance institution by using the money meant for the development of the Niger Delta Master plan to sponsor PDP elections in 2015." "We were so shock that the commission spent over ₦4 billion to sponsor PDP elections whereas abandoned projects by the Commission are scattered all over the Niger Delta region. We call on EFCC to investigate and bring the immediate past board to justice (*Vanguard Newspaper*, August 26, 2015).

As a fall-out of the above point, NNDC like its predecessors has become a medium for exploitation and dispossession of resource benefits of the oil producing states. Bulks of the Commission's funds are diverted to the private coffers of the ruling class through stupendously profitable contracts. This in a lot of ways explains why the NDDC contracts are the most sought after. Apparently, the primary motive of such interventionist structure is to further empower the ruling faction of the political class. And because these parastatals were geared towards political patronage, they were also bedeviled by debt crisis and mindless financial mismanagement.



NDDC AND EXECUTION OF CONTRACTS

Infrastructural development in the oil producing areas in Nigeria is one of the primary targets of the NDDC. Infrastructure is the sum of all basic material structures, institutional conditions and human resources available to society, needed for the proper functioning of the economic sector, further distinguished between three components of infrastructure that are inter-related-institutional, social and physical infrastructure (Jochimsen (1966). In agreement, Sullivan and Sheffrin (2003) posit that infrastructure is the basic physical and organizational structures needed for the operation of a society like industries, buildings, roads, bridges, health services, governance and, among others. Investment in infrastructure leads to economic growth and improvement in people's wellbeing. Investment in infrastructure has always played a leading role in economic development. Basic infrastructure – roads, railways, airports, for energy generation and supply, water supply, sanitation, etc. underpins sustainable development and economic transformation of emerging economies (Gavin, 2015).

The importance of delivering quality infrastructure has been underlined by the World Bank (World Bank, 2004). But to deliver quality infrastructure that reflect the well-being of the people, there is need for a synergy between the government and the benefitting communities. According to Akpomovie (2011), government should ensure that the host communities are adequately incorporated in the planning and implementation of development projects. The role of community members in sustainable community projects becomes crucial because they feel the direct impact of both the negative and positive implementation of any development agenda (Eversole, 2012). Similarly, Warren and McFadyen (2010) argued that when community members are incorporated into developmental issues in their community, they tend to show much commitment and affection to the successful implementation and sustainability of such development. This act of engagement and commitment are what they termed as community ownership. Therefore, the active participation of community members in the development of their community triggers a positive attitude and enthusiasm of community members towards achievement and sustainability of development programs.

However, despite the need to engage the benefitting communities in the execution of developmental infrastructure, as highlighted above, extant studies such as Aghalino (2012), Kadafa, Zakaria and Othman (2012), Okolo (2014), Wilson (2011), among others tend to agree on the fact that despite the colossal efforts by the NDDC through her robust master plan in developing the oil producing areas, not much has been accomplished. Given this, the study investigated how award and execution of contracts by the NDDC affected the development of infrastructure in the oil producing areas of Nigeria.

The results of the interviews further illuminated our understanding of how NDDC execution of contracts by the NDDC affected the development of infrastructure in the oil producing areas of Nigeria. The key interviewees identified a number of issues that undermine execution of contracts by the NDDC. These issues were categorized into two sub-themes namely: inadequate collaboration and lack of sense of ownership.

Based on the finding of this study, it was discovered that adequate collaboration is needed for successful execution of contracts by the NDDC. This was buttressed by an NDDC official during interview. According to the respondent, “the Commission generates the people's interests/needs, aggregates and sent them for approval. The requests approved are covered in the budget. After which the contract is awarded” (Face-to-face interview, June, 2018). Then reacting to the question on the level of the people's involvement in the project process and execution, he remarked that “though the communities make their request, they may not necessarily know when it has been approved and awarded” (Face-to-face interview, June, 2018).

Buttressing the foregoing, an opinion leader in Bayelsa state reveals; “We do not see NDDC, how do you expect us to play any role in their projects? It's not possible, you must see the agency, discuss with them before you can accept any role given to you”. The implication therefore is that communities are not involved in the project process. With regard to this viewpoint, a member of Civil Society Organization in Rivers state posits:

The Commission (NDDC) does not disclose critical elements of the project like the contractor, consultant, contract value, content, scope and timeline to the concerned community. For example, Abonnema community, Akuku-Toru LGA, Rivers state has threatened to sue NDDC for failing to disclose critical elements of the sand filling project at their community which up till today has nothing to show for it... (Face-to-face interview, June, 2018).

The contribution of a community leader in Abia state also reveals non-involvement of community in the project process, according to a key informant:

The contractor only visits the concerned community, gives marching grant to the chiefs and sometimes the town union leaders who most times may never bother to inform the members of the community...in connivance with the chiefs, the contractor mounts his sign post indicating the name of the contract, the consultant, the project awardee. As a result, the youths and other concerned members of the community who not being aware of the project details agitate and make heavy demands for marching grants from the contractor who in an attempt to settle the youths and others finds it difficult to accomplish his task (Face-to-face interview, June, 2018).



Regarding the impact of NDDC projects on the communities, the respondents virtually agreed on the fact that people are not properly involved; projects completed but not in use because the people concerned do not know what the facility is for. They also noted that projects are not properly labeled leading to one or two companies claiming ownership. For not being properly involved, the communities therefore lack the capacity to ask questions, even when they perceived any default in the project specification. In this case, Ogbunabali road Port Harcourt; Okporowo-Okoma 1 and 11 – Oshiugbokor and Ogbele roads in Ahoada-East Local Government Area were cited as few examples.

In rating the NDDC projects, the respondents, mostly community members and members of CSOs, gave completed projects 30%, abandoned 40% and reiterated that most of the projects only exist on budget. They identified the major challenge of the NDDC to include strong political interference resulting in award of contracts based on political compensation.

Arising from the foregoing, award and execution of contracts by the NDDC **within the study period was characterized by unilateral approval of contracts without due process** in clear violation of the Public Procurement Act 2007 and the Niger Delta Development Commission Authorization Manual section F; award of contracts to unregistered companies, as well as to cronies and associates without the authorisation of the approving bodies and in clear violation of standing financial regulations as contained in the NDDC Act; non-involvement of the benefiting communities in the project process; as well as non-disclosure of critical elements of the project like the contractor, consultant, contract value, content, scope and timeline to the benefiting community. We now proceed to examine the implications of the foregoing for infrastructural development in the oil producing areas of Nigeria within the study period.

CONCLUSION

The study examined the interconnectedness between the Niger Delta Development Commission and management of infrastructural development in the oil producing areas of Nigeria, between 2009 and 2017. The NDDC is an interventionist institution meant to address decades of infrastructural underdevelopment in the oil producing areas of Nigeria. The NDDC was established by the Nigerian government as the intervention measure which is aimed at remedying the situation of the oil producing areas. It is to bring about a positive measure to redress the imbalances in the area. Different scholars attributed the problems of the oil producing areas to some variables like corruption, patronage networking and shoddy execution of projects, fire-brigade approach, political exclusion, award of contracts without due process; non-implementation of the Board's decisions; undue interference and poor funding of Niger Delta Development Commission (NDDC), others focus on what is called the "infrastructure-funding gap" thesis. Yet, other scholars highlight the difficulty of the delta's terrain and the negative impacts of the oil industry among others.

However, studies on the Niger Delta Development Commission and management of infrastructural development in the oil producing areas of Nigeria have focused on the linkage between economic exploitation on natural resources and marginalization. These studies primarily argue that the state of infrastructural development in the oil producing areas is as a result of the limited quantum of funds allocated to the Commission. Thus, while providing a framework for understanding the dynamics of the administration and management of government intervention programmes, the extant studies on government intervention programmes have not systematically articulated the nexus between the Niger Delta Development Commission and management of infrastructural development in the oil producing areas of Nigeria between 2009 and 2017. The study calls for the de-concentration of power to local agencies through direct state interventions. With this arrangement state offices will be automatically eliminated. Such agencies will be more accessible, more sympathetic and quicker to respond to the needs of local communities. This is likely to enhance the interaction between the communities and the Nigerian State, and build up their confidence in the State and make them have personal stakes in the success of development programmes.

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PSYCHOLOGICAL EFFECTS AND CHALLENGES FACED BY COLLEGE TEACHERS DURING THE PANDEMIC YEAR

Ms.M.Sivasankari¹, Ms.U.Deepika², Dr.C.Eahambaram³, Mrs.N.Revathi⁴

¹*I M.Com(CA), Dr.N.G.P. Arts and science college, Coimbatore-48,*

²*I M.Com(CA),Dr.N.G.P. Arts and Science College,Coimbatore-48,*

³*Associate Professor, Department of Commerce (CA), Dr.N.G.P. Arts and Science College, Coimbatore-48,*

⁴*Assistant Professor,Dr.N.G.P.Arts and Science college,Ciombatore,*

1.1 INTRODUCTION OF THE STUDY

In addition to having an impact on pupils' mental health, the pandemic has also put instructors under a lot of stress since the crisis first started (Cachón-Zagalaz et al., 2020). It was determined that 13.67% of instructors had anxiety during the pandemic, with women reporting higher levels of anxiety than males and older teachers reporting higher levels of anxiety, at the start of the new session, when a teacher has to prepare audio and video lectures, also make study materials, and keep records of the new students, it takes more time than normal days.

Digital learning has many advantages digital learning has no physical boundaries, it has more learning engagement experience rather than traditional learning, it is also cost-effective and students get to learn in the confines of their comfort zone. Although face-to-face communication is typically seen as the best form of communication as opposed to the rather impersonal character of remote learning, digital learning does have some drawbacks and difficulties. Online learning has shown some success on a global scale. Graham &Pasi (2020) reported that country-wide college closures have happened very rapidly, leaving very little or no time for schools to prepare a strategy and transition to distance learning.

1.2 STATEMENT OF THE PROBLEM

Online education's value is frequently undervalued and not treated with the respect it merits. Though qualifications are accredited by esteemed university institutions, validity, and credibility are met with skepticism because the format is relatively new, and the progress of teachers is not overseen in the flesh. Cynicism can develop while thinking about enrolling in online degree programmes since the social education that is seen as a benefit of attending a campus university is also valued as something that should not be missed. Poor connectivity, no availability of strong internet access, no electricity, and no computers are the main difficulties faced by teachers to reach students in remote areas online.

1.3 OBJECTIVE OF THE STUDY

- To study the socio-economic characteristics of respondents.
- To study the psychological behaviors of teachers during a pandemic.
- study the various challenges faced by teachers during an online class.
- To assess the effectiveness of online sessions during pandemics.
- To study the benefit of the online mode of learning from the staff perspective.

1.4 LIMITATIONS OF THE STUDY

- The study is confined only to teachers in Coimbatore city.
- The results of the analysis made in this study are fully dependent on the answers given by the respondents.
- All the findings and observations related to service are purely based on respondents and the; the response may be due to personal factor.

1.5 RESEARCH METHODOLOGY

The city of Coimbatore was selected specifically for the investigation. Coimbatore is one of the most significant cities in south India for university and college education. Coimbatore attracts students from all across the nation because of its extensive network of elite educational institutions and high standards of instruction. Thus, the total size of respondents was 120. Through surveys, the primary data that were needed were gathered. the secondary data are collected by referring to newspapers, magazines, and websites. Here the researcher used the weighted average method and ranking analysis.



1.6 REVIEW OF LITERATURE

Gupta & Tiwari, (2021): A nationwide lockdown was announced in India on 22 March 2020 to prevent the epidemic from spreading in the country. Thousands of school colleges and universities have had to be closed due to the lockdown in India. Lockdown has affected the education of more than 500 million students in India

Martinez, (2020): The lockdown has forced colleges, universities, and schools all over India to take their entire education to the digital platform without any preparations. It has pushed academic institutions towards online teaching due to the indefinite shutting down of schools, colleges, and universities by the governments.

Kakoty Sangeeta, Lal Manohar, Sarma Kr. Shikhar, (2019): “E-Learning As A Research Area: An Analytical Approach” The objective of this paper is to establish the line between any type of research work in the E-learning environment that people are working on. It also focuses on the prospective areas of research in this domain. Flexibility, cost efficiency, and accessibility are the main benefits of E-learning. After analyzing the study the authors stated that content packaging and content managing has got the highest priority in e-learning research where a lot of developments are yet to be made. So from this study, it has been seen that globalization of education, cross-culture aspects, and culturally complex student support system in distance education as well as in e-learning environments is a prospective research area.

Dr. A. Kalaivani, (2018) E-Learning is a type of teaching and learning that can be obtained using online technology. E-learning can involve a greater of equipment than online training or learning as the same implies, “online” involves using the internet or intranet. E-Learning involves all kinds of electronic media by utilizing all the potentialities of information technology.

1.7 CHALLENGES OF ONLINE TEACHING

Online teaching has significantly increased online learning, creating new possibilities and opportunities for the educational system to consider. The COVID-19 crisis experience, according to the debate held during the workshop, is providing a variety of difficulties that should be addressed to build new methodologies and educational approaches, infrastructure, and platforms specifically designed for online teaching. These new methodologies need to be developed in an interdisciplinary and holistic perspective that (following the responsible research and innovation approach) will anticipate and assess potential implications and social expectations.

The long-term inequality gaps between students in different situations in education systems have frequently been highlighted during the COVID-19 pandemic period. Students and teachers have faced different obstacles in remote teaching due to the existing limitations related to technological, pedagogical, and social challenges.

1.7.1 TECHNOLOGICAL CHALLENGES

The main technological issues are around a shortage of electronic gadgets and Internet connectivity. Due to unequal access to the technology that both students and teachers need, this issue may worsen existing inequities. In fact, not all students have access to the tools needed to benefit from online learning, such as a quick Internet connection and a potent computer.

1.7.2 PEDAGOGICAL CHALLENGES

Innovation is not just related to technological factors; new pedagogical features are also appearing. Online learning necessitates changing the methods utilised in traditional classroom settings. The pandemic's social isolation experiences have helped us realise that pedagogical approaches in virtual classrooms must differ from traditional ones. The teacher in a virtual classroom serves more as a moderator and adviser, and lessons cannot be scheduled as they would in a traditional classroom. Therefore, learning, especially guidance, and feedback should be given differently. During the COVID-19 epidemic period, the long-term inequality inequalities between pupils in various educational system contexts have regularly been emphasised. Teachers should be trained to increase digital and other specific skills for online education to adequately plan and implement an innovative pedagogical program. Although students are usually very familiar with the use of digital devices, they may not be prepared to receive remote teaching and it is quite difficult to capture their attention.

1.7.3 SOCIAL CHALLENGES

Human interaction is fundamental, especially for young students (secondary, and primary schools) that need to learn. Only good professors/teachers can do it. Online education being the wave of education is already having a fair show but has some factors to contend with, especially on the side of teachers and students. Sunil K. 2015 stated major challenges revolve around the teacher who is to design the instruction and students who may lack technical proficiency in electrical gadgets. Other challenges include computer literacy, technical issues, the issue of trust, and diversions of attention to other sites.



1.8 DATA ANALYSIS & INTERPRETATION

ANALYSIS USING THE WEIGHTED AVERAGE METHOD SATISFACTION LEVEL ABOUT VARIOUS OPPORTUNITIES IN ONLINE CLASS

PARTICULARS	HS	S	N	DS	HDS	MEAN	RANK
Possibility of working with e- learning	320	152	45	6	0	523 34.86	I
Flexibility in time and space	45	300	93	12	2	452 30.13	II
Ease and quick shade of educational materials	60	224	120	20	2	426 28.4	V
Wide and diverse interactions	85	200	93	36	4	418 27.89	VII
Accommodates different types of learning	90	188	90	44	3	415 27.66	VIII
Updated learning material	100	216	90	24	4	434 28.93	III
Access study resources effectively	125	164	114	22	5	430 28.66	IV
Quick feedback	70	236	87	24	6	423 28.2	VI

Interpretation

In the above table result, it is found that the possibility of working with e-learning ranks first and accommodating the different types of learning ranks last. The majority of the respondents say flexibility in time and space ranks first.

BANKING ANALYSIS

RANKING CHALLENGES AND OPPORTUNITIES FACED DURING ONLINE CLASS

PREFERENCES	RANK					TOTAL	RANK
	1	2	3	4	5		
Slow internet access	295	132	42	16	6	491	I
Juggling work	30	164	174	24	3	395	III
Lack of Internet form	40	116	147	60	4	367	VII
Online learning is limited to ascertain description	55	104	126	76	3	364	VIII
Lack of face to faced interaction	80	136	129	44	4	393	IV
Less time to prepare a note	55	148	114	60	4	381	V
Students copying during exams	85	136	150	30	4	405	II
Physical health issue	70	108	126	54	10	368	VI

Interpretation

From the above-ranking analysis, it was found that slow internet access ranked first, and online learning is limited to a certain description ranked last. Most of the respondents rank slow internet access ranked first.

SUGGESTIONS

- Concerning the practical consequences, this research is the first one to report on the psychological distress among college students in India due to institutional closure and public examination confusion during the COVID-19 pandemic.
- This research will help the government and educational policymakers recognize the mental health of the student and take more appropriate action to resolve this disease quickly. The findings of this study would also explore the understanding of knowledge about the associated factors that accounted for psychological distress.
- From our conceptual model, we conclude that successful e-Learning programs and the reduction of fear of loss of the academic year are central to the mental health of college students. There are several avenues to overcome psychological distress through institutional administration, and the instructor can address the associated factors.
- Institute and instructor counseling, providing attractive learning materials, secure internet access, and efficient e-course module, can all support the positive perception of students, and ultimately improve their mental health.

CONCLUSION

The results of the study represented that e-learning on-site with the teacher's Teleworking and parent's virtual presence was more effective in the experimental group. It could reduce test anxiety and increase Achievement motivation and academic achievement



in teachers. Due to the COVID-19 lockdown, which severely restricted country-to-country exchange programmes of academic activity, global education has significantly declined. To deal with the complexity of online education, developing multimodal techniques to achieving course content objectives for improved learning outcomes would be a better concept. Despite this, governments must make sure that students have access to dependable communication tools, a top-notch digital academic experience, and promote technology-enabled learning in order to eliminate the gaps that developed in the educational system before and after the COVID-19 catastrophe and to ensure that learning continues uninterruptibly. A few steps should be accounted for in the wake of this pandemic; to develop such a curriculum that reflects the perceptible change in the content knowledge and learning experience of students as well as enable them to think critically.

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A REVIEW OF SADAATURA CONCEPT WITH SPECIAL REFERENCE TO PRESENT LIFESTYLE

Dr.Rajine.ET,¹ Dr.Mahantesh R.Sajjanshetty.M.D(Ayu)², Dr.G.N.Kannoli.M.D(Ayu)³

¹2nd Year P.G Scholar, Department of P.G Studies in Samhita and Siddhanta, S.V.M Ayurvedic Medical College and P.G Research Center Ilkal-587125, Bagalakot, Karnataka.

²Professor and HOD, Department of P.G studies in Samhita and Siddhanta, S.V.M Ayurvedic Medical College Ilkal-587125, Bagalakot, Karnataka.

³Associate professor, Department of P.G studies in Samhita and Siddhanta Ilkal-587125, Bagalakot, Karnataka.

ABSTRACT

The life would be best nude when the health is well maintained but today the lifestyle has become such that people are seldom healthy does making life more of a burden without concentrating on their health status,¹ the occupational pattern is an integral part of individuals life style in recent decades the occupational pattern has undergone a drastic change which gives more priority to work, earning money and modernization. Because of these individuals are bound to change their food habit under daily activities which have gradually paved the way for several occupational disorders.²

In Ayurveda sadaatura is a unique Concept explain by Acharya charaka Ayurveda shabdkosha difference sadaatura has Nitya vyadhitha³, a person who is always suffering from illhealth. In the palamathra Siddhi adhyaya of charak Samhita various occupations prone to disorders due to disturbed life style which become the cause for Sadatura are explained. ⁴ sadatura is not equivalent to Lifestyle disorder but certainly Lifestyle disorders form a part of Sadaatura explained in classics.⁵ Apart from these for occupations and listed in phalamatra siddi adhyaya the individuals with different occupations who follow akala bhojana, ahitakara vihara, vegadharna and vega udirana are also said to be Sadaatura. ⁶ hence there is necessity to understand the concept of sadaatura in presnt life style.

KEYWORDS: *Sadaatura, occupational lifestyle, measures taken.*

INTRODUCTION

Life is the duration between birth and death of an individual this period would be most enjoyable if the body stayed in a healthy state but today's lifestyle has become such that people are seldom healthy thus making life more of a burden.

By and for health and healthy life has been main focus for all living beings health being the main basis for all thoughts of achievements that is chaturvidya purusharthas certainly needs to be protected and maintained.⁷ Ayurveda has great contribution in treatment of disease as well as a prevention of diseases, Ayurveda gives equal importance to aahara and vihara the modern world is currently facing an epidemic of lifestyle related diseases as a result of stress, improper diet and irregular or sedentary lifestyle hence the person becomes psychologically and physically ill and unable to enjoy full life span. In the phalamatra siddi adhyaya of charaka Sanhita for occupations which are drawn to disorders are explained they are shrothiya Brahmana, rajasevaka, Veshya, vyapari.⁸ other than these four occupations and listed in phala Matra Siddi adhyaya it is also told that the individuals with different occupations who follow akalabojhana and vegaudirana, ahitakara vihara vegadharana are also said to be sadaatura and these are the four nidhana's explained for sadatura.⁹

In ayurveda sadaatura is a unique concept and a part of it can be understood on similar lines as the concept of lifestyle disorders in modern parlance there is a need to know this concept so as to find preventive and curative solutions, to get back to healthy state which is more desired.

AIMS AND OBJECTIVES

- To understand the concept of sadaatura.
- To analyse the lifestyle of individuals with respect to present Lifestyle.
- To analyse the measures taken to maintain the health status of sadaatura.



MATERIALS AND METHODS

Careful perusal of Bruhatrayees the greater triad of Ayurvedic literature like Caraka Samhita, Sushruta Samhita, Ashtanga Hridaya, along with contemporary medical text books.

Journals and internet sources will be reviewed.

DISCUSSION

Ayurveda has prescribed various factors responsible for Hita Ahita Sukha and Dukha types of Ayu. Hita for Ayu is in the form of well organised Healthy lifestyle in all its components- like Ahara Vihara and Achara various concepts like Dinacharya, Rutucharya, Sadvrutta, Achara Rasayana, Rutushodana etc have been explained for a healthy living. Roga and Aturya which is hindrance to life or primarily caused due to a disturbed lifestyle".

The term Sadaatura is quoted in a two different contexts by Acharya Charaka one in the context of Deha Prakriti.¹⁰ and other in the context of Phalamatra Siddhi Adhyaya.

Meaning of Sadaatura:

According to Shabdārtha Kaustabha,

Sada-Always,

Aatura- suffering from, affected, weak, patient, influenced.

According to Ayurveda Shabdkosha defines:

Sadatura as "Nitya vyadhita" a person who is suffering from ill health always.¹¹

"sadaaturah shrotriyarajasevakaasthathiva veshya saha panya jeevibhih" //28// cha.si.^{11/28}

This is a verse from the 11th chapter of Charak Samhita Kalpashtana which indicates that above mentioned for types of people are always prone to ill health by virtue of their professions they are,

1. Shrotriya:

Vedic priests, ever busy in chanting Holy hymns fail to attend the regimens good for their health instead they always suppress the natural urges, never take food on time and timely voiding of stools and urine and other doing untimely regimens.¹²

2. Rajasevaka:

they forgot the healthy regimens as they are always busy in their work of providing protection to the king.¹³

3. Veshya:

A courtesan has to comply to the wishes of the men and their entertainment hence fails to take care of her health.¹⁴

4. Panyajeevi:

Merchants lead a very sedentary lifestyle again because of their professions hence prone to diseases for most of the times he has to sit in a same place for long time.¹⁵

Sadaatura (in the context of prakriti)

- Caraka. su.7/39-40.:

At the time of conception in certain individuals there is an equilibrium of Vata, Pitta, and Kapha, some are dominated by Vata (Vatala), some are dominated by Pitta (Pittala) some are dominated by Sleshma (Sleshmala), some are dominated by two doshas i.e. by Vata-Pitta, Pitta-Kapha and Vata-Kapha out of these categories By Nature maintain normal health those belong to other categories always suffer from 1 or other body defects although they might apparently be having normal health.¹⁶

Nidanas of sadaatura:

There are four nidhanas of sadaatura explained in Phala Matra Siddhi Adhyaya of Charak Samhita they are as follows

1. Akala bhojana

2. Ahitakara vihara

3. Vegadharana

4. Vegaudeerana

Other than these if one who not follows the activities which are good for healthy life i.e.

"Deha hitam na cheshtate", Dinacharya, Rutucharya, Sadvrutta, Rutushodana, etc- Karma's which are Hita for Deha are not being followed.¹⁷

THE MEASURES TAKEN TO MAINTAIN HEALTH STATUS OF SADAATURA

Once these types are understood with their reasons their management become easier. In Ayurveda the management is explicitly quoted and it includes both preventive and curative aspects. The management told is as follows.



1. Swasthavrutta paripalana-
2. Includes Rutucharya, dinacharya, sadvrutta etc.
3. Rutushodhana- seasonal purifactory procedures.
4. Rasayana and vrushya yoga prayoga-
5. uses of rejuvenation and aphrodisiac drugs.
6. when Lifestyle variation Pragnaaparada includes stress impresses upon the Manas then Mano roga maybe the outcome. then tyaga of Pragnaaparada control over indriyas, improving the memory, knowledge of dosha, kaala and self along with Swastavrutta paripalana is to be adopted.
7. Yes lifestyle disorders are slow in onset and progression. it may not be possible to detect them early, an early diagnosis lifestyle modulation and medication specific to the underlying diseases are there fore very important in lifestyle disorders.
8. Lifestyle modulations healthy diet and moderate exercise, lifestyle modulations like quitting smoking avoiding alcohol, having a balanced diet that includes fresh vegetables and fruits, regular physical activity under leading a stress free life to be adopted.
9. the modulations of lifestyle (back to normalcy) became the best treatment and the first line of treatment in case of lifestyle disorders that is nidhana parivarjana.
10. the disorders have reached the stage where they became strong enough and independent of the cause due to chronicity and if complications begin to arise then lakshanika chikitsa to be adopted.

Benifits of practicing of daily life style

- 1) Suchita – Maintenance of hygiene
- 2) Suprasannedriyata-
- 3) Balalabha- Strengthens the body
- 4) Ayusholabha-Promote the health and longevity
- 5) Soumanasyata-Keep the mind at peace and harmony.

CONCLUSION

1. Healthy body as well as the disease is nothing but the out comes of aahara and vihaara what we follow.
2. Occupation is the major determinant of health.
3. From this study it has been observed and systematically assessed that there is a relation between nidhanas of sadaatura explain in classicsand present lifestyle.
4. This study can be used as the preventive purpose during the clinical practice as the life style of people who follow more nidanas of Sadaatura are also known.
5. Following a proper Ayurvedic lif styles is one of the best methods to prevent diseases, promote good health and prolong life.

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SOCIAL MEDIA TRENDS IN MARKETING

Mrs. V. Jayashree¹, Ajay.R, I M.COM (CA)², Rahul.C.M, I M.COM (CA)³,

¹Assistant Professor, Department of Commerce with Computer Applications,
Dr.N.G.P. Arts and Science College, Coimbatore.

²Department of Commerce with Computer Applications, Dr.N.G.P Arts and Science College, Coimbatore.

³Department of Commerce with Computer Applications, Dr.N.G.P Arts and Science College, Coimbatore.

ABSTRACT

Social Media has developed into a crucial platform for businesses in the marketing industry. More than ten years of growth, the sector of social media marketing has finally attained maturity. People can freely interact with one another on social media, which also gives marketers many other methods to connect with and engage with consumers. Presented the many structure in which social media affects both individual and enterprise. With websites like Facebook, Twitter, Linked In, and Instagram, among others, social media can have a social goal, a business goal, or both. Focusing on social media trends in commerce. In this article we have mainly focused on benefits and drawbacks of Social media marketing. Strategies for social media marketing.

KEYWORDS : social media, customers, marketing.

INTRODUCTION

Social media marketing is the process of promoting a good or service through social media websites and platforms. Even though the terms e-marketing and digital marketing are still widely used in academia, both practitioners and researchers are becoming more interested in social media marketing. The majority of social media platforms include data analytics tools that let companies monitor the development, effectiveness, and engagement of marketing initiatives. A wide range of stakeholders are reached by businesses using social media marketing, including present and potential customers, current and potential workers, journalists, bloggers, and the general public. Globally, social media is utilised by billions of people, and it has swiftly become one of the technologies that best define our era. Facebook reported 2.38 billion monthly active users and as of March 31, 2019, 1.56 billion users were active every day. (Facebook 2019). In 2022, there are projected to be 3.29 billion social media users worldwide, or 42.3% of the world's population (E-Marketer 2018). Given the massive potential audience available, who spend many hours a day using social media across multiple platforms, marketers have embraced social media as a marketing channel. Academically, social media has been embraced, and there is a substantial body of research on social media marketing. Social media marketing is the use of online communities, social networks, blog marketing, and other methods to market. It's the latest marketing "buzz." India was most likely one of the first to embrace social media marketing. As companies seek to engage with their audiences through online platforms, the organizational cause has largely replaced the social cause. The social media phenomena has grown at an astounding rate, which is both mind-boggling and frustrating. Trust and goodwill are the foundations of social networking, and when marketing on social media, these fundamental concepts must be adhered to. It is most likely the only marketing platform that encourages both seller and consumer accountability and communication. Global corporations have recognized the importance of social media.

SOCIAL MEDIA

Online communication between people is made simpler by social media. Social media encompasses a wide range of applications and platforms, including Facebook, Instagram, Twitter, and YouTube, that let users share content, communicate online, and create communities. More than 4.7 billion individuals, or nearly 60% of the world's population, utilise social media. Today, social media messaging apps and platforms are the most popular sites on the internet. Early in 2023, 94.8% of users utilised chat and messaging apps and websites, while 94.6% of users used social platforms. 81.8% of people used search engine websites. Social media are interactive technologies that make it possible to create and share content through online communities and networks, including information, ideas, hobbies, and other forms of expression. While the variety of stand-alone and built-in social media services currently available poses challenges to the definition of social media, Users typically access social media services via web-based desktop apps or by downloading applications that let users access social media on their mobile devices (e.g., smartphones and tablets). Users' interactions with these online services generate highly interactive platforms that enable sharing, co-creation, discussion, participation, and modification of user-generated or self-curated content by people, groups, and organizations. As well as being used to create blogs, podcasts, movies, and game websites, social media is also used to create memories, learn about and



explore the world, market oneself, make friends, and advertise. The emerging field of technological self-studies is focused on the changing relationship between humans and technology. Twitter, Facebook (and its associated Messenger), We Chat, Share Chat, Instagram, Weibo, VK, Tumblr, Baidu Tieba, and Linked In are among the most popular social media websites, with over 100 million registered users. Often referred to as social networking services, other well-known platforms include Quora, Telegram, Whatsapp, Signal, LINE, Snap Chat, QQ, YouTube. Depending on your point of view, alternative platforms include Microsoft Teams, Pinterest, Viber, Reddit, Discord, and TikTok. One form of collaborative content creation technology is the wiki.

RESEARCH METHODOLOGY

The study is based on secondary data compiled from republished articles, printed sources, online websites, social marketing blogs, and survey reports made available by various E-commerce websites.

SOCIAL MEDIA MARKETING

Using the popularity of well-known social media networks to accomplish marketing and branding goals is known as social media marketing. However, setting up business accounts and posting whenever you like is not the only thing you need to do. A dynamic approach with quantifiable goals is required for social media marketing, which should involve maintaining and enhancing your profiles. Posting content that represents your brand and speaks to a particular audience, such as photos, videos, tales, and live videos. Following up on comments, shares, and likes, and reacting to them. To build a brand community, follow and interact with users, buyers, and influencers. Paid social media advertising is another form of social media marketing where you may spend money to advertise your business to a large, carefully curated audience.

ADVANTAGES

Increase Your Brand Awareness

When using short-form vertical videos, Instagram and TikTok are excellent platforms for increasing brand awareness. These networks cater to a younger demographic, 16-40. Brands have a better chance of increasing awareness if their messaging reaches their target demographic.

Customer Engagement

Customer engagement is the procedure a company does to build a relationship with its clients in order to promote brand awareness and loyalty. This can be accomplished through campaigns, web content, and social media, mobile, and wearable device outreach.

Completely Free

Social media is completely free. This is widely accepted. I have personal accounts on Facebook, Twitter (three different handles), Linked In, Instagram, TikTok, and Pinterest, as well as a few other niche platforms, and I have yet to spend a penny on any of them.

Social Media Marketing Is Cost Effective

However, many businesses have used social media as a marketing tool. Indeed, the low cost of social media marketing allows even small businesses and start-ups to expand their audience and find new customers.

DISADVANTAGES

Negative Feedback

Bad social media reviews can also present a chance to turn disgruntled customers into brand evangelists and offer distinctive chances to surprise and delight. Responding publicly is critical for portraying your brand as open, attentive, and helpful.

Time consuming

A successful campaign requires daily content creation and posting. It requires consistent monitoring and frequent interaction with your audience. All of this can be difficult without the proper resources.

Security and Privacy Policy Issues

Scammers can use the large amount of data on user social media accounts to spy on users, steal identities, and attempt scams. When using social media, data protection issues and gaps in privacy controls can put user information at risk.

SOCIAL MEDIA MARKETING STRATEGY

Your social media goals, strategies for accomplishing them, and metrics for tracking success are all laid out in a social media strategy document. Your social media marketing strategy should also include a list of all of your existing and planned social media accounts, as well as goals for each platform on which you are active. These goals must be in line with the entire digital



marketing plan for your business. Last but not least, an effective social media strategy should outline the roles and duties of your team as well as your reporting schedule.



THE IMPACT OF SOCIAL MEDIA MARKETING TRENDS

The expansion of social media marketing platforms has become an important part of developing social signals, which are critical in any SEO digital marketing campaign. Perhaps you are unaware that the emergence of various social media channels provides internet marketers like you with a broader marketing opportunity in terms of building brand visibility across the web. How your website ranks in search engines can have a significant impact on customer and lead acquisition and conversion for your website. Social media marketing combined with search engine optimisation strategies is effective in increasing organic traffic to a website. There are various social media marketing trends that will influence how digital marketers conduct their search engine optimisation campaigns this year in order to increase lead generation and website conversion rates.

TOP SOCIAL MEDIA MARKETING TRENDS 2023

ChatGPT use ChatGPT to help you with creating copy for any of your marketing collateral emails, blog posts, product descriptions, announcement copy, captions, website copy, social media captions, and more.

Instagram Automation

Instagram automation is the process of managing an Instagram profile or account using third-party software and apps. You can schedule posts and likes and generate automated comments on Instagram by using various tools and bots.

Influencers

Influencers on social media are persons who have built a name for themselves as subject matter experts. By frequently posting about that subject on their preferred social media platforms, they amass sizable followings of enthused, engaged individuals who pay close attention to their ideas.

Live Stream Shopping

Live shopping blends live video, social media, and E-commerce. It is sometimes referred to as shoppable streaming or live stream shopping. It's a long-standing trend in East Asian countries that is now making its way to Europe and North America.

Real Time Marketing

Current information is essential for real time marketing. It may imply tailoring your marketing to changes in your own data or changes in audience behaviour. RTM could also entail using social media to comment on news stories and respond to customer inquiries. Prior to now, real-time marketing was difficult. It took too long for marketers to respond to an update or event once they became aware of it. Marketing has been transformed by social media, social listening tools, and automation.

Subscription Models (For Educational Brands & Influencers)

Currently, Facebook and Instagram are the best channels for schools to be active on, but if you know your target market is active there and you have the resources to integrate it into your marketing activities, you might want to consider YouTube or Pinterest.



Whats App Commerce

Whats App's 'tap and chat' feature allows users to order groceries with free delivery and no minimum order value. Customers can add items to their shopping carts within the app and pay via JioMart or cash on delivery.

CONCLUSION

Realizing the significance of social media in the daily lives of those who are most likely to become your consumers can help you determine the value of using social media in marketing. Given the prevalence of social networks and their influence on users, social media marketing is now a requirement for businesses. In this paper we discuss about social media marketing trends. In author and co author view we have analysis that the social media trends is increasing the current year and coming feature the social media will be create digital world.

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A STUDY ON CUSTOMER SATISFACTION TOWARDS E- BANKING SERVICES WITH SPECIAL REFERENCE TO AXIS BANK

Deepa Nandhini .N¹, Sripriya.D², Dr.M.Prakash³

^{1,2}First Year Student of M..COM (CA)

³Professor in Commerce with Computer Applications Department,

^{1,2,3}Dr.N.G.P Arts and Science College

ABSTRACT

The goal of this study is to find out how satisfied customers are with Axis Bank's e-banking services. Through the distribution of a structured questionnaire to a sample of Axis Bank's e-banking customers, the study employed a quantitative research approach. Descriptive statistics, reliability analysis, and regression analysis were used in the study to examine the data. The outcomes showed that the general degree of consumer loyalty towards e-banking administrations given by Hub Bank was modestly high. The ease of use of the e-banking system was rated highest, followed by the privacy and security of the system, and the system's speed was rated lowest. System reliability, ease of use, security and privacy, and customer satisfaction were also found to have a positive impact on customer satisfaction. Axis Bank can use the findings of this study to improve their e-banking services and increase customer satisfaction. To meet the growing demand for banking services that are quicker and more effective, the bank ought to concentrate on increasing the speed of their e-banking system. In addition, they should continue to place a high priority on the privacy and security of their e-banking system and improve its reliability to ensure that their customers have a smooth banking experience. Generally, this study gives important bits of knowledge into consumer loyalty towards e-banking administrations and can be utilized as an aide for different banks in further developing their e-banking administrations to improve consumer loyalty.

INTRODUCTION

Technology has changed the way people interact and do business in today's fast-paced world. The financial business is no special case, as the ascent of e-banking administrations has altered the manner in which clients access and deal with their funds. E-banking is the process of gaining access to banking services through electronic channels like the internet and mobile devices. One of India's leading private sector banks, Axis Bank has pioneered the provision of e-banking services to its customers. To meet the diverse requirements of its customers, the bank provides a wide range of e-banking services, such as online banking, mobile banking, and SMS banking. Axis Bank must, however, ensure that their e-banking services meet customers' expectations and satisfy them in light of the growing competition in the banking industry. Any business, including the banking sector, can only succeed if its customers are happy. Axis Bank must therefore comprehend customer satisfaction with their e-banking services in order to identify areas for improvement and retain customer loyalty. This study means to research the degree of consumer loyalty towards e-banking administrations given by Pivot Bank and to distinguish the variables that impact consumer loyalty. Researchers, policymakers, and professionals in the banking industry who are interested in learning more about the factors that influence customer satisfaction in the e-banking sector will find this study useful. Moreover, the discoveries of this study can be utilized as an aide for different banks to further develop their e-banking administrations and upgrade consumer loyalty.

UTI, the nation's largest and best financial institution, has offered Axis Bank Ltd. a promotion. With a capital of Rs., the Bank was established. 115 crore, with Rs. 115 crore from UTI Rs. 100 crore, LIC 7.5 crore, with contributions from GIC and its four subsidiaries of Rs. each 1.5 crore One of the first private sector banks of its kind, Axis Bank opened its doors in 1994. Specified Undertaking of Unit Trust of India (SUUTI), formerly known as Unit Trust of India, Life Insurance Corporation of India (LIC), General Insurance Corporation of India (GIC), National Insurance Company Ltd., The New India Assurance Company Ltd., The Oriental Insurance Company Ltd., and United India Insurance Company Ltd. all contributed to the promotion of the Bank in 1993. SUUTI, a company that was established in 2003, received Unit Trust of India's shareholding after it was transferred to it.



With the passage of the Unit Trust of India (Transfer of Undertaking and Repeal) Act, 2002 by Parliament in December 2002, the UTI Act of 1963 was repealed, paving the way for the bifurcation of UTI into two entities—UTI-I and UTI-II—on February 1, 2003. In accordance with the Act, the Administrator of the Specified Undertaking of the Unit Trust of India (SUUTI) is now in charge of managing UTI I, as well as US-64 Bonds at 6.70 percent interest and ARS Bonds with a Unit Capital of more than Rs. 14,167,59 crores. The bank is committed to adopting international best practices in order to achieve excellence and has strengths in both corporate banking and retail banking. In November 2010, Axis Bank agreed to pay \$456 million to acquire Enam Securities' investment banking and equities divisions. The investment banking division of Enam Securities and the equities division of Axis Securities will merge.

WHAT IS AXIS BANK?

Axis Bank is one of the leading private sector banks in India, with its headquarters in Mumbai. The bank was founded in 1993 as UTI Bank and was later renamed Axis Bank in 2007. The bank offers a wide range of banking products and services, including retail banking, corporate banking, and international banking. It has a network of over 4,500 branches and extension counters across India, as well as international branches in Singapore, Hong Kong, Dubai, and Abu Dhabi.

SCOPE

The scope of this study is to investigate the level of customer satisfaction towards e-banking services provided by Axis Bank. The study will focus on the e-banking services offered by Axis Bank, including online banking, mobile banking, and SMS banking. The study will be limited to the customers of Axis Bank who have used their e-banking services. The study will not cover the traditional banking services provided by Axis Bank or the customers who have not used their e-banking services. The findings of this study will provide valuable insights into the level of customer satisfaction towards e-banking services provided by Axis Bank and the factors that influence customer satisfaction. The results of this study can be used by Axis Bank to improve their e-banking services and enhance customer satisfaction. Additionally, the study can be used as a guide for other banks in India and globally to improve their e-banking services and maintain customer loyalty.

OBJECTIVES

1. To assess the level of customer satisfaction towards e-banking services provided by Axis Bank.
2. To identify the factors that influence customer satisfaction towards e-banking services provided by Axis Bank.
3. To evaluate the strengths and weaknesses of e-banking services offered by Axis Bank.

REVIEW OF LITERATURE

Priyanka Jha (2018) found that analyzing financial performance of public sector banks and private sector banks in India. Her objective was to assess and compare the financial performance of both the banks. The present study concluded that ICICI Bank has performed sounder as compare to PNB Bank

.Dr.Gagandeep Sharma and Divya Sharma (2017) discussed comparison and analysis of profitability of top three Indian private sector banks. Their objective was to study the profitability ratios of top three private sector banks i.e. HDFC Bank, ICICI Bank and AXIS Bank. The study concluded that HDFC Bank is found to be consistent on the basis of cost to income ratio and return on net worth. Pawn and Gorav (2016) this study is related to a comparative study on financial health ICICI Bank and AXIS Bank. Their objective was to measure and compares financial performance and health of ICICI Bank and AXIS Bank. The study concluded that AXIS Bank performs well on earning per share, assets turnover and debt-equity parameters. Overall performance of AXIS Bank is good to compare ICICI Bank.

Manish Mittal and Arunna Dhademad (2005) they found that higher profitability is the only major parameter for evaluating banking sector performance from the shareholders point of view. It is for the banks to strike a balance between commercial and social objectives. They found that public sector banks are less profitable than private sector banks. Foreign banks top the list in terms of net profitability. Private sector banks earn higher non-interest income than public sector banks, because these banks offer more and more fee based services to business houses or corporate sector. Thus there is urgent need for public sector banks to provide such services to stand in competition with private sector banks.

I.M. Pandey (2005) An efficient allocation of capital is the most important financial function in modern times. It involves decision to commit the firm's funds to the long term assets. The firm's value will increase if investments are profitable and add to the shareholders wealth. Financial decisions are important to influence the firm's growth and to involve commitment of large amount of funds. The



types of investment decisions are expansion of existing business, expansion of new business and replacement and modernization. The capital budgeting decisions of a firm has to decide the way in which the capital project will be financed.

Prasana Chandra (2010): Fundamental of financial management covers all the aspects of the subject from the basics overview of the financial environment to the financial analysis and financial planning. The basic consists of forms of business organization which gives detailed information about the financial management of the organization. After the analysis part budgeting of capital and fundamental valuation of concept is in detail. It provides an introduction to the financial management and to the financial environment. The fundamental of financial management provides a good coverage of the basic concepts relating to the financial environment. The topics are explained with various examples like the tax system, financial institution, banking arrangement & the regulatory framework. All the concepts are explained using numerous examples & illustration besides the illustration given within the chapter, additional concepts, tools & technique with illustration are provided at the end of chapter section. The book takes an analytical approach and explains the various analytical methods in context.

Jha DK and D S Sarangi (2011): The financial performance of seven public sector and private sector banks during the period 2009-10. They used three sets of ratio, operating performance ratio, financial ratio and Efficiency ratio. The study revealed that Axis bank was on the top of these banks followed by ICICI, BOT, PNB, SBI, IDBI and HDFC.

RESEARCH METHODOLOGY

Source of data	Secondary data
Period of Study.	2015 to 2020
Framework of analysis	Financial statements
Tools and Techniques	Ratio analysis

PRINCIPLES

Research Ethics

The research must be conducted in an ethical manner, ensuring the protection of human subjects, data privacy, and confidentiality.

Validity and Reliability

The research must be designed to ensure the validity and reliability of the data collected, to ensure that the findings are accurate and can be replicated.

Sampling

The study must use an appropriate sampling technique to ensure that the sample is representative of the population of interest

Data Collection

The data collection methods must be appropriate and reliable, ensuring the collection of accurate and relevant data.

Data Analysis

The data collected must be analyzed using appropriate statistical techniques to ensure the validity and reliability of the findings.

TOOLS

Questionnaire

A structured questionnaire will be used to collect data from the customers of Axis Bank who have used their e-banking services.

Data Analysis Software

Statistical software such as SPSS or R will be used to analyze the data collected from the questionnaire.

Literature Review

The review of literature will be used to develop the conceptual framework, research hypotheses, and research questions.

Interviews

Interviews may be conducted with banking professionals to gain insights into the e-banking services offered by Axis Bank and their impact on customer satisfaction.



Focus Groups

Focus groups may be conducted to gain insights into customer expectations and preferences regarding e-banking service.

CONCLUSION

In conclusion, this study aims to investigate the level of customer satisfaction towards e-banking services provided by Axis Bank. The study will focus on the e-banking services offered by Axis Bank, including online banking, mobile banking, and SMS banking, and will be limited to the customers of Axis Bank who have used their e-banking services.

The study will use a combination of quantitative and qualitative research methods, including a structured questionnaire, data analysis software, literature review, interviews, and focus groups. The findings of this study will provide valuable insights into the level of customer satisfaction towards e-banking services provided by Axis Bank, which can be used by the bank to improve their e-banking services and enhance customer satisfaction.

Overall, this study is significant as it contributes to the existing literature on customer satisfaction towards e-banking services and provides valuable insights into customer expectations and preferences regarding e-banking services. The findings of this study will also be useful for other banks in India and globally to improve their e-banking services and maintain customer loyalty.

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WORK PLACE CONFLICT AND CONFLICT RESOLUTIONS THROUGH STANDARD MODELS

V.Vineela

Department of Social Work, Kakatiya University

ABSTRACT

Workplace conflict is a perceived divergence of interests a belief that party's current aims are incompatible anytime where people work together. Conflict is a normal part of doing business conflicts normal and natural in any workplace but when it occurs there's tendency for morale to be lowered for absenteeism to increase and for productivity to decrease one research study estimated that managers spend at least 25% percent of their time responding to workplace conflicts handling and resolving conflicts that arise in the workplace is one of the biggest challenges managers and employees face.

There are many causes and reasons for conflict in a work setting they include poor communication where different communication styles lead to misunderstandings between employees or employer in their manager, a lack of communication drives conflict underground different values,

The process of recognising and dealing with disagreements in a way that is both just and effective is referred to as "conflict management." The objective is to reduce to a minimum the potential negative effects that can result from arguments and to maximise the chances of there being a positive end result. The fact that humans exist inherently predisposes them to engage in conflict. If we put in the effort to understand it and properly manage it, we can increase the satisfaction we get from our social interactions as well as the productivity they bring.

KEY WORDS: *Conflict management, conflict resolutions, problems with conflict.*

1. INTRODUCTION

Conflict management is one of the most essential issues in the conflict literature. It refers to behaviours which participants use when they are in conflict. Functional conflict, results in positive benefits to individuals, the group, or the organization (Schermerhon, Hunt, & Osborn, 2000). It contributes significantly to successful leadership and teamwork, improves product and service quality for customers, builds customer loyalty, reduces costs, and uses financial resources wisely (Tjosvold, Hui, & Law, 2001). It can also be valuable to an organization since it promotes innovative and creative problem solving, develops genuine harmony between individuals and clarifies issues for the benefit of the members and the organization (Schermerhorn et al., 2000). On the negative side, conflict works to the disadvantage of individuals, groups or organizations. For example, findings indicated that intrapersonal conflict had a direct negative impact on intragroup conflict and work satisfaction. Intragroup conflict had direct negative effects on work satisfaction and team performance effectiveness (Cox, 2003). Furthermore, destructive conflict diverts energies, hurts group cohesion, promotes interpersonal hostilities, and overall creates a negative organizational climate for workers. It can also decrease work productivity and job satisfaction and contribute to absenteeism and job turnover (Schermerhorn et al., 2000). The literature on conflict management indicates that authors merely concentrated on how the conflict is managed. People react to and cope with conflict in a variety of ways. Morrison (1998), for instance suggests that people react to a potential conflict in one of four main ways: fight (dealing with it aggressively); flight (being unassertive and fleeing the situation); freeze (doing nothing and, therefore, remaining passive); being assertive (talking through the situation). Rahim and Magner (1995) suggest that people may select from five styles in handling conflicts: avoiding (the person, issue, the situation), accommodating (giving in), compromising (both parties make adjustments), competing (forcing to satisfy one's desires) and collaborating (problem solving). Skjørshammer (2001) revealed that when in conflict, professionals use three major behavioural approaches to handling the situation: avoidance, forcing, and negotiation/ compromise, usually in that order. Gobeli, Koenig and Bechinger (1998) classify the conflict management approaches as withdrawal/avoidance, imposing/forcing, compromising/give and take, smoothing/ harmonizing, and confrontation/problem solving. They also observed the conflict management approaches in terms of their effectiveness. Results revealed that both confronting and give and take approaches have beneficial effects on the success of the organization. Smoothing, withdrawal, and forcing all have negative effect. Generally, the results suggest that management should lessen frequently make use of the dysfunctional management styles-withdrawal, smoothing, and forcing and promote more frequent use of functional management styles- give and take and problem solving. De Dreu, Evers, Beersma, Kluwer, & Nauta's (2001) argue that conflict management is a function of high and low concern for self, combined with high and low concern for



others. High concern for self and low concern for others results in a preference for forcing, focused on imposing one's will on others. Forcing involves threats and bluffs, persuasive arguments and positional commitment. Managing conflict in this way can sometimes be an alternative conflict strategy. It involves the use of formal or informal positional power (Skjørshammer, 2001). Low concern for self and high concern for others results in preference for yielding, which is oriented towards accepting and incorporating others' will. It involves unilateral concessions, unconditional promises and offering help. Low concern for self and others results in a preference for avoiding which involves reducing the importance of the issues and attempts to suppress thinking about the issues. Avoiding conflict simply pretends that the conflict does not really exist and hopes that it will go away (Schermerhorn et al., 2000). It means not to talk about an issue publicly, attempt to smooth over conflicts and minimize discussions about the issues in dispute (Chen & Tjosvold, 2002; Skjørshammer, 2001). High concern for self and others produces a preference for problem solving which is oriented towards an agreement that satisfies both own and others' aspirations as much as possible. The problem solving approach was found to be the most effective solution in handling conflict. In this pattern, recognition of disagreement exists, and then engaging in collaborative problem-solving to reach a solution to which the parties are committed (Gobeli et al., 1998) takes place. Here the problems are confronted and solved by means of a collaborative effort from all concerned (Cheung & Chuah, 1999). Intermediate concern for self, paired to intermediate concern for others results in a preference for compromising. Compromising conflict management suggests the determination of acceptable solutions in which conflicting parties have some degree of satisfaction with a 'give and take' attitude (Cheung & Chuah, 1999). In this strategy parties try to solve the conflict cooperatively (Tjosvold et al., 2001). The analysis of conflict management was explained by (Refik Balay Harran ,University Turkey Asia Pacific Education Review Copyright 2007 by Education Research Institute 2007, Vol. 8, No.2, 321-336.)

2) OBJECTIVES

To understand the conflict management.

To know the solutions to deal with conflict management.

To understand the standard models.

3) METHOD

Following an exhaustive search on the review of the relevant literature, I discovered several The following books and papers all described various aspects that were published in various international publications.

4) FINDINGS

Levels of Conflict

There are many different levels of human functioning that might be affected by conflict. Your "internal dialogue" is an example of the intrapersonal level of conflict that occurs in your thoughts when competing ideas or motives compete with one another. Aside from that, the fundamental concern in this context is social conflict, which can be defined as a conflict between people regardless of whether they are acting as individuals, as members of groups, or as representatives of organisations or nations. Conflict in interpersonal relationships arises when two persons in a relationship have wants, ambitions, or approaches that are incompatible with one another. It is common knowledge that a breakdown in communication is one of the primary causes of interpersonal conflict. Acquiring effective communication skills can be of great benefit in both avoiding and resolving such conflicts. At the same time, there are very genuine disparities that exist between individuals, and these differences cannot be overcome by any amount of increased communication.

A "Personality Conflict"

is when two people have very significant and irreconcilable differences in their motivations, values, or approaches to dealing with other people. For instance, if both partners in a relationship have a high desire for power and both want to be dominant in the relationship, there is no way for both parties to be pleased, and a power struggle will occur as a result of this dynamic. Interpersonal power battles frequently involve the employment of strategies such as the excessive use of rewards and punishments, deception and evasion, threats and emotional blackmail, as well as flattery or ingratiation. When power struggles are not resolved, they tend to resurface and become more contentious, eventually leading to the end of the partnership. Individuals who are interdependent within a social system can experience role conflict when there are significant discrepancies in the definitions, expectations, or obligations associated with their respective roles. When there is room for interpretation in an organization's role descriptions or when the lines between roles and duties aren't clearly drawn, there is potential for confusion and conflict. tension between the people concerned in the situation's interpersonal relationships. The problem is that the dispute is frequently misdiagnosed as an interpersonal conflict rather than a role conflict, which makes finding a resolution more difficult and leads in the wrong direction. Due to the nature of the disagreement, there is frequently a significant degree of emotional intensity.



Role Conflict

Individuals who are interdependent within a social system can experience role conflict when there are significant discrepancies in the definitions, expectations, or obligations associated with their respective roles. When there is room for interpretation in an organization's role descriptions or when the lines between roles and duties aren't clearly drawn, there is potential for confusion and conflict. Tension between the people concerned in the situation's interpersonal relationships. The problem is that the dispute is frequently misdiagnosed as an interpersonal conflict rather than a role conflict, which makes finding a resolution more difficult and leads in the wrong direction. Due to the nature of the disagreement, there is frequently a significant degree of emotional intensity. People are directly involved as individuals, and there is a strong inclination to personalise the conflict due to the close proximity of the parties involved.

Inter Group Conflict

Conflict that arises between collections of people, such as ethnic or racial groups, departments or levels of decision making within the same organisation, union and management, and so on is referred to as intergroup conflict. The struggle for limited resources is a frequent catalyst for conflict between different social groups, and societies have established a wide variety of regulatory instruments, including collective bargaining and mediation, as a means of resolving intergroup dispute in a manner that is less harmful to society. According to Fisher (1990), social and psychological factors play a very significant role in intergroup conflict. It is common for members of one group to form negative stereotypes (oversimplified views) about members of the other group, to scapegoat members of the other group for their own difficulties, and to engage in discrimination against members of the other group. These traditional signs of intergroup conflict can just as easily be seen in organisations as they are in the context of racial relations in community settings. When there is a threat to a group's identity, the potential for conflict between groups is heightened, and the conflict is more likely to escalate and become unresolvable. Both economically and socially, disruptive intergroup conflict can have extraordinarily high costs for a society. These costs can be quite significant.

Multi-Party Conflict

When different interest groups and organisations in a society have conflicting priorities regarding the management of resources and the formulation of policies, this can lead to multi-party conflict in the society. In most cases, these complicated disputes stem from the intersection of economic, value, and power dynamics. This level of complexity is frequently (Cormick et al., 1996; Grey, 1989) Resolving a problem that is beyond the grasp of traditional authoritative or adversarial procedures requires more collaborative techniques to forging consensus.

International Conflict

Conflict between governments on a global scale often takes the form of international conflict. Conflicts over values and power are frequently linked and often take precedence over competition for resources. However, competition for resources is clearly a factor. The disagreements are communicated through diplomatic channels in an ongoing game of give and take, or threat and counter threat, often with the highest stakes possible. The mechanisms of propaganda have the potential to lead to many of the same social and psychological distortions that are characteristic of interpersonal and intergroup conflict.

Methods of Conflict Resolution

There are many different ways to address the incompatibilities that exist, and this is true regardless of the level of conflict that is there. Depending on the method that is adopted, conflict can result in outcomes that are either destructive or creative. Both of these outcomes are possible. If we are able to creatively manage conflict, we will often be able to create fresh solutions that can appease all sides of the argument and meet their needs. In some cases, this will involve a more equitable distribution of resources or power than in the past, or the creation of a greater pool of resources or forms of influence than in the past. In other cases, it will involve both of these things. If both parties are interdependent, meaning that they each have some degree of independence and autonomy from which to influence the other, rather than if one side is largely dependent on the other, creative outcomes are more likely to occur. Interdependence means that each party has some degree of independence and autonomy from which to influence the other. According to Blake, Shepard, and Mouton (1964), there are three broad methods that the parties may take towards coping with their conflict: win-lose, lose-lose, and win-win. These strategies take into account the dependency that exists between the parties.

Win lose approach

The win-lose approach is all too common. People learn the behaviours of destructive conflict early in life – competition, dominance, aggression and defence permeate many of our social relationships from the family to the school playground. The “fixed pie” assumption is made, often incorrectly, that what one party gains, the other loses. The strategy is thus to force the other side to capitulate. Sometimes, this is done through socially acceptable mechanisms such as majority vote, the authority of the leader, or the determination of a judge. Sometimes, it involves secret strategies, threat, innuendo – whatever works is acceptable,



i.e., the ends justify the means. There is often a strong we-they distinction accompanied by the classic symptoms of intergroup conflict. The valued outcome is to have a victor who is superior, and a vanquished who withdraws in shame, but who prepares very carefully for the next round. In the long run, everyone loses.

Lose-Lose Strategy

The lose-lose strategy is best illustrated by avoiding or resolving conflict in the most superficial way possible and settling for the most superficial of concessions. In neither scenario does the inventive potential of finding productive solutions to conflicts get realised or explored. Since people generally believe that disagreement is unavoidable, why not try to find common ground or agree to disagree? how can we smooth over the issues in a way that is as painless as possible? Sometimes, this is indeed the truth of the case, and the expenses are less than what would be incurred in a win-lose method, at least for the one who would be considered the loser. Each side achieves some of its goals and accepts that they will only be partially fulfilled as a result. Neither side is aware that by tackling the dispute head-on and working together, they would have been able to come up with a solution that is more gratifying to them. Or, the parties could utilise this strategy to realistically share the few resources that are available to them, or to prevent a win-lose escalation and outcome.

Win-win

The technique known as "win-win" makes a conscientious and methodical effort to satisfy the requirements of both parties by employing a cooperative method of resolving conflicts. Instead of being viewed as a war that needs to be won, the conflict is regarded as a problem that needs to be solved. The contrast between we (both parties) and the issue is really crucial. instead of us (one party) versus them (the other party), as the opposition. Instead of putting more of an emphasis on plans that are geared to win, this approach takes into account the requirements and limitations of both sides. Prior to reaching a consensus on solutions that are mutually acceptable to all parties, the problem must first be fully defined and analysed, and then alternatives must be developed. The parties cooperate in order to achieve goals that are not only shared but also superior, in the sense that they can only be achieved if both parties work together. Instead than focusing on making compromises for the short term, there is more of an emphasis placed on the quality of the parties' long-term relationships with one another. Openness and candour are the defining characteristics of communication rather than secrecy and cold calculation. Both threatening behaviour and compulsion are prohibited. Given the comprehensive pool of resources already present in the connection, it is presumed that integrative agreements are doable and so proceed accordingly. Both attitudes and behaviours are shifting away from becoming more suspicious and antagonistic towards one another and instead moving in the direction of increasing trust and acceptance of one another. The win-win method calls for an extremely high level of patience as well as expertise in dealing with people and finding solutions to problems.

CONCLUSION

The process of recognising and dealing with disagreements in a way that is both just and effective is referred to as "conflict management." The objective is to reduce to a minimum the potential negative effects that can result from arguments and to maximise the chances of there being a positive end result. The fact that humans exist inherently predisposes them to engage in conflict. If we put in the effort to understand it and properly manage it, we can increase the satisfaction we get from our social interactions as well as the productivity they bring.

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CUSTOMERS VIEWS OF SWIGGY'S ONLINE FOOD ORDERING WITH SPECIAL REFERENCE TO COIMBATORE CITY

Prasanth.C¹, Santhosh.N.S², Dr.M.Prakash³

^{1,2}First Year Student of M.COM (CA)

³Professor in Commerce with Computer Applications Department,

^{1,2,3}Dr.N.G.P Arts and Science College

ABSTRACT

The emergence of the Internet more recently has boosted the e-commerce sectors in nations like India. Online food ordering services are now simple for customers who want food delivered right to their door thanks to advancements in e-commerce. Although consumers still go out to eat, they find it quite handy to order food online like Swiggy, Zomato, Uber eats because it saves them from having to go to the restaurants in person. In this survey, our primary goal was to examine how customers felt about online food delivery services. We chose to examine customer view of online food ordering on swiggy in order to better understand the elements that have drawn customers in developing nations like India to them.

KEYWORDS: customers views, and buying food online on swiggy

1. INTRODUCTION

The popularity of online food delivery is at an all-time high, and 30% of restaurant orders are thought to be placed online. Although consumers continue to eat more meals out, the shift in trend has a significant impact on the food business. One of the world's most rapidly expanding platforms for ordering and delivering meals is Swiggy. Their workflow is as simple as ordering, preparing, and delivering. Swiggy, there are no order value restrictions and you may even place a little order. As a result, you are able to order food for both yourself and your friends. You have no order value restrictions with Swiggy, and you can even place a little order. You can therefore order food for both yourself and your friends. Swiggy claims to bring food in 40 minutes, while the actual delivery time is usually 37 minutes. Therefore, food delivery through Swiggy is really quick.

2. OBJECTIVES

- To Study Factors influencing Customers ordering food online rather than online.
- To know the customer preferences on online food ordering service.
- To study the influence of online food delivery mobile application among the residence of Coimbatore.

3. BENEFITS OF SWIGGY

3.1 There is no Minimum Order Requirements

With Swiggy, there are no order value restrictions and you may even place a little order. You can therefore order food for yourself and your friends. When developing the meal delivery app, the Swiggy creators took care to allow users to order from establishments close to where they were at the time. Drivers and delivery personnel are also available to fulfil orders for each customer according to their location and timing. Because of its quick service rates and comfort for the consumers, people are aware of this meal delivery app.

3.2 Rapid Delivery

Swiggy estimates that meal deliveries take an average of 37 minutes but guarantees that they will arrive in 40. Consequently, Swiggy offers incredibly quick food delivery. The function of delivery actually begins as soon as a person opens the app, which is something that most people are unaware of. restaurants that can provide food to a consumer within a certain time frame, or those that are truly serviceable to customers (say, at most 60 minutes). The anticipated time of delivery for a restaurant order.

3.3 Range of Coverage

Swiggy's coverage of distance is one of its key advantages. Using Swiggy, you may place an order from a restaurant located a long distance away. This choice also provides the chance to sample numerous restaurants in the area. Nowadays, buying food online is really simple. Open Swiggy, select a restaurant, build a cart, and then submit an order. Little does one realise that



from the moment the app is opened until the item is delivered, a lot happens behind the scenes to ensure that the consumer has a pleasant and hassle-free experience.

Distance and time to travel between two locations are unarguably the two most important things that are heavily used in Swiggy's ecosystem. These values are used to:

- Obtain the distance of nearby restaurants from a customer's location and display a list of the suitable establishments.
- Identify the times for food delivery.
- Determine the delivery personnel and assign the best one determines whether two orders are on the same route and group them.

3.4 Real-time tracking

Swiggy keeps users updated on the status of their orders, so they no longer need to worry about them. To make things even simpler, consumers may also follow the driver's realtime whereabouts. To improve productivity and give consumers access to real-time tracking of their orders from order placement through delivery, the live tracking capability has been introduced across the full fleet of delivery vehicles.

3.5 Wallet

The user can quickly pay for their orders using the wallet option. The user can also take advantage of a variety of discounts and coupons that are only valid for wallet users, which further improves app engagement. In order to provide a "single-click checkout experience" on its platform, unicorn food aggregator Swiggy has partnered with ICICI Bank to establish its own digital wallet, Swiggy Money. Customers will be able to store money in the comprehensive digital wallet and pay for any food orders placed on Swiggy.

4. CONSUMER'S VIEWS OF SWIGGY'S ONLINE FOOD ORDERING SERVICE

It's a viewpoint that they have developed as a result of each direct and indirect engagement they have had with your business. Stimulus, and organize, interpret, and provide meaning to it. May be anything related to the product and/or brand, and any of the elements of the marketing mix. It means how customers feel about your product or brand. It's an opinion that they have formed through every interaction they've had with your company, both direct and indirect.

4.1 Fast food delivery through an app

Customers could order from establishments close to where they were when the Swiggy app was being developed. Additionally, any customer can get their orders according to their location and time thanks to the drivers and delivery personnel on hand. As a result, this food delivery app is well-known for its quick turnaround times and client comfort.

4.2 Interactive User Interface

Customers adore Swiggy's user interface! They think it's cool, approachable, and engaging. Users can choose from a list of restaurants and food items to place their order, according to the Swiggy review. They can also search by location, menu item, and restaurant! Aside from their profiles, customers may examine their orders, payments, offers, and other features. Do you aware of any other features that customers favour? Customers who are vegetarians have the "Veg Only" option available. Customers can use this option and tailor their orders to their needs and preferences.

4.3 An efficient technical team

Swiggy's front-end and back-end engineers worked hard to make it one of the top meal delivery apps available today. The Swiggy App was made by Kotlin (for Android) and Swift (for iOS) developers. In addition, this food delivery software successfully integrates other programming languages like Java, Scala, Python, Go, Rust, NodeJS (for the back-end), and ReactJS (for the front-end)!

4.4 Packaging and Delivery

Swiggy is adamant on upholding its quality and cleanliness in front of the clients. Before delivering food to clients and purchasers, the programme gives eateries instructions on proper hygiene upkeep.

4.5 Great experience

We freely confess that Swiggy was among the first apps to offer on-demand food delivery. They developed and implemented this concept and informed the populace of the convenience of receiving hot meals directly from their homes. The experience of this food delivery service is therefore taken into account in this Swiggy review.



5. DRAWBACKS OF SWIGGY

Here is a list of the constraints Swiggy has to deal with from its clients and the expanding market for food delivery apps! You should pay close attention to these restrictions. These will assist you in identifying the procedures to avoid using when creating a food delivery app. Additionally, this area will inform you of any difficulties you might have with customers and eateries.

5.1 Focuses on the restaurant in relation to the customers

One of the fastest meal delivery applications is Swiggy, as mentioned in the 'Strengths' section. Why do customers receive such streamlined services? Swiggy links up with the neighbourhood restaurants close to the customer. But if you've ever entered a restaurant from a different city or region, you might have seen the warning that it's closed there. Swiggy establishes connections with areas close to its clients. This turns out to be one of the main drawbacks of this food delivery technology.

5.2 Additional & delivery charges

Think about using Swiggy to order a hot dinner from one of your favourite eateries. However, after putting your order to the cart, you notice additional fees. When customers see the additional taxes and delivery fees, they frequently cancel their food orders. This practise hurts this food delivery service's business. Customers allegedly left the app or switched to another after Swiggy added extra fees to their meals, according to the Swiggy review.

6. CONCLUSION

Due to the industry's demand, profit margin, and potential, the majority of startups and entrepreneurs are gravitating towards the food delivery sector. If you fall into this category, now is the ideal time to start your own meal delivery service. In order to increase consumer happiness for Swiggy and other online delivery platforms, the research tries to identify crucial variables. Although Swiggy has offered more price breaks and coupons to users of the service, clients still favour Zomato more, thus theoretically Swiggy may improve its user interface. The epidemic recently had a significant global impact on the food business. Following the pandemic, when economies are slowly recovering and the food industry is reactivating its market, it is crucial for food delivery platforms to comprehend how consumer purchasing habits have altered or been influenced.

This study adds useful information about how consumer behaviour has evolved recently and what additional criteria must be considered before any decisions in an organisation are made. Major participants in the food delivery industry can use the information gathered and submitted to the organisation to assist them plan future promotional activities and improve their services. Nowadays, many would rather purchase food online than stroll into a café or restaurant. According to the analysis, one of the key factors contributing to customers' happiness with online meal delivery services is the discounts and coupons these platforms offer. In light of this, it can be said that factors such as performance expectations, payment methods, food item descriptions, discounts, and offers have a direct impact on overall satisfaction.

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BIOLOGICAL EFFECTIVENESS OF FUNGICIDES AGAINST RICE BLAST IN THE REPUBLIC OF KARAKALPAKSTAN

G.K.Reipova¹, H.H.Nuraliev²

¹Teacher, Karakalpakstan Institute of Agriculture and Agrotechnologies

²Professor on agricultural sciences, Tashkent State Agrarian University

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ANNOTATION

The article presents data on the study of the use of fungicides against rice blast in the Republic of Karakalpakstan. The fungicide Foliant BT, 22.5% c.e., showed the highest biological effectiveness against rice blast. (a.i. - Tebuconazole + triadimefon), which was 90.0-92.7%, and the yield was 68.7 t/ha. Then came the drug Amistar Top 32.5% s.c., taken as a standard, where the efficiency was 86.5-88.9%, with a yield of 64.2 t/ha, followed by the fungicide Merit 32.5% s.c. comparable with the standard. (a.i. - Azoxystrobin + Difenoconazole), where the biological efficiency was 85.8-87.1% with a yield of 66.5 t/ha.

KEY WORDS: rice, blast, fungicide, biological effectiveness.

INTRODUCTION

Cereal crops, in particular rice, is one of the most important agricultural crops in Uzbekistan. Rice is one of the oldest food crops and ranks second in the world in terms of cultivated area after wheat and is the main food source for half of the world's population. Rice is grown in 108 countries of the world, the total area is 145 million hectares. According to FAO, the population in general in Europe consumes 5-6 kg of product per year and up to 200 kg in Southeast Asia.

In modern environmental conditions, a decrease in productivity and a deterioration in the quality of agricultural products cause various diseases caused by fungi, bacteria, and viruses. In this connection, at present, an urgent task is to develop and introduce into production measures to combat diseases, in particular, blast, as one of the main diseases of rice.

Blast is the most damaging disease of rice, causing great damage every year in all areas where rice is cultivated. There are leaf, nodular and panicle forms of the disease.

The causative agent of the disease is *Piricularia oryzae* Br. et Cav. From the order Hyphomycetales of the class Deuteromycetes.

The disease is common wherever the crop is grown and manifests itself throughout the growing season of plants. All aboveground organs are affected. Depending on the nature of the damage, three forms of diseases are distinguished: leaf, nodular and panicle.

Leaf form. Light brown spots up to 3-4 cm long with a dark brown, almost black border are formed on the leaves and their sheaths, covered with a dirty gray coating of conidial sporulation. They gradually increase, acquire a brown color and dry out. With severe damage, plants can die, more often they do not form a panicle, they look like burnt ones.

Nodal form. Black-brown spots appear on the nodes and stems, the nodes turn black, soften, become covered with a dirty gray coating of conidial sporulation, constrictions form, the stems break. In plants affected by this form, the grain in the panicle, as a rule, is not formed.

Panicked form. The main and lateral axes of the panicle are affected, which darken, soften and rot. The lower part of the glumes darkens, grains either do not form at all or are feeble, light in color with low germination.

The fungus forms an intercellular mycelium, from which conidial sporulation emerges through the stomata of the leaves.

During the growing season, the pathogen is spread by conidia. They germinate at humidity above 98% and at temperatures in the region of 7-40⁰ C. Mass germination of conidia and intense damage to plants occurs in the presence of drop-liquid moisture on plants and a temperature of 22-24⁰ C. Under such conditions, the disease can acquire an epiphytotic character.

The main source of infection is uncultivated and not flooded affected plant residues and seeds, on which the causative agent of the disease persists in the form of a mycelium.

Losses of potential rice yield from blast in ordinary years are up to 25%, and in years of epiphytoticities - up to 60% or even more.

The harmfulness of the disease is manifested in:

- Decrease in seed germination;
- Death of seedlings;
- Loss of individual plants during the growing season;



- The formation of a smaller amount of grain in spikelets;
- The formation of underdeveloped or feeble seeds.

The mycelium of the blast fungus is preserved in the seed, so the most important measure in the treatment of this disease is pre-sowing seed preparation.

To suppress the vital activity of the fungus in the seeds, they are treated with a systemic fungicide. This contributes to healthy seedlings and prevents the mass death of rice sprouts during germination. In the future, when symptoms of the disease are detected during the growing season, the fields are treated with fungicides in order to prevent the mass spread of the disease.

With the development of the disease during the growing season of rice, a very effective chemical method of protection is used.

PLACE AND METHODS OF RESEARCH

Production test of the preparation Merit 32.5% s.c. and Foliant BT, 22.5% c.e. was held in the farm named "Karamat" Nukus district of the Republic of Karakalpakstan. The rice planting took place on June 5th.

The first treatment of plants with fungicides was carried out on June 25, when the first signs of the disease appeared on the field.

Testing of the preparation, carrying out accounting and processing of digital material was carried out according to the "Guidelines..." of the State Chemical Commission of the Republic of Uzbekistan (Khozhaev, 2004). To determine the damage of plants, we used the scale recommended for accounting for the development of diseases according to A.E.Chumakov, I.I.Minkevich, T.I.Zakharova (Chumakov et al., 1974).

Scale for determining the degree of damage to seedlings:

Score: 0 - no damage;

1 - up to 1/5 of the area of crops;

2 - up to 1/3 of the area;

3 - up to 2/3 of the area;

4 - more than 2/3 of the area;

The percentage of disease development was determined by the following formula:

$$R = 100 * \sum (AB_1 + AB_2 + AB_3 + AB_4) / N * K$$

where, R - the intensity of the development of the disease,

A is the number of plants; B₁; B₂; B₃; B₄ - scores from 1 to 4.

$\sum(AB)$ - the sum of the products of the number of plants and the corresponding score

N is the total number of registered plants (sick and healthy)

K - the highest score on the scale for recording the intensity of the damage

The biological effectiveness of the fungicide Merit 32.5% s.c. and Foliant BT, 22.5% c.e. against blast was determined by the following formula:

$$C = \frac{Pk - Po}{Pk} \cdot 100$$

where: C – biological efficiency, %; Pk is an indicator of the development of the disease in control; Po is an indicator of the development of the disease in the experimental plot (in the experiment), in terms of 15, 30 or 45 days, scores.

RESULTS OF THE RESEARCH

In 2022, studies were conducted to determine the effectiveness of the use of chemicals against blast.

The studies were carried out from the first treatment (June 15), the second treatment (June 29) and the third treatment (July 13) from the period when the first signs of the disease appeared in the plant.

We studied the biological effectiveness of the use of preparations Merit 32.5% s.c. at a rate of 1.0 l/ha, Foliant BT, 22.5% c.e. (0.6 l/ha) For comparison, the fungicide Amistar Top 32.5% s.c. at a consumption rate of 0.6 l/ha. The data obtained are presented in table 1.

In the control variant (the preparation was not sprayed), the damage of rice by pariculariosis was 33.4%, and the development of the disease was 43.3%.

When making the fungicide Merit 32.5% s.c. rice damage by pariculariosis ranged from 5.2 to 8.5%, and the development of the disease from 1.5 to 2.8%. Biological efficiency ranged from 84.2 to 87.1%, and the yield was 66.5 c/ha.

When using the fungicide Foliant BT, 22.5% c.e. the damage was from 3.3% to 3.8%, the development of diseases from 1.0% to 1.3%. Biological efficiency ranged from 90% to 92.3%, and yield - from 1.0 ha to 66.5 t/ha.

As a standard used, Amistar Top 32.5% s.c. the incidence ranged from 4.7 to 9.0%, the development of diseases from 1.3 to 2.4%. Biological productivity ranged from 86.5 to 88.9%, the yield was 64.2 c/ha.

Dignity 32.5% s.c. 1.0 l/ha and Foliant BT, 22.5% c.e. The biological effectiveness of the tested fungicides at a rate of 0.6 l/ha increased from 84.2 to 92.3%, the development of the disease increased from 1.0 to 2.8%.



Table 1.
Biological efficacy of the studied preparations against rice blast
 (Karakalpakstan, Nukus district, Rice Research Institute, 1.5 ha, variety Nukus-2, 2022)

№	Variants	Consumption rate, kg/ha	15.06.2022.			29.06.2022.			13.07.2022.			Yield, t/ha
			Damage, %	Disease development, %	Biological efficiency, %	Damage, %	Disease development, %	Biological efficiency, %	Damage, %	Disease development, %	Biological efficiency, %	
1.	Control - no processing (spraying with water)	-	33,4	11,7	-	36,7	12,7	-	43,3	17,8	-	54,2
2.	Amistar Top 32.5% s.c. (standard)	0,6	4,7	1,3	88,9	7,4	1,6	87,4	9,0	2,4	86,5	64,2
Fungicides were applied 3 times												
3.	Merit 32.5% s.c. (Azoxystrobin + Difenconazole)	1,0	5,2	1,5	87,1	5,0	1,8	85,8	8,5	2,8	84,2	66,5
Fungicides were applied 2 times												
4.	Foliant BT, 22.5% c.e. (Tebuconazole + triadimefon)	0,6	3,3	1,0	92,3	3,8	1,3	90,0	-	-	-	68,7



CONCLUSIONS

The fungicide Foliant BT, 22.5% c.e. showed the highest biological effectiveness against rice blast. (a.i. - Tebuconazole + triadimefon), which was 90.0-92.7%, and the yield was 68.7 t/ha. Then came the preparation Amistar Top 32.5% s.c., taken as a standard, where the efficiency was 86.5-88.9%, with a yield of 64.2 t/ha, followed by the fungicide Merit 32.5% s.c. comparable with the standard (a.i. - Azoxystrobin + Difenconazole), where the biological efficiency was 85.8-87.1% with a yield of 66.5 t/ha.

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A STUDY ON HIGHER STUDIES STUDENTS AWARENESS TOWARDS SOCIAL MEDIA USAGE WITH SPECIAL REFERENCE TO COIMBATORE CITY

¹Dr.C.Eahambaram, ²Ms.S.V.Snekabarathi, ³Dr.T.Sumathi, ⁴Dr.R.Karthikeyan, ⁵Mrs.V.Jayashree

¹Associate Professor, Department of Commerce with Computer Applications, Dr.N.G.P. Arts and Science College (Autonomous) Coimbatore, Tamilnadu.

²Student of II M.Com CA, Department of Commerce with Computer Applications, Dr.N.G.P. Arts and Science College (Autonomous) Coimbatore, Tamilnadu.

³Assistant Professor, Department of Commerce with Computer Applications, Dr.N.G.P. Arts and Science College (Autonomous) Coimbatore, Tamilnadu.

⁴Assistant Professor, Department of Commerce (B-VOC Banking Stock & Insurance), PSG College of Arts and Science.(Autonomous)Coimbatore, Tamilnadu.

⁵Assistant Professor, Department of Computer Science, Dr.N.G.P. Arts and Science College (Autonomous) Coimbatore, Tamilnadu.

ABSTRACT

The goal of this study is to examine social media awareness and usage among higher education students, particularly in Coimbatore City. Questionnaires were used as the tools for data collection in a descriptive survey design. Which of the following social media platforms do students use the most frequently throughout a regular week? The study concentrated on the several platforms that users may connect to using What's App, Google Meet, Instagram, Facebook, Google +, My Space, Tagged, Twitter, You Tube, Internet Explorer, Yahoo, Bing, Share chat, Snap tube, Safari, Firefox, Moj, and UC browser. And demonstrate how kids who use social media excessively might experience a variety of health problems, including poor sleep, eye fatigue, bad body image, depression, cyberbullying, and more. The principal difficulties encountered

KEYWORDS: Social media, Use most often, Higher Studies Students.

INTRODUCTION TO SOCIAL MEDIA

The use of social media in a department's communications plan can be beneficial. The Office of University Communications and Marketing has created the following introduction to social media since many workers have shown a desire to create and maintain a social media presence in both personal and professional capacity. Before creating your social media presence, please take a moment to read this overview.

Higher education students' understanding of social media use According to research, social media has essentially permeated every sort of organisation in recent years. Higher education institutions have not been left out either, and they have embraced this universal trend. There are many different types of social media, including social networking sites, blogs, vlogs, instant messaging, and online communities. Yet, the social networking website Facebook seems to be the apparent winner, largely as a result of its massive membership. Regardless of their physical location, Facebook users may produce and share information, establish connections, and



foster collaboration and connectivity. Higher education institutions have a wide range of opportunities to embrace social media to advance their efforts in teaching and learning as a result of its quick increase. Social media is appropriate for administrators, managers, students, and teachers in higher education institutions due to its pervasiveness and particularly high adoption.

Social media is utilised as a tool for learning and teaching in a wide range of circumstances, including language learning, writing development, after-class discussions, synchronous and asynchronous communication, community building, and as a teaching and learning tool. Social media use in higher education is altering the way that interactions between teachers and students. Social media offers a distinctive forum for communication between students, as well as between students and teachers. Students find it convenient and simple to communicate, acquire information, and offer information through social media. According to studies, academics have recently increased their use of social media to engage in debate, present and host courses, and provide after-hours help for students. The usage of social media has also shown to promote engagement between students and between teachers. Students gain proficiency in the use of internet technology for learning thanks to social media.

1.2 STATEMENT OF PROBLEM

A study on college students' awareness of social media usage with a focus on Coimbatore City was the topic that was chosen. An analysis of the data tends to indicate that, when it comes to using social media in higher education, insecurity, time-wasting behaviour, misuse of the tools during class, and antisocial behaviour are the biggest obstacles.

It is simple to develop an addiction, and studies have shown that students who use social media excessively may experience a variety of problems, including poor sleep, eye fatigue, negative body views, depression, anxiety, cyberbullying, and more.

SCOPE OF THE STUDY

The study on Coimbatore City College students' understanding of social media usage was the topic of attention. According to data research, insecurity, time-wasting behaviour, abusing technology in the classroom, and antisocial behaviour are the main obstacles to adopting social media in higher education.

According to studies, youngsters who use social media excessively may have a variety of problems, such as insomnia, eye fatigue, bad body image, melancholy, anxiety, cyberbullying, and more. Addiction is also simple to develop.

OBJECTIVES OF THE STUDY

1. To determine the degree to which higher education students in Coimbatore City are aware of social media usage.
2. To learn the primary motivations behind using social networking sites.
3. To determine which of the following social media platforms students utilise most frequently throughout a regular week.
4. To determine which social media sites are used the most frequently by students.
5. To learn about the kids' recommendations for raising understanding of social media.

1.3 RESEARCH METHODOLOGY

The study is based on survey collected in Matriculation hr. sec school with the help of Primary data and Secondary data.

RESEARCH DESIGN

The research design used for the study is descriptive in nature. The researcher has made an attempt to find the assessment of higher studies students' awareness towards social media usage in Matriculation hr. sec school only.

ANALYTICAL TOOL USED

The collected data have been analyzed with the help of statistical tools such as

- Simple Percentage Analysis
- Chi square
- F-test method
- Ranking Analysis

LIMITATIONS OF THE STUDY

1. The study's methodology relies on appropriate sampling, a non-random sample technique, to get data from respondents.
2. The grades may not always be related because the survey is only based on the opinions of 250 respondents.



3. REVIEW OF LITERATURE

- Taylor [2022] carried out a case study to examine the potential impact of SNS on student retention in introductory computing courses. Following the introduction of Facebook in CS1 class, the author claimed to have noticed an increase in retention rates.
- An experiment was carried out by Hernandez et al. [2021] to examine the effects of various instruments supporting students' learning and perception of interaction. The students were divided into groups that used Google Documents, an LMS discussion forum, or Facebook with wiki-style document creation and wall/comment features.
- After completing an online instruction on how to use the wiki, students were asked to co-edit a document on an internal wiki, and
- Kear et al. [2020] performed a survey. Over time, they gathered information on how students used wiki. Despite students learning how to use wiki, the authors noted a decline in usage over time. They discovered through further inquiry using the survey tool that the students were dissatisfied with the editing of other students' work. Students favoured discussion forums over wiki when asked to compare them for this type of collaborative tasks.

Table 3.1
Simple Percentage Analysis

CRITERIA	OPTIONS	NO.OF. RESPONDENTS	PERCENTAGE
Age	13 years	67	26.8%
	14 years	51	20.4%
	15 years	68	27.2%
	Above 16	64	25.5%
Gender	Male	131	52.4%
	female	119	47.6%
Education	9 th standard	66	26.4%
	10 th standard	57	22.8%
	11 th standard	61	24.4%
	12 th standard	66	26.4%
Family income	Less than 1,00,000	34	13.6%
	1,00,000-2,00,000	57	22.8%
	2,00,000-3,00,000	86	34.4%
	More than 3,00,000	73	29.2%
Type of family	Join family	116	46.4%
	Nuclear family	134	53.6%
Area of residential	Rural area	135	54%
	Urban area	115	46%
Mobile phone at home	Yes	177	70.8%
	no	73	29.2%
Activities you use for social media	Communication with family and friends	72	28.8%
	Academic tasks	99	39.6%
	Study purpose	78	31.2%
	others	1	1%
Why do you use	To writes notes	53	21.2%
	To know all about course	67	26.8%
	To search for resources	72	28.8%
	To download some references	58	23.2%
Interested	Products	91	37%
	services	75	30%
	advice	83	33%
Prefer to see it	Videos	59	23.6%
	Pictures	43	17.2%
	Attribute	77	30.8%
	vlogs	71	28.4%
Type of content	Memes	66	27%
	Reels	67	27%
	Health and lifestyle	115	46%
	others	-	-
Social media websites	Extremely likely	98	39.2%
	Very likely	77	30.8%
	Moderately likely	56	22.4%
	Slightly likely	19	7.6%
Integrated into lessons	Yes	120	48%
	no	130	52%
Main reasons	Conversation with friends	66	26.4%



	Search some education tools	79	31.6%
	Download some referencoes	105	42%
	others	-	-
Purpose social media	Whaisapp	96	38.4%
	Google meet	72	28.8%
	Instagram	80	32%
	others	2	2%

INTERPRETATION

The age table shows that 26.8% of the respondents are 13 years, 20.4% of the respondents are 14 years, 27.2% of the respondents are 15 years, and 25.6% of the respondents are Above 16 years. The Gender table shows that 52.4% of the respondents are male and 47.6% of the respondents are female. The education table shows that 26.4% of the respondents are 9th standard, 22.8% of the respondents are 10th standard, 24.4% of the respondents are 11th standard, and 26.4% of the respondents are 12th standard. The family income table shows that 13.6% of the respondents are less than 1,00,000 , 22.8% of the respondents are 1,00,001-2,00,000 , 34.4% of the respondents are 2,00,001-3,00,000 , 29.2% of the respondents are more than 3,00,000. The type of family table shows that 46.4% of the respondents are Join family and 53.6% of the respondents are nuclear family. The area of residential table shows that 54% of the respondents are rural area and 46% of the respondents are urban area. The having mobile phone at home table shows that 70.8% of the respondents are yes and 29.2% of the respondents are no. The activities you use for social media table shows that 28.8% of the respondents are communication with family and friends, 39.6% of the respondents are academic tasks, 31.2% of the respondents are study purpose, 1% of the respondents are others. The why do you use table shows that 21.2% of the respondents are to write notes, 26.8% of the respondents are to know all about the course, 28.8% of the respondents are to search for resources, 23.2% of the respondents are to download some references. The interested table shows that 37% of the respondents are products, 30% of the respondents are services, and 33% of the respondents are advice. The prefer to see it table shows that 23.6% of the respondents are videos, 17.2% of the respondents are pictures, 30.8% of the respondents are attribute, 28.4% of the respondents are vlogs. The type of content table shows that 27% of the respondents are memes, 27% of the respondents are reels, and 46% of the respondents are health and lifestyle. The social media websites table shows that 39.2% of the respondents are extremely likely, 30.8% of the respondents are very likely, 22.4% of the respondents are moderately likely, and 7.6% of the respondents are slightly likely. The integrated into lessons table shows that 48% of the respondents are Yes and 52% of the respondents are No. The main reason table shows that 26.4% of the respondents are conversation with friends, 31.6% of the respondents are search some education tools, 42% of the respondents are download some references. The purpose social media table shows that 30.4% of the respondents are What Sapp, 28.8% of the respondents are Google Meet, 32% of the respondents are Instagram, and 2% of the respondents are others.

CHI SQUARE

Table 3.2.1

**TABLE SHOWING CHI SQUARE RELATIONSHIP BETWEEN AGE AND SATISFACTION FACTORS
HIGHER STUDIES STUDENTS AWARENESS TOWARDS SOCIAL MEDIA**

NULL HYPOTHESIS

This is no significant relationship between age and satisfaction factors.

ALTERNATIVE HYPOTHESIS

There is significant relationship between age and satisfaction factors.



AGE	LEVEL OF SATISFICAION		TOTAL
	DISSATISFIED	SATISFIED	
13 years	19(7.6%)	48(19.2%)	67(26.8%)
14 years	9(3.6%)	42(16.8%)	51(20.4%)
15 years	20(8%)	48(19.2%)	68(27.2%)
Above 16 years	9(3.6%)	55(22.0%)	64(25.6%)
Total	57(22.8%)	193(77.2%)	250(100%)

CALCULATED VALUE	TABLE VALUE	DEGREE OF FREEDOM	LEVEL OF SIGNIFICANCE	RESULT
6.410	7.815	3	5%	Accepted

INTERPRETATION

The table shows that the calculated value(6.410) is less thantable value (7.815) at 5% level of significance with the degree of freedom 3. Therefore, null hypothesis is accepted. Hence it is found that there is no significant relationship between age and satisfaction factors.

TABLE 3.2.2

TABLE SHOWING CHI SQUARE RELATIONSHIP BETWEEN GENDER AND SATISFACTION FACTORS HIGHER STUDIES STUDENTS AWARENESS TOWARDS SOCIAL MEDIA

NULL HYPOTHESIS

This is no significant relationship between gender and satisfaction factors.

ALTERNATIVE HYPOTHESIS

There is significant relationship between gender and satisfaction factors

GENDER	LEVEL OF SATISFICAION		TOTAL
	DISSATISFIED	SATISFIED	
Male	43 (17.2%)	88(35.2%)	131(52.4%)
Female	26(10.4%)	93(37.2%)	199(47.6%)
Total	69(27.6%)	181(72.4%)	250(100%)

CALCULATED VALUE	TABLE VALUE	DEGREE OF FREEDOM	LEVEL OF SIGNIFICANCE	RESULT
3.759	3.841	1	5%	Accepted



INTERPRETATION

The above table shows that the calculated value (3.759) is less than table value (3.841) at 5% level of significance with the degree of freedom 1. Therefore, null hypothesis is accepted. Hence it is found that there is no significant relationship between gender and satisfaction factors.

F-TEST METHOD

Table 3.3
TABLE SHOWING AGE AND SATISFACTION SCORE: F- TEST

SOURCE OF VARIATION	SUMS OF SQUARE	DF	MEAN SQUARE	F- TEST SQUARE	RESULT
Between group	1.591	3	.530	2.697	.047
Within group	48.365	246	.197	-	-
Total	49.956	249	-	-	-

INTERPRETATION

The table shows that the calculated value of 'F' (2.697) is more than the table (7.815). This implies that the framed null hypothesis is rejected. Thus, it can be concluded that there is a significant difference in the mean score of the sample responded belongs to four different group of age.

RANKING ANALYSIS

Table 3.4
TABLE SHOWING RANKING FACTORS OF THE RESPONDENT

SL NO	FACTORS	1	2	3	4	5	TOTAL	RANK
1	You tube	87 (5) 435	118 (4) 472	1 (3) 3	7 (2) 14	37 (1) 37	961	1
2	Moj	2 (5) 10	82 (4) 328	122 (3) 366	39 (2) 78	5 (1) 5	787	3
3	Share chat	1 (5) 5	10 (4) 40	115 (3) 345	122 (2) 244	2 (1) 2	636	4
4	UC Browser	2 (5) 10	39 (4) 156	7 (3) 21	60 (2) 120	142 (1) 142	449	5
5	Snap tube	159 (5) 795	3 (4) 12	3 (3) 9	20 (2) 40	65 (1) 65	921	2

INTERPRETATION

The table shows that You tube Rank 1 of the respondents, Snap tube Rank 2 of the respondents, Moj Rank 3 of the respondents, Share chat Rank 4 of the respondents, UC browser Rank 5 of the respondents.

4.1.1SIMPLE PERCENTAGE ANALYSIS

- ❖ Most is 27.2% of the respondents are 15 Years.
- ❖ Majority is 52.4% of the respondents are Male.
- ❖ Most is 26.4% of the respondents are 9th Standard and 12th Standard.
- ❖ Most is 34.4% of the respondents are 2, 00,001 – 3, 00,000.
- ❖ Majority is 53.6% of the respondents are Nuclear family.
- ❖ Majority is 54% of the respondents are rural area.
- ❖ Majority is 70.8% of the respondents are yes.



- ❖ Most is 39.6% of the respondents are Academic tasks.
- ❖ Most is 28.8% of the respondents are To Search for Resources.
- ❖ Most is 36.4% of the respondents are Products.
- ❖ Most is 30.8% of the respondents are Attitudes.
- ❖ Most is 46% of the respondents are Health and lifestyle.
- ❖ Most is 39.2% of the respondents are extremely likely.
- ❖ Majority is 52% of the respondents are No.
- ❖ Most is 42% of the respondents are Download some references.
- ❖ Most is 38.4% of the respondents are WhatsApp.

4.1.2 CHI SQUARE

- ❖ There is no significant relationship between age and satisfaction factors.
- ❖ There is no significant relationship between gender and satisfaction factors.

4.1.3 F- TEST

- ❖ There is a significant difference in the mean score of the sample respondents belonging to four different groups of age.

4.1.4 RANKING ANALYSIS

- ❖ 1st rank has been given for You tube
- ❖ 2nd rank has been given for Snap tube.
- ❖ 3rd rank has been given for Moj.

5.1 SUGGESTIONS

- Vlogs with comment functionality to share and discuss information.
- Twitter and course hash tags to encourage open forum and debate
- Pinterest for sharing clever ideas, inspiration and valuable resources amongst
- Skype to engage more deeply with the material and each other.

5.2 CONCLUSION

The findings reveal optimistic impacts in all of the above dimensions, thus indicating that the wider future use of social media in higher education is quite promising. However, teachers and higher education institutions have not yet been highly activated towards faster social media exploitation in their activities. Commercial social media are being increasingly adopted in formal learning settings even though they have not been conceived specifically for education. Whereas highly studies students social services like Facebook and Twitter have been thoroughly investigated for their benefits for teaching and learning in higher education, other social media platforms which have been gaining considerable attention among youth have been largely overlooked in scholarly literature. The purpose of this study is to fill that vacuum by analyzing whether and how social media platforms like Instagram, Pinterest, Snapchat and WhatsApp have become an integral component of teaching and learning in higher education. Results show that although the use of WhatsApp is well documented of studies, there is a dearth of research about Instagram, Pinterest and Snapchat.

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APPLIED PRINCIPLES OF INDIAN VASTU IN CONTEMPORARY RESIDENTIAL ARCHITECTURE FOR URBAN AREAS

Ar. Priyanka Rastogi¹, Ar.Vatsalya Kaushal²

¹Assistant Professor, Faculty of Architecture & Planning

²MURP 2nd Yr., Faculty of Architecture & Planning,

Dr. APJ Abdul Kalam Technical University, Lucknow, U.P., India

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ABSTRACT

The meaning of traditional Indian Vastu has diminished over time due to misunderstanding and an imperfect knowledge of Vastu's guiding principles and their scientific foundation. For those who believe in Vastu, the purpose of this paper is to shed light on the classical Indian principles of Vastu and their application to contemporary residential architecture practise in urban regions. Consequently, the consequences of vastu principles with regard to characteristics such as Facing, Location, Weight Balance, and Appliances have been described via a variety of approaches for their use in constructing residential structures. In addition, it provides scientific basis for each Vastu principle and its significance in planning the layout, which would provide practical benefits to the occupants and the peer requirements of the spaces. This document might serve as a fast guide for architects to implement vastu principles in residential projects.

KEYWORDS: *Vastu tips, Urban Vastu, Modern Vastu, Applied Principles of Vastu, Vastu in India, Relevance of Vastu in Contemporary Context*

INTRODUCTION

In the past, it was believed that the traditional Indian Vastu had a significant meaning in the Indian setting, which was totally based on scientific principles and contained logical positivism, which is sometimes misunderstood by the general public. The meaning of following and applying Vastu principles is somewhat propagated as religious or spiritual repercussions and benefits, so that individuals may be unable to violate the regulations and be compelled to make genuine decisions regarding the design of their home. Historically, Formal Architecture services were not available to the general public; priests and astrologers were frequently the ones who preached the concepts of Vastu and helped individuals construct their Residence layout. However, in the present environment, where Formal Architecture services are easily available in urban areas with factual knowledge, people still desire that Vastu principles be included into contemporary architecture. This research is an attempt to adapt these ideas to a contemporary context, with real-world validation based on Climate, Orientation, etc.

REASONS FOR THE FORMATION OF PRINCIPLES OF VASTU

The old Indian Vastu system was primarily intended to balance the energy of the residence's entire ecosystem with climate-responsive(Pandey, 2020) architecture in order to provide the greatest possible passive(Yadav, 2021) thermal comfort. In addition to balancing thermal comfort for inhabitants, Vastu principles also account for the behaviour of the Earth's Magnetic Field, polar directions, and the Sun's path(Hotwani et al., 2022)from morning to evening. In addition, Vastu is concerned with the practical aspects of Architectural Services and Urban Physical Infrastructure. Vastu also regulates the timing and quantity of daylight entering various spaces.

NEED OF VASTU FOR CONTEMPORARY CONTEXT

Over a longer period of time, architectural styles have developed in response to shifting necessities, shifting lifestyles, shifting building materials, and, most significantly, rising land prices(Vastu Shastra in Indian Architecture - Home Loan Stories - Kotak Bank, n.d.) that are now out of reach for middle-class families. Not only have land prices but also construction costs increased dramatically. With major developments in construction technology(An Architectural Interpretation Of Vastu Shastra | Habitat Living, n.d.) and urban services, as well as a need for improved health and hygiene, the concept, designs, and objectives have



shifted substantially. In today's fast-paced world, time and money have become the most important factors in metropolises, megalopolises, and tyrannopolises. Consequently, the design of urban houses has also evolved.

Architects face a difficult challenge(Gupta, 2016) in applying the principles(Antara, 2017) of Vastu due to the limited scope and declining sizes of urban dwellings, but they can still accomplish the practical(Is Vastu Shastra Relevant to Architecture of the 21st Century? - RTF, n.d.) benefits by not confining it to the theories of Astronomy and behaviour of the cosmos. With the advancement of mechanical ventilation technologies(Vastu Shastra in the Modern Era - PropertyPistol Blog, n.d.), the meaning of Vastu is now restricted to the directions and placements of various places that include meaningful benefits(SCIENTIFIC VASTU SHASTRA | An Architect Explains, n.d.) in the micro context, but are performed for satisfaction in the macro(Importance Of Vastu Shastra In Modern Architecture - DB Architects, n.d.) context (Astrology).

PARAMETERS OF VASTU FOR CONTEMPORARY URBAN RESIDENCES

- With respect to Facing(Chandrakar & Parvez, 2022)
- With respect to Location(Kumar Gupta & Maheshwari, 2020)
- Weight balancing Vastu(Dash & Joshi, 2022)
- With respect to Appliances(Patra, 2017)

METHODS TO APPLY VASTU IN CONTEMPORARY ARCHITECTURE AND THEIR SCIENTIFIC ANALYSIS

The various methods to apply Vastu in different spaces, which are based on multiple parameters, are shown below:-

With respect to facing

Kitchen	Toilet	Bedroom
Hob towards East / North / Northeast side	WC fixture on North or East Side so that Human Facing would be towards South or West	Heads of sleeping people must be towards the east, south, or southwest
Reason – Ample amount of daylight on Hob from East during day Cooking	Reason – Astrological (Better Health)	Reason – North significantly pulls the blood flow towards it because of the presence of Iron in blood in the sleeping position. The high blood flow in the head won't allow deep sleep, causing health issues. Therefore, North must be avoided for the part of the head

Wardrobe	Dining	Worship – Hinduism, Jainism
The door of Wardrobes must open toward North, East, or Northeast	While eating, the face should be towards North or East or Northeast	While worshipping, the Facing must be towards Northeast, North, or East
Reason – Astrological (Fewer expenses on Health issues, more monetary savings)	Reason – Better Daylight on the plate during breakfast and lunch + Astrological (Better digestion and conversion into energy)	Reason – Early Morning first light strikes directly to the deity from behind, making well illumination and sacred—a must requirement for early morning prayer.



With respect to Location

Kitchen/Toilet – Composite, Hot & Dry, Warm & Humid Climate	Kitchen/Toilet – Cold and Dry, Cold & Wet Climate	Bedroom – Composite, Hot & Dry, Warm & Humid Climate
locating the Kitchen/Toilet in the Southwest and Southeast zones of the Residence.	locating the Kitchen/Toilet in the Northwest and Northeast Residence zones.	Locating a Bedroom in the Northwest or Northeast zones of the Residence.
Reason – South East and South West are hotter regions of the house, leaving Northeast and Northwest for living spaces like bedrooms, etc.	Reason – Northeast and Northwest are colder regions thus suitable for Kitchen and leaving Southeast and Southwest for maximum penetration of daylight, benefiting in colder regions	Reason – South East and South West are hotter regions of the house, leaving Northeast and Northwest for living spaces like bedrooms, etc.

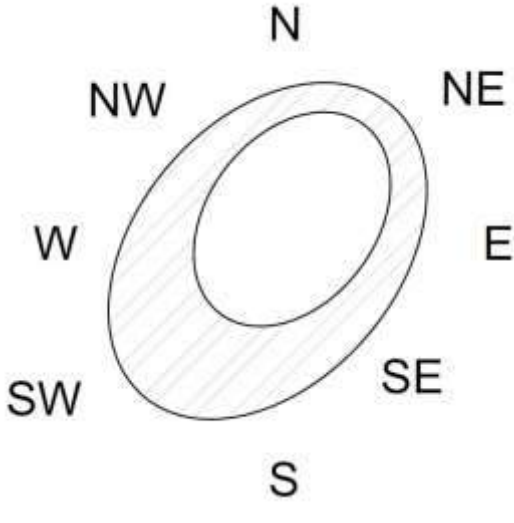
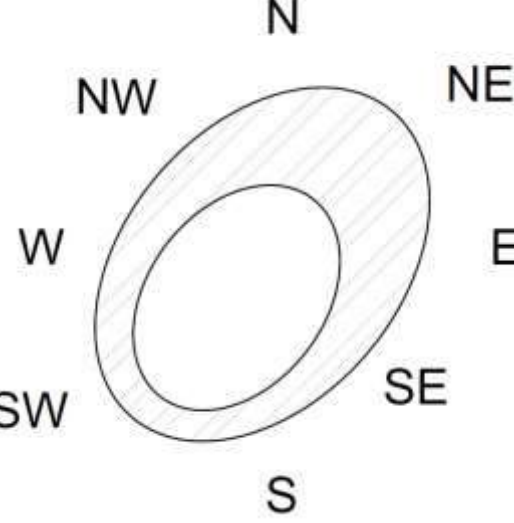
Bedroom – Cold and Dry, Cold & Wet Climate	Store/Staircase - Composite, Hot & Dry, Warm & Humid Climate	Store/Staircase - Cold and Dry, Cold & Wet Climate
Locating Bedroom in Southwest and Southeast zones of Residence.	Locating Store/Staircase everywhere except in the Northeast zone of Residence.	Locating Store/Staircase everywhere except in the Southwest zone of Residence.
Reason – Northeast and Northwest are colder regions thus suitable for Kitchen and leaving Southeast and Southwest for maximum penetration of daylight, benefiting in colder regions	Reason – The northeast zone being a colder region as compared to others, must be utilized for Living spaces and not for storage purposes in a composite climate	Reason – Southwest zone being a Hotter region as compared to others, must be utilized for Living spaces and not for storage purposes in cold climatic conditions

Worshipping – Hinduism, Jainism	Living/Dining Room - Composite, Hot & Dry, Warm & Humid Climate	Living/Dining Room - Cold and Dry, Cold & Wet Climate
Locating place of worshipping at the Northeast corner of the Residence – Ishaan Kon	Locating Living/Dining Room everywhere except in the Southwest zone of Residence.	Locating Living/Dining Room everywhere except in the Northeast zone of Residence.
Reason – Early Morning first light strikes directly to the deity from behind, making well illumination and sacred—a must requirement for early morning prayer.	Reason – Southwest is the harshest in hot & dry and composite, so spaces like living/dining room can be avoided.	Reason – Northeast is the cold zone in cold climatic conditions. Therefore living/dining rooms can be avoided.

Car Porch - Composite, Hot & Dry, Warm & Humid Climate	Car Porch - Cold and Dry, Cold & Wet Climate	Borewell
Southwest and Southeast could be the ideal place for a Car Porch	Northwest and Northeast could be the perfect place for a Car Porch	Locating Borewell pit at North portion of Residence
Reason – Harsh climatic zones for composite and Hot & dry climates could be utilized for Non-living spaces like Car Porch	Reason – Harsh climatic zones for Northwest & Northeast could be utilized for Non-living spaces like Car Porch	Reason – Astrology



Built Mass balancing Vastu

Composite, Hot & Dry, Warm & Humid Climate	Cold and Dry, Cold & Wet Climate
	
<p>The heavier side being from east to south to west, the thick mass would benefit as a passive strategy from Harsh Climate as must requirement for Hot Regions</p>	<p>The heavier side being from east to North to west, the thick mass would benefit as a passive strategy from Harsh Climate as must requirement for Cold Regions</p>

CONCERNING APPLIANCES

1. Refrigerator – To be placed outside of the Kitchen, because being a 'Cold' product, the balancing of energy of waves in the Kitchen (due to Hob and Gas) is challenging to maintain in Astronomical Context.
2. Television – Not to be placed in the bedroom, creates disharmony between a couple who stays in that bedroom, negative energy to the relationship.

CONCLUSION

When it comes to putting the principles of Vastu into practise in urban homes that feature compact and practical floor layouts, there is most definitely space for improvement. The ancient Indian practise of Vastu was developed as a strategy for developing climate-responsive spaces, as well as the practicability for urban services and ventilation, and for achieving a balance of the energy of waves in terms of astronomy. Vastu has been practised in India for thousands of years. However, given the current state of affairs, passive ventilation is neither a problem nor a necessity in certain situations; the strategies (described above) to apply principles in a variety of climates are the product of the collaborative efforts of the colleagues who were involved in this research. Designers in the modern world acquire instruction in such a way that enables them to develop structures that are habitable, functional, and aesthetically pleasing. Additionally, the feelings and good fortune associated with "Vastu" in its original Indian context would continue to exist, at least to some degree.

Disclaimer by Authors: These applied principles of Indian Vastu aren't meant to render professional advice or services to any third party. This is to understand traditional Indian Vastu and styles to use in Contemporary Architecture up to the sphere of residential blueprints. We don't accept any responsibility or liability for any losses occasioned to any party because we relied on similar information. We make no representation or bond regarding the delicacy or absoluteness of the data used within this assessment. We shall have no liability for any terms (expressed or inferred) contained in or for any elision from this exploration.

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ATTITUDE TO THE WORK OF WILLIAM SHAKESPEARE IN WORLD LITERARY STUDIES

Namozova Saodat Baxtiyorovna

Karshi State University, Teacher of the Department of Linguistics

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ABSTRACT

Various poetic features of William Shakespeare's work, his scope of creative influence, in particular, a number of problems, such as the scope of creative influence, have not lost their relevance to this day. To study and draw reasonable conclusions about the concepts of "Shakespearean tradition", as well as "Shakespeareanism" from the perspective of emerging and modern studies, especially from the perspective of certain views, creative influence.

KEY WORDS: *Shakespearean tradition, creative influence, poetic features, creative, world literature, dramaturgy.*

Changes in people's thinking, social upheavals, intensification of mutual struggles have always shaken the human heart. In such a situation, the art of words, which heals the human soul, began to develop, and in this process, talented individuals sought to understand the human being more deeply. William Shakespeare's work also flourished in such a period, as a product of a deeper understanding of the history of human endeavors, violence and struggles. The process of studying and analyzing the essence of William Shakespeare's works in different aspects has brought forth unique researches in world literature. Works of M. M. Morozov on Shakespeare studies, E. Pinsky, A. A. Anikst, Yu. F. Shvedov, V. P. Komarova, V. A. Lukov, K. Muir, V. R. Elton. In the analytical approaches of S. Davis and a number of other philosophers and writers, it is possible to observe the desire to understand the essence of literary creation, together with paying great attention to its direct dramaturgy. N.Ya. Berkovskii, B.G. Reizov, I. Klimenko, N.Ya. Dyakonova, A.A. Elistratova, N.A. Solovyova, V.P. Fedorov, G.N. Khrapovitskaya, M.M. It is worth noting the views of Bakhtin, V. M. Zhirmunsky, I. O. Shaytanov, Yu. Kristeva and others.

English romantic writers, who are a part of world literature with a long history, have always admired Shakespeare's work and his dramas. In creating lyrical ballads, Shakespeare's plays seemed perfect to W. Wordsworth due to their alternation of strong passions with simple feelings, leadership of human fate, and conflicts at the core of his tragedies.

William Shakespeare notes that pity and other "disturbed" emotions never exceed "the limit of pleasure" when dramas appear on stage. Wordsworth says that he himself turned to poetic form because he notes that "circumstances involving excess suffering are better understood in verse, especially in rhyme, than in prose." A different situation is observed in the analysis of the works of V. Blake. It is not without reason that Shakespeare and Milton are equally recognized as his constant inspiration and "teachers". Blake's poetry is usually interpreted in harmony with mythological, biblical and literary memories. In addition, according to the observations of researchers A. M. Zverev, the unfinished drama "Edward III", developing the traditions of Shakespeare's annals, was inspired and creatively fed by the play "Henry V". While interpreting the motives of oppression, U. Blake puts forward the tragedy of man and the environment, which in turn is an important point for Shakespeare's work. The unique unity of tragic and comic interpretations in lyrical poetry inspired by Shakespeare is revealed. When talking about complex social and spiritual issues, sparks of romance and brutal realism are observed, the political conflicts of the time are closely connected with the interpretations of the "false benefactors" of the homeland, quoted from "Hamlet" in the poem "Island in the Moon". Along with the artists influenced by the work of William Shakespeare, there is also an analytical approach to his artistic works. Based on this, concepts such as the artistic perfection and poetic perfection of the works created by the writer were put forward. The philosopher and critic praised the dramatist for the flawless authenticity of the image, his opinion "about the original greatness and highness of man", and also noted the deepest tragedy of his works. Humanity has acquired a mindset that, in fact, it seems that its miraculousness, its desire to change human life is not in vain. That's why F. Schlegel, when talking about the works created by the writer, notes his greatness, that he is a high personality, that he was able to absorb these views and concepts into the interpretations, and in these comments, together with the creative approach, we talk about the uniqueness of the principles of human understanding.

In fact, in addition to the intensification of inter-period conflicts, a deeper approach to the history of the Middle Ages, the works of the narrowly harmonized style have absorbed into their interpretation a number of problems such as the renewal of



art, the strengthening of drama, the evolution of human thinking, the strengthening of capital in society and the deepening of the human factor, which has changed the principles of understanding life and man. laid the groundwork for renewal. On the basis of such views, vitality and artistry were combined. In his turn, A. Schlegel noted the difference between the "romantic" theater of Shakespeare and the ancient drama of Sophocles in his work "Dramatic Art and Literary Readings": the visual style replaces the plastic style. Romantic art is characterized by spiritual oscillations between the past and the future, and notes that antiquity is "reliably situated on the ground of reality". Western and Russian literary critics analyze the works of William Shakespeare from different angles.

This, along with their different views, led to the formation of views that complement each other, explain, but sometimes contradict each other. Works in the genre of chronicles and historical dramas appeared in Anguilla in the last quarter of the 16th century, and it is emphasized that they appeared due to the mutual struggles of that time, that is, due to the historical conditions. Because during this period, the conflicts between social classes intensified, the intensification of socio-political struggles between the state and the people began to shake the hearts of conscious individuals, which led to the formation of works of various genres.

Such views are also observed in the process of William Shakespeare's creation of chronicles and poetic works. In addition, Wordsworth stated that he himself turned to the poetic form, because he writes that "situations involving excessive suffering are better understood in poetry, especially in rhyme, than in prose." William Shakespeare revealed the unique principles of his works, especially his sonnets. The artistic poetic interpretation of various aspects, complex and conflicting aspects of XVI's life began to find its expression in the works of the artist, and this process served to ensure the formation and development of literary and critical views on the work of the writer and his works. In the work of William Shakespeare, various complex aspects of human character were absorbed into chronicles and dramatic works. Therefore, in the dramas of the writer, the conflicts of the period are interpreted based on the concept of the individual.

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A STUDY ON FINANCIAL PERFORMANCE OF COAL INDIA LIMITED

Mr.P.Kanagaraj¹, Mr. C. Harsh²

¹Assistant Professor in Department of Commerce with Professional Accounting, Dr.N.G.P Arts & Science College, Coimbatore,

²Student in Department of Commerce with Professional Accounting, Dr.N.G.P Arts & Science College, Coimbatore,

ABSTRACT

One of the largest coal-producing corporations in the world, Coal India Limited (CIL), is the subject of this study's analysis of its financial performance from 2017 to 2022. The purpose of the study is to assess CIL's financial performance metrics, including profitability, liquidity, solvency, and efficiency. Utilising a variety of financial measures and methods, data was studied from the annual reports of CIL. The study's findings demonstrate that CIL has experienced consistent revenue and profitability growth throughout the years, but the company also faces issues with liquidity and efficiency. The report emphasises how crucial financial performance analysis is to helping organisations like CIL make wise decisions and strengthen their financial position. Investors, stakeholders, and politicians may find the study's conclusions helpful in assessing CIL's financial performance and informing their choices.

1. INTRODUCTION

Financial performance refers to the evaluation of a company's financial statements and reports in order to understand its overall financial situation, operating efficiency, and long-term viability. This analysis provides critical insights into the company's profitability, liquidity, solvency, and growth potential, which are key factors that investors, lenders, and other stakeholders consider when evaluating the company's financial health. One of the primary objectives of financial performance analysis is to assess the company's profitability. This includes analysing its revenue, earnings, and margins to determine how effectively the company is generating profits from its operations.

2. STATEMENT OF THE PROBLEM

The problem being addressed in this study is the financial performance of Coal India Limited (CIL) over the past five years. Despite being the largest coal mining company in the world, CIL has faced challenges in maintaining its financial stability. These challenges include declining production and sales, increasing costs, and changes in government policies. These factors have negatively impacted the company's profitability and liquidity, raising concerns about its ability to meet financial obligations and provide value to shareholders. This study aims to understand the reasons behind CIL's financial challenges and to propose potential solutions.

3. OBJECTIVES OF THE STUDY

- To analyse the financial performance of CIL over a period of five years (2017-2022) using financial ratios such as profitability ratios, liquidity ratios, and solvency ratios.
- To identify trends in the company's revenue, expenses, profits, and cash flow during the five-year period.
- To analyse the company's investment decisions and its impact on the company's financial performance over the five-year period.
- To evaluate the overall performance of the management of the company by looking into the return on equity and return on assets of the company.
- To suggest potential solutions to improve the financial performance of CIL in the future.

4. FINANCIAL ANALYSIS

- Net Profit Ratio
- Total Expenses Ratio
- Return on Assets



- Price Earnings Ratio
- Inventory Turnover Ratio
- Total Asset Turnover Ratio
- Operating Profit Ratio
- Current ratio
- Quick ratio
- Debt-to-equity ratio
- Debt-to-assets ratio
- Return on equity (ROE)
- Earnings per share (EPS)
- Cash Ratio
- Interest Coverage Ratio
- Equity Ratio
- Return on Investment

5. REVIEW OF LITERATURE

Dhruti G Jani (2022), This paper aimed to evaluate and analyse the financial performance of Coal India Limited after disinvestment from 2011-12 to 2019-20 using the DuPont model and assets utilization. The government's stake in the company was reduced to 66.4% in 2020 through multiple rounds of disinvestment, starting in 2015 with a 10% offer for sale. The analysis showed a decreasing assets turnover ratio, indicating inefficient use of assets, and a stable ROE, with the highest value in 2018-19. The equity multiplier was found to be the most stable factor within the DuPont framework, indicating less financial leverage in the initial years of the study period.

Dr. P. Dhanya, Ms. K. Subhiksha (2021), The study aimed to estimate the profitability of DELL company over a five-year period using financial performance measures. The tools used in the study were liquidity ratio, profitability ratio, activity ratio, and total assets turnover ratio. The study found that the company should focus on improving efficiency in converting sales into profit and on keeping costs low while increasing sales in order to improve profitability.

Mrs. P. Dhanya, Mr. Sri Monish. J (2021), The study analysed the financial performance of Coal India Limited using 5 years of secondary data and various tools such as liquidity ratio, profitability ratio, and activity ratio. The objective of the study was to evaluate the profitability and liquidity position of the company. The financial performance of Coal India Limited during the study period was found to be satisfactory, as determined by the data in the annual report.

Dr. R. Mayilsamy, Mr. P. Veerakumar (2021), The study aims to evaluate the financial performance of Oracle Financial Services Software Limited, by analysing the company's ability to generate revenues and use assets efficiently. The data used in the study is five years of financial information of the company. The main objective of the study is to measure the profitability of the business concern. The research tools used in the study are liquidity and profitability ratios. The study suggests that the company should focus on improving its cash management practices and increasing efficiency in converting sales into actual profits to achieve better profitability.

Mr. P. Kanagaraj, Mr. Gouwsigan V (2021), This research paper aims to examine the financial performance of Indian Oil Corporation Limited over a period of six years (2014-2020) using ratio analysis of liquidity, solvency, profitability, and efficiency. The study used secondary data collected from the company's website and analysed it using ratio analysis of the balance sheet. The findings were discussed in detail and suggestions were made for corrective actions to maintain good solvency and meet short-term and long-term obligations.

Ms Jyoti Jain, Dr. Ruchi Jain (2020), The study analysed the effect of solvency, efficiency, and liquidity on profitability of Coal India Ltd. from 2010 to 2019. The profitability was measured by Return on Assets and Return on Equity, while solvency was measured by Debt Equity Ratio, liquidity was measured by Current Ratio and Quick Ratio, and efficiency was measured by Finished Goods Turnover Ratio. The study used Ordinary Least Square regression and found that liquidity had a substantial effect on profitability, while solvency and efficiency did not have a significant effect on profitability.

Ms. Monika (2019), the Government of India owns over 200 companies that fall under the Public Service Union (PSUs) category. These companies vary in terms of financial strength, turnover, growth rate, and contribution to the nation. To empower these PSUs and enable them to expand their operations, the government created the Maharatna category in 2009. There are three categories of PSUs: Maharatna, Navaratna, and Miniratna.



Suresh Kumar, Ankit Kumar (2019), the paper examines the relationship between Corporate Social Responsibility (CSR) and corporate financial performance in Indian manufacturing companies. A sample of 31 companies from Nifty was used, and the study was conducted using secondary data from 2014-2018. The results of regression and correlation tests indicate that there is no significant relationship between CSR initiatives and corporate financial performance in the selected manufacturing companies.

Ms. Archana Agarwal, Dr.P.Santhi (2019), In this study, the financial soundness of select public sector companies in the oil sector in India was predicted through a comparative analysis of their financial health. The companies selected were Indian Oil Corporation Limited, Hindustan Petroleum Corporation Limited, and Bharat Petroleum Corporation Limited and the analysis was based on secondary data collected over a ten-year period from 2008-09 to 2017-18. The data was analysed using methods such as percentage, financial ratios, and Altman Z score. The results showed that the public sector companies had an increasing trend and excellent financial viability position during the study period

Dr.Yagyadeep Shrimali, Dr. S. C. Bardia (2018), In this article, the author focuses on investigating the liquidity position of selected petroleum companies. The study uses liquidity ratios to analyse the data from 2009-10 to 2015-16 and employs statistical methods like Analysis of Variance and Student's t-test to determine the significance of differences between actual and estimated values. The author concludes that proper assessment of liquidity is crucial for any business and the study provides suggestions for improvement.

Dr. S.Saravanan, K.Janani (2015), This analysis aims to evaluate the financial performance of BPCL by studying its operating and financial characteristics through its accounting and financial statements. The ability to analyse the company's financial position is crucial for improving its competitiveness in the market. By examining its financial performance, the organization can identify ways to improve performance at the department, unit, or organizational level. The goal of this analysis is to understand the importance of financial management in the growth of the company.

Jyoti Verma (2017), The company regularly evaluates its financial performance. Based on the study of Coal India Limited and its subsidiaries, it was found that the company has achieved several successes, but also faces certain problems and limitations. These issues are not impossible to overcome and can be addressed with concerted efforts. Therefore, recommendations and suggestions have been provided to bring about necessary improvements.

Dr. Govind M. Dhinaiya (2017), the authors of this study aimed to measure the financial performance of Nifty 50 companies in India, using Economic Value Added (EVA) as the measurement tool. The authors believed that EVA is a unique financial tool that takes into account the cost of capital and the impact on shareholder wealth and stock price. The authors analysed the financial performance of these companies for the period of 2013 to 2017, and found that there was no consistent relationship between EVA and the Market Price of Share (MPS). This indicates that it may not be possible to determine the true value of a company based solely on one measurement parameter, such as EVA or MPS

Santosh Kumar Yadav, Rohit Kapoor, Amol S. Dhaigude (2016), This study analysed the financial performance of oil and gas companies using the Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS) method over a five-year period from 2011 to 2015. Financial ratios were calculated for each company separately and transformed to show performance rankings using entropy and TOPSIS method. The results showed that Hindustan Ltd. had the highest ranking in 2011, BPCL in 2012, Gail Ltd. in 2013, and Petronet in the last

6. TABLE

Year	Net Profit	Total Expenses	Return On Assets	Price Earnings	Inventory Turnover	Total Asset Turnover
2018	8.26	89.10	5.61	24.99	13.23	67.94
2019	17.54	74.89	13.13	8.37	17.83	74.86
2020	17.40	77.54	11.14	5.17	14.52	64.04
2021	14.11	79.31	7.89	6.32	10.06	55.90
2022	15.82	77.49	9.67	6.49	15.51	61.14



Year	Operating Profit	Current ratio	Quick ratio	Debt-to-equity	Debt-to-assets	ROE	EPS
2018	10.90	1.37	1.54	0.08	0.01	0.35	11.34
2019	25.11	1.51	1.30	0.08	0.02	0.66	28.34
2020	22.46	1.71	1.47	0.20	0.04	0.52	27.12
2021	20.69	1.68	1.58	0.16	0.04	0.35	20.61
2022	22.51	1.62	1.48	0.08	0.02	0.40	28.17

Year	Cash Ratio	Interest Coverage	Equity Ratio	Return on Investment
2018	18.98	24.04	0.16	5.61%
2019	16.81	101.88	0.20	13.13%
2020	11.03	46.86	0.21	11.14%
2021	4.79	27.04	0.23	7.89%
2022	7.02	42.61	0.24	9.67%

- The company's net profit has been consistently positive over the past five years, with a slight decrease in 2021, followed by an increase in 2022.
- Total expenses have also been consistently high over the same period, with a noticeable increase in 2018 and a decrease in 2019.
- The company's return on assets (ROA) has fluctuated over the years, with the highest value in 2019 and the lowest value in 2021.
- Price-earnings ratio (P/E) has been highest in 2018 and has since decreased each year, indicating a decrease in market confidence in the company's future earnings potential.
- Inventory turnover has been highest in 2019, indicating efficient inventory management, followed by a slight decrease in subsequent years.
- Total asset turnover has also been consistently high, indicating effective utilization of the company's assets to generate revenue.
- Operating profit has been increasing each year since 2018, indicating a healthy growth in the company's core business.
- The current ratio has been consistently above 1, indicating that the company has sufficient current assets to meet its current liabilities.
- The quick ratio has been consistently above 1, therefore the company has an ability to meet its short-term obligations.
- The debt-to-equity ratio has been consistently low over the years, indicating that the company is not heavily reliant on debt financing.
- The cash ratio has been decreasing each year, indicating that the company has less cash available to meet its short-term obligations.
- The return on equity (ROE) has fluctuated over the years, with the highest value in 2019 and the lowest value in 2021, indicating fluctuations in the company's profitability relative to its equity.

7. SUGGESTIONS

- Implement regular training and education programs for employees to increase their knowledge and skills in relation to data privacy and security.
- Develop and implement strict policies and procedures for handling, storing, and protecting sensitive data, and ensure that all employees are aware of and comply with these policies.
- Conduct regular audits and assessments of data privacy and security practices to identify and address potential vulnerabilities.
- Use encryption and other security measures to protect sensitive data both in transit and at rest.
- Limit access to sensitive data to only those employees who have a legitimate business need for it, and regularly review and update access controls.
- Collaborate with cybersecurity experts and other relevant organizations to stay up-to-date on the latest threats and best practices in data privacy and security.

8. CONCLUSION

Based on the information provided, it appears that the financial performance of Coal India Limited (CIL) has been generally positive over the past several years. The company has reported consistent revenue growth and has maintained a strong financial



position, with a relatively low debt-to-equity ratio and a high return on equity. Additionally, CIL has been able to maintain a relatively stable dividend payout ratio over time, indicating that the company is able to consistently generate profits and return value to shareholders. There are, however, some areas where CIL could potentially improve its performance. For example, the company's net profit margin has been relatively low compared to its peers, indicating that there may be room for cost savings or efficiency improvements. Additionally, the company's working capital ratio has been trending downward in recent years, which could be an indication of potential liquidity issues.

Overall, it appears that CIL is a financially stable and well-performing company. However, management should monitor the company's net profit margin and working capital ratio to ensure that they do not become problematic in the future. Additionally, CIL should continue to focus on cost-saving and efficiency-improving initiatives in order to improve its bottom line and maintain its strong financial performance.

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A STUDY ON FINANCIAL ANALYSIS OF KOTAK MAHINDRA BANK

Mr.P.Kanagaraj¹, Mr.S.K.Kumaragurubaran²

¹Assistant Professor in Department of Commerce with Professional Accounting, Dr.N.G.P Arts & Science College, Coimbatore,

²Student in Department of Commerce with Professional Accounting, Dr.N.G.P Arts & Science College, Coimbatore,

ABSTRACT

One of India's top private sector banks, Kotak Mahindra Bank places a high priority on both innovation and customer satisfaction. Over the years, the bank has continuously produced solid financial results, with stable increase in important financial parameters like net interest income, net profit, and total assets. Net interest income at Kotak Mahindra Bank increased by 13% to reach Rs. 17,517 crore in the fiscal year 2020–21, while net profit rose by 16% to Rs. 5,550 crore. The bank's total assets increased by 12% to Rs. 3,83,619 crore as a result of significant increases in loans and investments. The bank's asset quality was consistent throughout the year, with its gross non-performing assets (GNPAs) ratio and net non-performing assets (NNPAs) both at 3.25 percent.

INTRODUCTION

Since finance is the engine and lifeblood of all economic activity, it permeates all aspects of economic and corporate life. It is vitally important for a business' survival and expansion. One of the fundamental techniques for assessing the bank's financial status and performance is ratio analysis. Financial analysis is the process of determining a company's financial strengths and weaknesses by strategically relating the components of its balance sheet, profit and loss account, and other financial statements. Financial statement analysis is a type of study that focuses on key relationships found in the bank's financial statements. The main purpose of financial statement preparation is decision-making. Ratio analysis is a method used in science to examine

STATEMENT OF THE PROBLEM

The financial analysis of a bank can be evaluated through the analysis of its financial ratios. However, the interpretation and comparison of these ratios can be challenging, especially for individuals without a strong financial background. The purpose of this project is to provide a comprehensive analysis of the financial ratios of Kotak Mahindra bank, and to compare its financial performance. This will allow the bank to gain insights into the financial health and make informed decisions.

OBJECTIVES OF THE STUDY

- To find out the profitability of the Kotak Mahindra Bank.
- To analyze the liquidity position of the Kotak Mahindra Bank.
- To analyze the solvency position of the Kotak Mahindra Bank.

METHODOLOGY OF THE STUDY

An Analytical research design is chosen for the study. This research is conducted to find out facts about the given topic from the answers obtained develop new and useful ways during things.

TOOLS

- ✓ Ratio analysis

REVIEW OF LITERATURE

- **Ms Kanika Arora, MrSachinRohatgi and DrPreeti Sharma(2022)**, they concluded that Indian banks should take care to ensure that they give loans to credit worthy customers. In this context the dictum "Prevention is always better than cure" acts as the golden rule to reduce NPA's. The future of banks would be based on their capability to continuously build good quality assets in an increasingly competitive environment and maintaining capital adequacy and



stringent prudential norms. Reduction of NPAs in banking sector should be treated as national priority item to make the Indian Banking system more strong, vibrant and geared to meet the challenges of globalization.

- **Alan Thomas John and John Pradeep Kumar(2022)**, According to their research, the profitability of the selected institutions is relatively decent. HDFC, ICICI Bank and Kotak Mahindra Bank are the finest private sector banks to invest in among the selected banks since they retain a superior position in terms of profitability, solvency, and stock valuation. The bank's asset quality and financial stability are also satisfactory. For the past five years, bank non performing assets (NPAs) have been on the rise. Banks have been able to progressively recover from the bad effects of the Covid-19 outbreak due to government and RBI interventions. Considering the above information, investors can consider investing in HDFC Bank ICICI Bank and Kotak Mahindra Bank.

ANALYSIS AND INTERPRETATION

Year	Operating Profit	Current Ratio	Quick ratio	Cash Ratio	ROA	ROE	Proprietary
2022	7.917	3.157	3.157	2.44	0.06	34.01	0.18
2021	9.166	3.578	3.578	2.69	0.07	33.12	0.21
2020	32.55	6.752	6.752	5.67	0.08	35.01	0.22
2019	33.77	3.283	3.283	2.42	0.08	31.26	0.24
2018	33.13	3.258	3.258	2.21	0.07	26.38	0.28

FINDINGS, SUGGESTIONS AND CONCLUSION

FINDINGS

1. The standard ratio of Liquidity ratio is 1:1 and the companies were highest 6.78 in the year 2020. It is growing every year so it is satisfactory.
2. Cash ratio of the bank was highest 5.67 in the year 2019-2020 and lowest 2.21 in the year 2017-2018. It is not growing every year so it is not satisfactory.
3. Operating profit ratio of the company was highest 33.77 in the year 2021 and lowest 7.917 in the year 2022. It is not growing every year so it's not satisfactory.
4. Return on asset ratio of the company was highest 0.08 in the year 2020 and lowest 0.06 in the year 2022. It is not growing every year so it is not satisfactory
5. Return on equity ratio of the company was highest 35.01 in the year 2020 and lowest 26.38 in the year 2018. It is growing every year so it is satisfactory.
6. Proprietary ratio of the company was highest 0.28 in the year 2018 and lowest 0.18 in the year 2022. It is not growing every year so it is not satisfactory.

SUGGESTIONS

1. The bank should maintain the assets in order to improve its position in future. It should increase the operating profit value, because the ratio proportion is very less so the bank need to improve.
2. The profit can be increased by increasing in efficient productivity and decrease in expenses of the bank. The bank can try to control the expenditure and fair return on the shareholders. The bank has to increase the current assets and current liabilities to make positive working capital.
3. The bank should probably consider the use of the fund to invest other opportunities to get a profit.
4. The bank should maintain the share capital to pay dividend to the shareholders.

CONCLUSION

The study was conducted with the intention of assessing the Kotak Mahindra Bank's ratio analysis. Ratios, which are crucial instruments for financial analysis, were used to conduct the bank's analysis. The analysis provides a clear picture of the bank's financial status during the last five years, and the performance is satisfactory. Therefore, the bank can boost its profitability and enhance overall performance if the suggested changes are made. The bank is operating satisfactorily. This study presents the conclusions and suggestions that would help the bank develop and improve.

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WEBSITE

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www.kotak Mahindra bank.com



SEMANTIC FIELD OF THE WORD “WOMAN” ASSOCIATED WITH THE EXPRESSION OF RELATIONSHIPS, OCCUPATIONS, ACTIVITIES AND PROFESSIONS

Adilova Dilorom Kadirovna

Senior Teacher, University of Economy and Pedagogy, Karshi city, Republic of Uzbekistan

ABSTRACT. BACKGROUND

The article deals with the peculiarities of the word “Woman”, and various expressions associated with the concept of “woman” have direct close connection with the figurative meanings of words and synonyms. All this is generally connected with the development of the language, because in the vocabulary of the national language reflects the material, spiritual development of national and social culture. The **object** of the article is the lexical unit “Woman”, the semantic field of the word “woman” associated with the expression of relationships, occupations, activities and professions.

The **aim** of the article is to define the semantic field of the word “woman” associated with the expression of relationships, occupations, activities and professions as a lexical unit.

Methods: descriptive method, method of componential analyses were used to prove the informativeness of the topic relied on the studies of well-known scientists in the field of linguistics.

Results (Findings): The analysis of the examples presented in the article shows that in the language, each full-valued word has special shades of meaning and stylistic features that differ in the way they are used from other words in the sentence.

Conclusion. Summing up the results, it can be concluded that the words as woman and mother, and expressions related to them, like and other lexical - semantic units in the Uzbek and Russian languages, have many lexical, grammatical and stylistic features. The expression “woman”, “mother” and related words revealed through many linguistic means. Uzbek and Russian poets skillfully used the rich vocabulary of the language to describe beauty and attractiveness of a woman's face, her figure, character and kind classes, which, of course, can be subjected to special scientific research. But it can, with regret, be noted that so far this the question was not subjected to a special study, which was for us reason for choosing this topic as a research study for our article.

Keywords: peculiarity, expression, concept, connection, figurative meaning, synonym, language, vocabulary, material, culture, relationship, occupation, activity.

INTRODUCTION

The general meaning of the words “woman”, “mother”, mean concepts “lover”, “beloved”, kinship related to the maternal line, the concepts of “girlhood” and “marriage”, “motherhood”, spheres of activity, profession, work, specialties of women, etc. It should be noted that we are talking about expressions with the word “woman”, which are reflected in the form of words, phrases and even sentences that are combined into a single lexical-semantic group. In this regard, various lexical-semantic groups of the expression “woman” are analyzed.

The opposite of the word “male” - (not male) is used the word “woman”. The word “woman” (wife, woman) is of Indo-European origin. “Wife. General Slovyan, Indo-European character. Old meaning - women in female, arose from an even more ancient one - “giving birth” (cf. related common, *gena*, other Indian: *janty*, Greek, *guna*; and other verbs - Indian: *janaty* - “gives birth”, Latin: *gignere* - give birth.)”.

Compare also R. Juraev's reflection on etymology of words woman (women): woman - the word of the Indo-European origin; ancient Iranian *zana*, ancient Indian *female Zoidan* (give birth, gender, ready for birth, Russian: wife, Latin: *genus*).

LITERATURE REVIEW. On the problem of lexico-semantic and stylistic features the word “woman” has not been specially studied, but in all scientific works written on vocabulary, lexicology and stylistics, such linguists as B.Kamoletdinov, M.Muhammadiyev, M.N.Kasymova, H. Majidov, M.Salomov, Sh.Karimov and others, speaks about the direct and figurative



meaning of the use of vocabulary in different styles of speech and different shades of the meaning of words. The above authors, in the course of disclosing the topics of their research, also expressed interesting thoughts about the meaning of concepts, the semantics of words, lexico-semantic groups, as well as stylistic features of vocabulary in Uzbek and Russian languages. It should be noted that in the study of the semantics of words and their place in the formation of phraseological units, the works of above mentioned scholars and their scientific works have become a reliable source for research on this topic.

MATERIALS AND METHODS

At all times, women have been glorified by poets. How many poems have been devoted to a woman, how much has been said over many millennia. But not only men are the authors of poems about women. Among Russian and Uzbek authors there are also poetesses who spoke their own word. In modern poetry there are also a large number of poems dedicated to the fair sex. The word "woman" in many languages is widely used. This word is broad in meaning and commonly used as a literary image by poets of classical and modern literature:

A woman is always a little like the sea,

Sea in something woman slightly (Evgeny Yevtushenko);

Yes, in a woman, as in a book, there is wisdom.

Can understand the meaning of its great

Only literate (Omar Khayyam);

I know that all women are beautiful.

And beauty and intelligence (Andrey Dementiev);

Will not this breeze blow on every man and woman? (Rudaky);

I held a speech for the glory of women without you,

And at meetings I shook hands with them more than once (Mirzo Tursunzoda);

Oh woman, when you suddenly leave

You are your faithful or unfaithful friend (Rasul Gamzatov);

Oh woman, divine miracle!

Fire in her eyes, fire in her soul (Maxim Safiulin);

Woman... heavenly creature...

Dream come true... (Evgeniy Brushtein);

You are holy anyway, ah holy woman (Khalima Khudoyberdiyeva)

To indicate the belonging of a woman to a certain family or spouse, specific definitions are used. For example, using phrases "Uzbek ayoli (woman)" – Uzbek woman, "Women Shokh" - the wife of the Shakh, "Women Council" -Soviet woman, and others. In Uzbek poetry, the word "xotin" is sometimes used in the designation "wife".

Gulzorlardan gul topolmaymiz.

Yertandirga non yopolmaymiz.

Ekin ekib yer chopolmaymiz.

Uyda agar xotin bulmasa.

And in Russian poetry, the word "жена" is used in the designation "wife".

Моя любимая жена,

Сокровище ты для меня!

Тебя всегда я берегу

И без тебя я не могу!

In Uzbek poetry, to indicate the age and physical condition of women, words and phrases denoting older women "momo, kampir" were used,

Ertalabki rizqimdan

qolmayin deb turvolgan

kampir tiniq ariqda

yuzlarini yuvadi

and in Russian "old woman" (старуха) and many others.

Ты жива еще, моя старушка?

Жив и я. Привет тебе, привет!

Пусть струится над твоей избушкой

Тот вечерний несказанный свет.

Unfortunately, in most cases, a woman is considered weaker than men, infirm. This is evidenced by the content of the following poems in which the word "woman" is used in the meaning "weak", "low":

In youth one must be like a lion, and on a journey one must be brave like a man,

If you don't have masculine manners, then stay at home like a woman.

You're such a scoundrel that you attack a woman

We cannot find flowers in gardens.

We can't bake bread for tomorrow.

We can't sow crops and plow the land.

If we do not find a wife at home.

My beloved wife

Treasure you are for me!

I always keep you

And I can't live without you!

From my morning sustenance

I was told not to stay

old woman in a clear stream

washes their faces

Are you still alive, my old lady?

I'm alive too. Hello you, hello!

Let it flow over your hut

That evening unspeakable light.



You look like a woman, dishonoring manhood (S. Miralizoda).

Being a mother is the highest mission of every woman. Mother is the source of life, continuer of the human race. If in one or another public formation does not recognize the principle of equal rights for men and women, despite to this, indeed, a woman is an equal member of every society, because she is the founder of the human race. Firdavsy in his epic *Shakhnama*, using the word "mother", clearly shows these characteristics of women:

That my mother, the daughter of Afrasiyab,

That the water was forded from the other side of the Jeykhun (Firdavsy).

In search of you, I wander through the fields and mountains,

After all, to this day, mother, I do not remember where your last refuge is

(M. Tursunzoda).

Mother is an Indo-European word in Sanskrit: *mata*, Greek: *meter*, Latin: *mater*, Armenian: *mayr*, lit. moter genus. n. moters - "wife, woman", Litovian: *motyna*- "mother", Latvian: *mate*- "mother", old German: *muoter*- "mother", German: *Mutter*- "mother", etc.

R. Juraev comments on the origin of the word "modar" in such a way: "Modar - mother" a word of Indo-European origin: Av.: *mota*, Old Persian: *mot*, Pamir-Rushan: *mod*, German: *mutter*, English: *mathe*".

Sometimes in the context or in a comment to the text using the definition specifies who the woman is the mother of:

- mother of the child, - mother of shakhriyar (sovereign):

After all, if I become the mother of the child (Attor).

The sovereign mother left this world (Firdavsy).

The plural of the word "mother" is formed by means of the suffix «-lar» in Uzbek and «-и» in Russian:

Ko'rganlarim

Onalar bolam desa

Bolasi bolam derkan.

Onasin o'ylamaslar

Farzandin g'amin yerkan (Khurshid Karim).

Никто из матерей старца не рожал (Firdavsy).

The word "mother" is also found in the caress form "mommy" in meaning young mother. In an affectionate form, especially in the speech of young people, this word is found in the meaning of "dear mother" in both – Uzbek and Russian languages:

Tushlarimda, mayli, boshim

Silab turgin, onajon.

Qolganlarga endi umr

Tilab turgin, onajon.

Мамочка моя милая,

Самая красивая,

Нежная, любимая

Мамочка моя.

Results. Words and phrases that express the meaning of the word "woman" and form its semantic field, are closely related to social phenomena and internal laws of language development. A woman, as a full, free member of society on a par with men, engaged in various professions and specialties, actively participates in the development of society and public life. It is also obvious that a woman takes her place in the world, she is like a mother great and sacred, like an employee - courteous, like a sister - sweet, and like a master, an entrepreneur - Skilled and expert in her field. In this regard, a woman is likened to purity and transparency, intelligence and wisdom, delicacy and sophistication, charming and inspiring, in a word, is a symbol of the mind, beauty and charm.

All these properties of "woman" are reflected in the language in the form of words, phrases and individual sentences. A woman is a mother, her beauty and attractiveness, dreams and hopes, actions and thoughts are instructive and noticeable, and it is natural that writers and especially poets, paid special attention to the chanting of women, mothers, her character and activities. There is no writer or poet who has not written about woman, mother, her beauty, facial expression, character and behavior. The Islamic religion also recognizes the role and position of women - mothers, their rights and respect in society.

A poem is basically a small piece of fiction. A work in which the author's intention is expressed through artistic visual and expressive means, using different means of description and turns of speech. "Verse originates from knowledge and science. Knowledge poses the problem of science to reason and turns it into decoration of speech, thereby showing a fascinating panorama of nature and society with a sense of love. All that boils in the heart and is the cause of surprises, and there is the basis of the verse".

Woman, like other objects of the world, is one of the main themes of poetry. Poets strove to use the most capacious and figurative expressions to reveal the theme of personality and activity of women. Therefore, an analysis of the role and place of words, phrases and expressions, being a means of artistic description in the image of women, is considered the



main task of the stylistics and lexicology of the language. **Discussions.** The question of the use of the figurative meaning of words is mutually explored in linguistics and literary criticism. First of all, it should be noted that literary material is subjected to linguistic analysis literature. Here we can observe the value transition based on the use of figurative and expressive means: comparison, metaphor, exaggeration etc. Professor H. Majidov is quite right notes that "to what extent lexical meanings are born with a metaphorical style, or receive a connotation by other lexical means from a variety of artistic techniques, such as comparison, metaphor, exaggeration, metonymy, praise, personification, etc., all of them diversity is divided into completely different groups - comparison, metaphor and synecdoche".

In describing the external appearance and inner world of a woman, it is important pay attention to the use of means of artistic expression, "a work of art is created on the basis of metaphor, and in it an important role is played by the creative person and his creative material takes on an artistic and sensual character".

The possibilities of the poet in the image of the external appearance and internal your character's worlds are limitless. In achieving this goal, the main the tools of the poet are the means of artistic representation. Certainly, language tools are the material for solving this problem. Expressions such as words, turns, phrases, sentences, etc. From here there is a close connection between fiction and language.

"A literary critic who studies a writer's work seeks to determine assignment of images and those associative representations that they called in the structure of the whole work. The task of the linguist in the study figurative speech is, first of all, to establish what the image is expressed by means. But this is not the main thing. Much more important to establish what is figurative semantics in words, phrases, and find out the laws of its formation".

CONCLUSIONS

In their research, most scientists, especially when analyzing features of the language and style of presentation of a particular poet, writer or their individual work of art, special attention was paid to the place and role of metaphors, comparisons, polysemantic words, metonymy, allegory, description by a synonym, antonym, phraseological unit, which are indeed considered important and basic language tools in fiction. Words and phrases that are used as a means of artistic descriptions of the image of a woman and her appearance, a lot.

Language fiction differs from other styles of language primarily imagery, and this, in turn, contributes to the enrichment of vocabulary composition of the language, serves to vividly express some episode. Not a single bright detail of the female figure: face, hair, curls, lips, growth, as well as character, thoughts and actions, did not remain outside the field of view of poets, and therefore the beauty, attractiveness, character and image of women are compared by poets with objects of nature. Among these expressions especially attractive are the words and phrases that serve to depict female figure and appearance. In the depiction of women and her description, the poets were not limited to well-known, common words and phrases. They have been efficient use all means of artistic description to express concept of "woman". "Imagination, which is the basis poetic work, decorates the words. In the description where the poet creates the world in its own way, even a simple word of moderate meaning can immerse someone in a sea of ideas".

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DRABBLE IS AN UNUSUAL AND FASCINATING GENRE THAT PUTS A COMPLETE STORY IN JUST HUNDRED WORDS

Annayeva Lola Rasulovna

Senior Lecturer, Retraining Institute of Pedagogical Personnel, Karshi city, Republic of Uzbekistan

ABSTRACT. BACKGROUND

*The article deals with the the history and peculiarities of the literary genre drabble which is a short sketch depicting one scene or describing a character. Also often referred to as a genre are short stories that consist of only 100 words. This unusual and fascinating genre sometimes inspires the reader to try his hand as an author for the first time. On the other hand, fitting a full story into just 100 words is not an easy task. A feature of such stories is an unforeseen ending or the presence of hidden subtext. The **object** of the article is the drabble, a short story of exactly one hundred words (not counting the title) and fanfics. More and more people are interested in fan fiction - literary works created by fans based on popular films, books or TV shows.*

*The **aim** of the article is to give an information about fanfics and one type of it which is called drabble.*

***Methods:** such methods as descriptive method, method of historical analyses were used to prove the informativeness of the topic relied on the studies of well-known scientists in the field of linguistics.*

***Results (Findings):** The analysis of the examples presented in the article shows that one type of fanfiction is Drabble. This genre is becoming more and more popular. But what is a drabble, how and when it arose, and not everyone knows about the features of such works.*

***Conclusion.** Summing up the results, it can be concluded that the basis of fanfiction is most often either the development of the original storyline in a different direction, or the creation of a branch of the story in a completely different direction, but using characters from the work. Drabble has the same compositional structure as any other story. The best drabbles use an unexpected plot twist, a denouement that "deceives" the reader's expectations.*

***KEYWORDS:** fanfics, drabble, literary genre, sketch, character, unforeseen ending, hidden subtext, basis of fanfiction, development, original storyline, structure.*

INTRODUCTION

Before listing the genres of fanfiction and revealing their features, it is necessary to touch on the question of the origin and meaning of this term. What is a fanfic? This is an essay, most often amateur, based on the most popular literary works or film works - television series, movies, anime, and the like. Moreover, fanfiction genres include various comics and computer games.

The word "fanfiction" refers to jargon. The authors of fan fiction are fiwriters (fcreators), and they are ardent fans of original works who cannot part with their favorite characters of the adored work. They also write most often for the same zealous fans. Recently, the creation of fanfiction happens on a commercial basis, but extremely rarely. Most often this is a product for fans of the original work.

The concept itself comes from English - fan literature or fan prose (Fan fiction). In use, there are other designations of this concept, which unites the genres of fan fiction. These are "fan-fiction", "fen-fiction", "fan-fic", most often just "FF" or even "fic". There are so many varieties of this new genre that only the most common ones will be listed. Any author has the right to create his own type of essay. That is why the genres of fanfiction (or rather, subgenres) are extremely diverse.

LITERATURE REVIEW

Slash fanfiction rarely uses *Curtain* story style, where the characters behave in an absolutely homely way. For example, they go shopping. A fanfic with the presence of corporal punishment is called *Domestic disciplin*, and it concerns sexual relations: one of the partners is beaten for some kind of mistake.

But more and more often there are mergers of different genres in fan fiction: the romance genre and the slash genre, for example. It's hard to find a pure genre, even a subgenre, in the fanfic subculture. But *Angstfic* (dreary fanfiction) and *Darkfic* (dark



fanfiction) are almost always present in fanfiction of recent years. The first component denotes depressive motives, spiritual or physical suffering, strong feelings and dramatic events. And the last component is the abundance of cruelty and death in the story. Also often used in any fan fiction - slash or romantic genre - Alternate Pairing or Shipping (alternative pairing or shipping), when they describe the romantic relationship of characters who in the original work not only do not like each other, but sometimes are divorced altogether on opposite sides of the barricades. In general, slash originally meant a kind of *Alternate Pairing*. However, now this concept has become much broader. Accordingly, there are *Femslash* styles, that is, *Saffic*, *Fem* or *Femmeslash* - all about women's relationships - romantic or another. And, of course, it is highlighted in a separate line and sent to the tenth row in fanfictions of the het genre.

If the relationship between the characters is permeated with warmth and nothing is overshadowed, this subgenre of fan fiction is called *Fluff*. Fanfictions about friendship, backed up by words and deeds are called *Smarm*. If there is no love line in fanfic or it doesn't mean much, it's *General audience* or just *Gen*. No description of fanfiction genres is complete without *Grapefruit*, it is fanfiction with violence in its pages or coercion to it.

MATERIALS AND METHODS

Varieties can also be identified by the method of creation, here the fanfiction genres and their significance for the reading public are most clearly visible. Quite often you can find a crossover in the subculture (especially English fans of fanfiction), where several alien universes merge in the narrative. For example, Jack Sparrow and Han Solo, along with Princess Leia, come to Hogwarts and meet Anton Gorodetsky there in order to jointly extinguish the Eye of Sauron.

Very often writers use *Point of view* or just POV. And this applies not only to fan fiction, a lot of works, including those in the fantasy genre, are written in this way. For example, the saga "A Song of Ice and Fire" by George Martin. This method is extremely convenient for narration, since it allows you to show events in different parts of the universe and at different intervals of time or simultaneously from different sides.

The Profic genre is exceptionally interesting. These works are truly artistic and often highly professional, where the author describes the adventures of his characters in a world that was created by another author. There are real masterpieces in this genre, such as, for example, the fanfic "The Ring of Darkness", which was written by Nick Perumov based on Tolkien's famous work "The Lord of the Rings". Many fans argue before fights who wrote better: Perumov or Tolkien.

Much has been written in this genre. The authors love alien universes and write whole book series on Star Wars, Dragonlance, Warhammer and other commercially successful works, the authors of which are loyal to franchising. The most interesting thing is that books from someone else's table - both sequels and prequels - are always sold like hot cakes. But it is not the epigones who should be thanked for this, but the author of the original, who created such an interesting universe that readers miss, and so much so that they are ready to read even frankly weak imitations.

If the characters in the fanfic die, it is classified as *Deathfic*. If the characters take a long time to establish a relationship - Established Relationship. Hurt/comfort - just by the name, we can conclude that it will be about helping one character - strong and kind - to another - weak and suffering. Well, a genre that has almost classic examples is *Continuation*, when fan fiction is an exact continuation of the original work. For example, "Gone with the Wind" was continued quite successfully by Alexandra Ripley. In any case, it was and is being sold as successfully as the original.

With the growth of opportunities, thanks to technological progress, fans of certain works of art successfully combine literary creativity with related genres. And fanfiction is sometimes quite high quality. For example, a film based on the Star Wars universe - Star Wars: Revelations: a highly technical level, using the latest technology. This is a fanfilm. A modification of fanfiction is also drawing based on the work, where completely new artistic images of favorite characters are created. This is fan art.

But for any genre - both pure fan fiction and related ones, like a role-playing computer game, for example - you need, first of all, a general interest in the canon, that is, that work (book, film, series, comic book, TV show, etc.), the characters and the whole world of which will be used to write fanfiction.

RESULTS

Fanfiction is a related kind of creativity, where the ficwriter uses both his own fiction, which goes far from the canon, and some set of elements from the original world. This is the only genre other than parody, of course, where the reader is better off being familiar with the work that inspired the ficwriter. The author wrote not for money, but for pleasure, first of all, his own, and secondarily - for the pleasure of the same fans of the author of the original work. They are not only consumers of someone else's creativity. Fikreiter is an example of co-creation, when literature appeals to the reader, and the reader responds to it with action.



Fanfiction - from English fan fiction (fan fiction) - a text written by a fan of a film (book, TV series) based on the original work. Fanfiction can continue the work (a story about what happened after the end), fill in empty spaces (where the author, for example, wrote "2 years have passed"), talk about the youth of the characters, or be an alternative story (for example, a fan of the "Watches" does not like the death of Kostya and he wrote a fanfic where Kostya survived, found himself a bride, etc.) Such fanfiction is marked with the abbreviation AU (Alternate Universe, Alternative Universe)

By size, there are the following varieties of fanfictions:

- *Ficlet* - short one-part fanfiction;
- *Drabble* - excerpt. Often just a scene, a sketch, a description of a character. Sometimes this means a short (one hundred words) story that has double connotations and / or an unexpected ending.
- *Vignette* - a very short story that includes a single thought (description of feelings, internal monologue, small event).

DISCUSSIONS

Drabble. This genre is becoming more and more popular. But what is a drabble, how and when it arose, and not everyone knows about the features of such works. Drabble? This is a short sketch depicting one scene or describing a character. Also often referred to as a genre are short stories that consist of only 100 words. A feature of such stories is an unforeseen ending or the presence of hidden subtext.

The main criterion for a drabble is its completeness. Such a story, despite its brevity, should contain the structure of a full-fledged work: have a plot, a climax and a denouement. It should be meaningful and useful. In addition, the drabble is written in an artistic or journalistic style. This is not an instruction for use, and therefore it should contain literary turns and "catch" the reader.

Drabble as a genre was born in 1980, when one of the communities of the University of Birmingham created an unusual game. Inspired by Monty Python's Drabble, sci-fi fans decided to play a game based on the plot of the novel, in which the participants had to write a novel, and the winner was the one who did it faster. In order to keep the game simple and interesting in real life, the participants introduced a rule that the story should be 100 words long. A certain amount of time was given to write a novel, a topic was set. This is where the concept of 100 words and the name drabble came from.

Creation criteria. It is not enough to know what a drabble is in order to create it. You also need to understand what criteria a story must meet in order for it to be called that. A great example of Drabble is 55 Fiction. These are 55-word stories. The author of the idea was Steve Moss, founder of the New Times magazine. The main requirements are as follows: size - exactly 55 words; the presence of a message and a plot; the presence of at least one character; the presence of a conflict and its denouement and, it was assumed that the drabble should be funny.

Tags:

Love

gender dysphoria

Declarations of love

Quarrels / Conflicts

Transgender characters

Humor

And I also read somewhere, I can't find the material that, as an example this genre is very suitable ... anecdotes.

Drabble is a passage, this is how this genre was born. But long before that, L. Tolstoy wrote stories for children of four or five years old and for the students of his school, who can fully be called drabbles, if we consider them excerpts from the life of birds, animals. And fairy tales, of all peoples or about Khodja Nasreddin, full of meaning and humor - these are *extracts* from people's lives!

CONCLUSIONS

We started with the fact that drabble is, after all, a game. And the game can change topics, conditions, tasks, rules. However, follow them for everyone, who entered the game, for sure!

Norm Sherman, founder and editor of the Drabblecast portal, appreciates the drabble genre for the energy and impulsiveness of fast-paced stories that are read in a few minutes, but at the same time make you cry or laugh.

How do you write a drabble anyway? The text structure of a drabble is somewhat similar to a joke or an anecdote: a certain scene is described, some events occur, and then the meaning of what is read is suddenly turned upside down. The ending should not only be unexpected, but also force the reader to rethink the whole story from the very beginning.

How to fit the story into such a tiny volume? The first draft is usually very far from the desired hundred words, besides, the trial version of any story should be brought to perfection before publication. The surest way to get a drabble of the right size is editing.



Among other things, strict requirements for the size of the story develop writing skills: for example, an attentive and economical attitude to words. After reading the first draft, find and remove everything unnecessary from it. Like any editor, in this case you need to be firm, but not lose the main idea and integrity of the story. If, after the first edit, you are still far from the desired volume, you should think about the structure of sentences, and possibly delete some of them altogether. Get rid of all unnecessary elements of your story. When writing a drabble, it's best to stick with one or two storylines and accurately answer the question, "What am I writing about?" This will save the story from unnecessary digressions, which only increase its volume.

What could the drabble be about? The answer is very simple: anything! Drabble is a form of fiction, so it cannot be limited to any one topic. Adventure, mysticism, romance - choose what you like. But most importantly, writing a story should bring you pleasure. Mastery comes with practice, and drabble is a fun way to develop your writing skills.

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WAYS TO DETERMINE THE LEADERSHIP ABILITY OF THE PUPILS BY CLASS SUPERVISORS

Ziyodullayeva Sarvinoz Shamsiddin kizi

Senior Lecturer, University of Economics and Pedagogy, Karshi city, Republic of Uzbekistan

ABSTRACT. BACKGROUND

*This article provides information on the methods for the formation of leadership qualities in primary school pupils, the history of leadership qualities. The class supervisor conducts educational work together with the school administration and in cooperation with the neighborhood community and parents. The school administration should always support the class supervisor and his/her work. Because the class supervisor knows his/her pupils well and takes into account what is needed to educate them. The **object** of the article is the work of the class supervisor managed by the deputy director for spiritual and educational affairs.*

*The **aim** of the article is to define and show the role of the class supervisor who is a pedagogue who leads a team of pupils at the same level, same age, and equal in terms of knowledge.*

***Methods:** descriptive method and method of analyses were used to prove the informativeness of the topic relied on the studies of well-known pedagogues.*

***Results (Findings):** The analysis of the examples presented in the article shows that the leadership is based on the place where the organization officially exists, and leadership is created on the basis of psychological relationships.*

***Conclusion.** Summing up the results, it can be concluded that the class supervisor should actively work with the parents of the pupils. According to experts, a class is a group of boys and girls of different temperaments and characteristics, but all of the same age, learning from teachers, and the manager, assistant and excellent pupils of this team. After all, it is necessary for parents to find out about the things that are going on in the classroom at school and accompany them when they are in trouble. For this, it is necessary to keep a contact book between the parents and the class supervisor and keep it without leaving it at all times.*

***KEYWORDS:** class supervisor, leadership qualities, educational work, cooperation, parents, pedagogue, age, knowledge, psychological relationships.*

INTRODUCTION

The main goal of the class supervisor is to be able to understand each other with the pupil and the head of the class in the process of properly educating his pupils, and the head of the class should be more attentive to the pupils. At school, pupils are educated through the work of the class supervisor. In particular, pupils are educated through events, concerts, various parties, meetings, contests and other games. Accordingly, pupils' thinking ability develops. The class supervisor's work plan is drawn up and supervised by the school principal and deputy principal. In the initial stage of primary school education, children take the first step in education under the guidance of a class supervisor.

They acquire knowledge, skills and abilities in educational activities. A teacher is characterized by his attitude towards children, great kindness and care. And these are carried out with strict demands. It is also important for the class supervisor to establish the correct relationship with the pupils and to reconstruct them according to the growth and development of the pupils.

LITERATURE REVIEW

Leadership (Persian: guidance) - achieves high indicators (results) in the field of activity (V.Pareto); charismatic (M. Weber); intellectually and morally superior to others (Dyuverje); the most active in political relations, striving for power (Mills); the organized minority of the society (G.Moska); achieved a high level in society due to biological and genetic origin (Nissche); influencing social development due to occupying a high level in society (Dupré); people with high status and prestige in society.

According to experts, the teachers manage to meet pedagogical requirements for pupils, parents, educators of the extended day group constantly communicate with the public. Class supervisor assists pupils in studying when necessary. The class supervisor keeps a record of his/her work and presents it to the school administration. Pupils are trained to improve their health and are taught physical and mental work. Communalism is a concept formed on the basis of mutual closeness and cooperation of people,



meaning social unity in the peoples of the world, including the Uzbeks. Communism is a way of life and lifestyle based on mutual cooperation and support of people, and is the opposite of individualism, personal selfishness, and egocentrism.

Children who study well should be encouraged in the class, i.e. in the team, during the meeting of the class supervisor. Children are friendly to each other. He/she strives to start reading them well, striving for each other. Bad pupils also aspire to good pupils, and they also strive to study well. In addition, the class supervisor should make a library for the class in order to improve the pupils' level.

Pupils can benefit from reading the books in this library outside of class or in their free time after class. It is only by absorbing the revolutionary, labor, and fighting traditions of our young generation, imbibing the best qualities of the older generation, their ideological faith and fortitude, love for the Motherland, and their aspiration to participate in strengthening its economic, political, and military power. Pupils can continue and reproduce the work of their grandfathers and fathers.

MATERIALS AND METHODS

Family is also a part of society. Raising a child in a family is very important. The family, unlike other educational institutions, is able to influence all aspects of a person throughout his life, and usually does. This enormous scale of the task of family education is combined with the deep uniqueness of its ideological and psychological impact.

Forms of work with parents usually include the experience of the class supervisor's personal characteristics, the unique characteristics that have arisen in the pupils' families, the knowledge and experience of parents, the above-mentioned mistakes and difficulties in raising children, character characteristics are determined by taking into account the environment in the school pedagogic team, the traditions and customs of working with parents.

Knowledge is a socio-historical, practically checked and logically confirmed result achieved in the process of knowing reality; the reflection of this reality expressed in the human mind through imaginations, stories, discussions and theories; information collected by people about natural and social phenomena; reflection of reality in human thinking. In the implementation of pedagogical education to parents, not only provide knowledge, but also arm them with practical qualifications and skills in the field of education, stimulate their pedagogical activity, encourage them to engage in independent activities, and establish family relationships in accordance with the purpose. It is very important to put.

Parents meetings should be possible organizational, final quarter meetings, topic discussion, practicum meeting, parent general education class plan meeting, etc.

One-on-one pedagogical conversation is the most popular, convenient and effective form of the class supervisor's work with pupils and parents. Quick resolution of issues that arise with the help of conversation, establishing reliable relationships with parents, obtaining additional information about the conditions of family education, providing pedagogical knowledge to parents, developing a program for the child's individual development and a system of joint pedagogical actions. The educational influence of mothers/fathers and the correction of the behavior of difficult-to-educate children and the resolution of disagreements between pupils are solved. Every parent loves their child, so they look with sincere respect and trust to the class supervisor, who considers it important to consult about their possible joint efforts to strengthen the new, social aspects formed in their child. Lack of pedagogical knowledge in parents leads to many mistakes in family education. It is impossible not to take this into account when working with parents. In this regard, the following difficulties and mistakes of parents in raising children can be distinguished:

1. Lack of parents' interaction with their children. They rarely talk about themselves and their work. School children are less interested in the life of the community, and parents are not interested in their child's interests, their attitude to public affairs and work, etc.
2. Inability to organize children's labor education by involving them in labor processes.
3. The presence of negative examples in parents' lives destroys the pedagogical effort of the school.
4. Examining the lack of consistency in the educational influence of parents, cleaning up for any wrongdoing does not help to create moral immunity.
5. The system of prohibitions as the basis of family education is the result of not being able to educate on the basis of social models, not being able to organize a child's life in such a way that he/she always practices correct behavior.
6. Actions are not coordinated with the school or disagree with it.
7. The fact that some parents weaken their educational activity as their children grow up, which leads to children's distance from their parents and their interest in school decreases.
8. Delaying in making decisions. Thinking that the child will come to his/her senses and recover after he grows up is usually not justified, it often leads to a situation of pedagogical neglect that requires re-education. Pedagogical lecture is one of the most popular forms of pedagogical education.



RESULTS

In recent years, providing pedagogical knowledge to parents has gained a large scale, providing pedagogical knowledge to mothers is carried out in various forms in enterprises, clubs, houses of culture, and through parental pedagogical universities. One of the important problems facing the science of pedagogy today is the problem of working conditions of teachers and pedagogy. Because all pedagogical ideas are embodied in the teacher, and these pedagogical ideas are implemented and implemented through his activities. The multifaceted and complex activity of a teacher is based on the important tasks of raising the young generation to be polite and attentive, arming them with scientific knowledge. Implementation of these depends on the various activities of the teacher: teaching children, organizing and conducting activities outside of school and the classroom, carrying out pedagogical propaganda among parents, and so on. All these require teachers to have deep knowledge, to love their field and children.

DISCUSSIONS

The peculiarity of the class supervisor's work is that he forms not just a team of children, but a team of pupils. The main task of pupils is to study. Therefore, the class supervisor first determines how the children feel about their studies, how they behave, whether they do their homework seriously or not.

The role of the class supervisor is important in organizing the class team and organizing the class meeting. In order to hold a class meeting, the team must first be assembled. The class supervisor sees many issues at the meeting. At the class meeting, several issues will be considered, problematic aspects will be analyzed and it will be necessary to find a solution.

CONCLUSIONS

In conclusion, the class supervisor should always be aware of his/her pupils. For example, if a pupil's learning is poor, in order to improve it, the teacher should first meet with the parents and inquire.

Class supervisor should talk to parents about why he/she is not studying well, why he/she does not attend classes on time. If the child's family has all the conditions, and the child wants to study well, but is not able to achieve the result he/she thought, the teacher should put the child next to a friend who studies well.

In addition, class supervisor organizes additional lessons for such passive pupils in many different subjects, such as mathematics, mother tongue, reading, etc., the teacher must act to further increase the demand and interest of children in reading.

And finally, the most important thing is what are the goals of their studies. These goals are considered to have a social essence or not. The teacher may face various situations at the initial stage of working with the class. The head of the class chooses educational methods according to the level of the determined level of the team's development. It is an additional requirement to take into account the age characteristics of teachers.

A class supervisor plays a major role in the development of a person. Mental education plays an important role in all-round development of a person. The task and content of the class supervisor's moral education forms environmental consciousness and culture from teachers.

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DEVELOPING LEARNERS' MOTIVATION IN EFL CLASSES

N.Karimova¹, E. Alimova²

¹Senior Teacher,

²Teacher,

^{1,2}Namangan State University, Uzbekistan, Namangan

ANNOTATION

In this article dedicates the analysis how to motivate learners in language learning environment. The work specifies new views and focuses on teaching EFL learners and to improve learner's proficiency via the strategies and methods of motivation and how to inspire learners to develop the drive to achieve. The importance of motivation in EFL is vital for the achievement of both teachers' and students' goals and objectives.

KEY WORDS: *involving, motivation, achievement, goals, competence, grammar, phonetics, develop.*

The interest of students to master the language is high and this helps me to engage my students, motivate them to learn the language and of course make my classes fun for them. Because of having different background of English language and various diversity, it is not easy to conduct the activities or lessons with ease and that is why I take different approaches in order to get them to learn. The students in the classrooms today are eager to gain more and more. [6] As they come from different cultures and have different learning styles, they started studying at university with differing levels of emotional and social maturity. So, I sometimes face multiple challenges in mixed-ability classrooms, at every course level. [7]

While teaching my first year students I defined that despite having enough vocabulary they were frustrated to start talking or express their opinion on suggested topic or given task, they had some difficulties utilizing such language skills and aspects effectively like speaking, writing, grammar, and vocabulary. [8] I noticed that, the most frequent difficulties were inability to formulate their idea in English and of course frustration about being unable to enter the group discussion. In order to overcome these difficulties I chose to conduct speaking class with first year students as one of the most engaging English language classes which I had taught. They were students of level B1. [8]

I designed and conducted one English speaking class that appropriately differentiates instruction for varying language and proficiency levels. [9] Through various interactive speaking activities like problem solving activities and group discussion [5] I strived to develop students' productive and receptive skills at the same time. In fact, my students learn at different speeds and that they differ widely in their ability to think abstractly or understand complex ideas. [10]

Before my students came into the classroom, I stuck the words toddler, baby, teenager, adult, senior on the board randomly. When we started our lesson I asked them to give definitions of the words and talk about their memories of those periods or just make sentences using them. [11] Then I divided them into three groups and asked them to think of write down 2 or 3 problems of the phase of life they had chosen. [4] I tried to create friendly English atmosphere in the classroom and friendly relationship among students through giving flexible, clear instructions using suitable learning approaches in response to my students' differing needs. I tried to choose one of the most interesting speaking topics in order to conduct efficient speaking class through many group activities. [12] During the speaking class I used many different group configurations over time and students had experience many different working groups and arrangements. And also they had an opportunity to develop their speaking skills as well as enhance their vocabulary. So, when I planned the lesson, I was focused on the integration of language skills and aspects such as speaking, grammar and vocabulary and writing as well. [13]

Thus, the speaking lesson was very interesting and engaging, because it was comprised more communicative activities such as discussion, prediction and to give learners opportunity to practice. [14] Indeed, students were also well-motivated, the main reason was that this lesson was built up as student-centered and requiring meaningful communication, because students could achieve through tasks or activities that require negotiation while at the same time providing opportunities to use the target language features. [15]



Relying on my experience, I can say that every teacher should choose proper and suitable teaching materials, take approaches, techniques and classroom activities according to their students' level, background knowledge and learning styles. [3] And also they should account for them for adjusting instruction during the class time. And in their classes they should use different types of assessment to check students' understanding according to the task achievement, gained vocabulary and grammar knowledge which students perform during the lesson. [16]

Please refer to the lesson you chose for homework task one. In a one-page reports please do the following: First, explain how you understand *linguistic competence* in general (i.e., what does *linguistic competence* mean to you); second, explain how the lesson you chose for Homework Task One can be transformed to have linguistic competence as the focus. [17]

Linguistic competences are related to the use of language through the expression and interpretation of concepts, thoughts, feelings, facts, and opinions in order to perform oral and written discussions. [2] Such interactions may take place in diverse social and cultural contexts, which will determine the characteristics of the language written or spoken, such as the grammar, pragmatic, and sociolinguistic characteristics. [18] Linguistic competences involve a set of skills, knowledge, and attitudes that are interrelated and mutually supported in order to conduct a successful scientific communication that may be destined to different communities or audiences (scientific or the general public), who will be able to understand the communicated knowledge and even use it, provided that they have been correctly materialized from a linguistic point of view. [19]

In order to conduct my class effectively for home task one I managed my lesson based on such communicative competences as linguistic. [20] And the following stages are included:

1. I divide the class into small groups according to their levels and try to check students' background knowledge about linguistic competence and the building blocks of language utilizing several questions. [21]
2. I distribute the handouts with short texts and tasks to the groups. There given short texts consisting of four sentences related to the topic "Stages of Life". [22]
3. I explain them their task and ask them to read the sentences within the group and analyze each sentence by asking several questions like: Whether this sentence is correct in its form and what the building blocks of this sentence are. [23]
4. I ask each group to prepare a small group presentation/ discussion on the stage of life and the activities people can or are able to do and each group member should participate in this presentation with their speech and critical work. [24]
5. I ask other 2 groups to listen to opinion of presenting group and then express their agreement or disagreement on the topic and add their opinion as well. [25]
5. Finally, I ask them to perform their presentations utilizing visual aids like poster, table or schema. [26]

By following the principles I mentioned above, I consider that students can enhance their knowledge about grammatical patterns like form, meaning and use. By using linguistic competence the teacher will conduct effective and engaging speaking class and have an opportunity to develop students' speaking skill with the combination of grammar. [27]

To teach more effectively teachers should understand how learners learn and what cognitive processes they go through. Teachers need deeper subject knowledge and greater confidence in classroom management and proficiency in new teaching strategies with a focus on learning rather than on teaching only. [28]

I have worked with teachers, provided monthly retraining courses with them at my Resource center which [1] I opened as NGO in my region and my function was to make them aware of new techniques, principles and approaches in teaching English. I always give autonomy to my students as this creates a friendly atmosphere and they feel free to ask and learn some useful expressions or vocabulary and also try to use them in their communication. [29] Showing how learners can "develop their abilities" can be exemplified in my writing class. Modern technologies of learning to write in a second language (L2) see writing as a social practice that is included in the cultural and institutional contexts in which it is produced. Writing is not only exclusive to the author, but it is interactional and collective, which expresses a culturally agreed upon purpose, reflecting a kind of connection and recognizing an arrangement in each community. Thus, in my research writing class, [30] I moved away from the cognitive-rhetorical process of L2 writing deal with in formal linguistic-textual emphases to a stance that followed the specification of the functional-textual-rhetorical resources needed. I observed learners as emerging scholars and delivered them feedback as if they were already socialized into the research writing community; and included them in ethical discussions in class about the standards maintained by the comprehensive applied linguistics profession - particularly in the design, data collection and analysis, and dissemination phases of research. The learners were treated as if they had abilities they did not yet possess, which is a necessary condition of the development of those abilities. [31]

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THE MAIN ROOTS OF DESTRUCTIVE BEHAVIOUR

Qaxxorov Sarvar Sayfiddinovich

PhD Student, International Islamic Academy of Uzbekistan, Uzbekistan, Tashkent

ABSTRACT

The article discusses the views of the scientist E. Fromm, who studied the origin and causes of destructive behavior in the individual, and their analysis. as well as given psychologically classification of the types of aggression in a person's behavior. At the same time, the article describes the classifications of scientists who conducted research on the destructive behavior of a person and induced analyzes of the various causes that led to the self-destruction of the individual.

KEY WORDS: *Destructive behavior, defense mechanism, "Anatomy of Human Destructiveness", aggression, biological adaptation, destructiveness and impudence, self-destruction, "I conception", self-defense, self-transformation, self-identification, social roles, behavior model;*

Destructive behavior is a practical or verbal manifestation of an individual's inner activity aimed at destroying something. Such behavior is in some cases the result of a defense mechanism identified with aggression, which is sometimes used against internal and sometimes against external forces. As an object of destructive behavior, the subject often chooses communication between people, relationships between them, one's emotional and physical state, objects of the material world, and so on.

E. Fromm, a researcher of the origins and causes of destructive behavior in the individual, in his book "Anatomy of Human Destructiveness" says that in modern society, interpersonal relationships are characterized by competition, exploitation, mutual hostility.

Analyzing the destructiveness of the person, E. Fromm identified two types of aggression¹:

- Positive type of aggression (or defense), in his opinion, this is an internal natural impulse with a phylogenetic basis that provokes an attack or escape, in the event of situations that threaten life, "such aggression serves to preserve and live the species itself;

Analyzing the views of the scientist, it should be noted that such aggression is inherent in all kinds of beings, on the basis of which lies the natural instincts of self-preservation, protection, generalization, the continuation of procreation. For this reason, it is necessary to evaluate this kind of aggression positively. Another important aspect is that such aggressive impulses are manifested by an example of an internal reaction to external stimuli, that is a kind of situation can be understood mainly as a biological survival and survival necessary for the process of biological adaptation.

- Negative aggression - "it is a destructive and cruel act that is unique to humans. They have no phylogenetic program, they do not serve biological adaptation, and they have no purpose."

Negative type of aggression is manifested in 2 main types:

1. sadism, or a strong passionate desire to have infinite power over other beings;
2. necrophilia or a desire to destroy life;

E. Fromm assesses the characteristics of a person, such as disorder and cruelty, which are characteristic of this type of negative type of aggression, emphasizing that they are not products of individual instincts or inclinations, but of the characteristics inherent. Fromm called them character tendencies or passions. Commenting on his own opinion, he comes to the paradoxical conclusion that destructiveness is not inherent in both animals and primitive people, it is the product of the cultural and technical development of mankind.

In conclusion, as Fromm points out, vandalism, destruction, and harm to oneself and the lives of others are unique to man and can be expressed not only in his biology but also in his psychological state. Biologically expressed aggression is a necessary mechanism for preserving existence and ensure the continuity of life on earth when species, races. And conversely, the destructive aggression belonging to the process of interpersonal relations is the complete opposite of this situation and can be understood through many phenomena known to us today as terrorism, extremism, religious fanaticism, fundamentalism. The

¹ Фром Э. Анатомия человеческой деструктивности. М.: АСТ.



course of such processes and their impact cannot be assessed in any positive way for human development. Here we can quote Fromm's words as proof of our point:

- "In this book, I use the word "aggression" to describe a person's reaction to self-defense behavior and threats, and I describe this type of aggression as positive. However, the desire of man to absolute superiority over another living being and the desire to destroy (malicious aggression), I divide them into separate groups and call them "destructiveness" and "impudence". That is, the desire of a person to belong to the world of subjectivity and object in general to other people, the way of life, culture, traditions can be regarded as destructive as a full-fledged style. It is a pity that such processes are escalating exactly today, that is, at a time when humanity is reaching the peak of its civilization. And this is a circumstance that serves as evidence of our thoughts, and destructive behavior is the product of human civilization. The desire to dominate the beliefs, lifestyles, cultures, traditions of others, in general the subjective and objective world of the individual can be considered completely destructive. Such processes are taking place today, at a time when humanity is reaching the peak of its civilization. This is a situation that serves as evidence of our views, a destructive behavior is -a product of human civilization.

Zlokazov Kirill Vitalevich, a researcher on the psychological aspects of destructive behavior, in his article "Destructive behavior, its manifestation in different contexts" classifies a person's destructive behavior into 3 types:

- "The article analyzes the destructive behavior of man in a generalized way in relation to social objects of different scale and quality. To this end, various destructive behaviors are considered within three analytical areas:

1. Intrapersonal (Attitude towards oneself and one's body)
2. Interpersonal
3. Metapersonal (The role of man in social structures)"

It should be noted that the above classifications are cited to distinguish and interpret in a broad sense the 3 types of destructive relationships of the individual (in relation to himself, other people and society). Such a classification is applied to characterize the complex, multi-level components of the "I" structure of the personality and the facets that affect the person associated with it².

In his approach to the destructiveness of the person, the scientist also paid special attention to the persons "I conception" and the components that carry him, in which he tried to cover the person's relationship to himself, others and society. And it is in these areas that he has classified the destructive behaviors that occur in relationships into 3 types. We will try to give more details about these below.

According to Zlokazov, the intrapersonal sphere of destructive behavior includes the following three types of behavioral manifestations:

1. Self-destruction
2. Self-harm (intentional self-injury)
3. Self-transformation (change of certain parts of the body, change of mood, etc.)

Self-destruction is manifested through suicidal actions, and this is the highest form of intrapersonal destruction. In the above chapters, we talked about the psychological factors that drive a person to self-destruction. This type of destructive behavior, which is widespread today, can be seen in the practices of many religious fanatics. But a pertinent question arises. Why does a person try to express his or her beliefs by harming his or her body? To this question, J.Muehlenkamp responded in his article "Body image as a mediator of non-suicidal self-injury in adolescents". In his opinion, the factor of self-harm, which is mainly transmitted between adolescents, plays the role of a mediator (mediator) between self-harm and negative emotions, the perception of one's own body in these adolescents. Adolescents can experience negative emotions or, when their body is negatively perceived by them, cause various damage to themselves (some members can be treated by means of sharp edging, reduce scars or use injections)³. This indicates that the person has psychological problems in self-identification. Just as a person tries to satisfy his inner psychologically unmet needs through external factors, subjective dissatisfaction with his personality can be reflected through various damages inflicted on the body.

According to the scientist, intrapersonal self-destruction - varies according to various factors. These include: gender, age, social environment, and so on. Women, unlike men, prefer a passive type of self-destruction, in which they prefer to isolate themselves mainly from the social environment. And men, on the contrary, tend to destroy themselves through an active type of self-destruction, namely: consumption of various alcoholic beverages in the management of vehicles and in the process of performing dangerous work, interference in criminal activities, etc.

Interpersonal (interpersonal relationship) destructive behavior, the second type of destructiveness, differs from the above type. Below we will dwell on this. The main means by which a person reacts to the environment is communication. A means of communication is an active purposeful process of speech activity, that is, the creation of sentences and their perception. It can be

² К.В. Злоказов. Деструктивное поведение в различных контекстах его проявления // Вестник удмуртского университета. Серия философия. Психология. Педагогика. 2016. Т. 26, № 4. – С. 67

³ Muehlenkamp J.J., Brausch A.M. Body image as a mediator of non-suicidal self-injury in adolescents // Journal of Adolescence. 2012 N 35(1). P. 1-9.



noted that the main instigator of destructive situations in a person relationship can be defined as this destructive communication. The analysis of psycholinguistic research allows us to interpret 2 different interrelated influences that bring about such cases in the process of communication.

Accordingly, 1) an increase the speaker's self-esteem and 2) decrease the recipient's self-esteem. To do this, the communication process must undermine the recipient's self-esteem.

Summarizing the above points, we emphasize that destructive intrapersonal behavior takes place in the process of communication and goes through the manipulation of the level of self-esteem of the interlocutors.

Thinking about destructive metapersonal behavior, Zlokazov describes their course through 2 different types of processes:

1. rejection of the individual's own social role
2. the fact that a person perceives his social role (excessive) and completely unites with him.

The individual's rejection of his or her social roles is expressed in his or her actions that are antisocial, dysfunctional and ineffective in relation to society. The central point of a person's destructive activities is his refusal to fulfill his or her social role. To these, the following can be cited as an example: in relation to labor activity, the reading foliation, the imposition of punishment and the refusal to perform other roles of the same type, the first type of destructive metapersonal behavior, that is, it can be an example of the rejection of social roles. In the content of each of these cases, destructive behavior is manifested, for example, rejection or rejection of educational or labor activities, the denial of existing legislative rules, systems and norms can be observed in such cases as the violation of the activities of this backward society.

The second type of metapersonal destructive behavior is when a person assumes their social role (extreme) and becomes completely attached to it. The occurrence of this type of destructive condition in a person can be described in detail through a model of social identification⁴ developed by scientists such as D. Boduszek and P. Hyland. According to him, a group member pays great attention to recognition in the group, applying patterns of behavior that are accepted within the group as well as to other people when he is not directly present with the group members. The disastrous consequence of this situation is a peculiar form of behavior that occurs in the individual, who not only seeks to fulfill his social role, but also has a high desire to protect the interests of the social structure, both inside and outside the group.

In our opinion, this type of behavior model, characteristic of fanatical personalities, is slightly more dangerous than the above 2 species, namely interpersonal and intrapersonal forms of destructive behavior. Because in the above types of metapersonal destructive behavior, it can harm a whole society if the person can cause mainly self-harm. The reason is that the introduction of the provisions of the law in the Society of the group in which he is a member is of paramount importance for him or her, begins to manifest itself as a value. It is against this background that the process of blindfolding and practical imitation of various ideas occurs. This view of destructive behavior allows us to gain some understanding of the psychology of the fanatical individual.

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FORMATION OF FAMILY RELATIONS IN ISLAM

Mirzakhanova Dilfuza

Trainee Doctoral Student, International Islamic Academy of Uzbekistan, Uzbekistan, Tashkent

ABSTRACT

The family is a factor that ensures the continuity of generations, values, customs and traditions, as well as the transfer of the spiritual heritage of our people from generation to generation. Because of this, family relations and the upbringing of young people have always been one of the urgent social problems, and the issue of its support has been in the constant attention of our state.

KEYWORDS: *Marriage, marriage contract, dowry, "fat", "milk payment", "Marriage Book", justice, equality in marriage. "International Day of the Family", healthy family.*

In independent Uzbekistan, family relations go back to the deep historical roots of Islamic and national values, imbued with humanitarianism. In the Holy Quran and Hadiths, many ideas about education and family building have been put forward. At the same time, in Islam, it is encouraged to do permissible and forbidden actions in family relationships, i.e., to engage in only halal activities and to avoid haraam activities.

It is known that the family begins with the structure of marriage. There are also different views and approaches about the social, spiritual, moral, and legal foundations of marriage, which are the basis for the formation and development of the family. Among His signs (another one) is that He will create mates from among yourselves so that you may be comforted, and that He will create between you kindness and kindness. Indeed, there are signs in this for a people who reflect." (Holy Qur'an, Surah Rum, verse 21).

In Islam, the stability of the family is prioritized above all else, therefore building a strong family is given great importance by all Muslims. According to Islamic law, the validity of a marriage is a combination of the following four conditions, such as: 1) the absence of direct impeding circumstances; 2) consent of certain persons; 3) determination of dowry; 4) determined by compliance with official rules.

When concluding a marriage contract, Sharia requires the following four conditions to be met:

1. The marriage contract must be pronounced in the Arabic language. It is allowed to say the marriage contract in another language only as an exception (if neither the husband nor the wife or their trusted representatives know Arabic).
2. Those who read the covenant (husband, spouse or their trusted representatives) must be of legal age and of sound mind.
3. When pronouncing the rule, it is necessary to say the name of the residue and the land.
4. The husband and wife must agree to enter into marriage and no one should force them to do so. There are very few restrictions on marriage in Islam, but intermarriage is recommended to match each other in terms of age and social status.¹

In Islam, a marriage can be annulled for the following reasons:

- 1) death of a husband or wife or apostasy from Islam;
- 2) disappearance of the husband;
- 3) marriage is invalid or improperly concluded;
- 4) divorce of the husband from the wife.

According to the philosophical content of the family and marriage chapters in the Sharia, the family is a small link, an integral part of society. Therefore, Sharia issues related to the family: the procedure for building a family, the rules of marriage, the determination of adulthood, the consent of men and women, property ownership, the manners of spouses, parents and children, distinguishing between halal and haram in food. Many issues such as for centuries, Muslims have followed Sharia's requirements for family and marriage in establishing personal and community relations.

Aspects of national values that contribute to the development of family relations in Islam, the content of such concepts as "dowry", "habit", "qalin", "aqeeqah", "social protection", "inheritance" should be thoroughly analyzed. In particular, in some

¹ Islamic law. Text of lectures., UzMU, 2010. - P. 39-40.



nations, there are cases of determining "dowry" and "thickness" in order to build a family and ensure its strength. According to Islamic teachings, dowry is the property of a woman, its use is only with the consent of the woman. In order to strengthen the relationship between husband and wife, some young people of the present age are also using the contract form of marriage to start a family. In Uzbek families, there is a custom to give the girl's side when starting a family. This custom existed even before Islam². It is actually one of the most common customs among the Turkic peoples. But this custom is based on some studies: "milk fee", "groom's gift", and in most cases, it is spent on the bride's dress and wedding expenses.

After all, the issue of family and marriage in the system of social relations of every society includes not only economic, household and legal issues, but also a very important spiritual and moral issue for the society and the individual. This is clearly expressed in the first sources of Islamic values - the Qur'an and hadiths. For example, the fact that the Qur'an's chapters "Nisa" and "Divorce" are devoted to the issue, as well as several verses in other chapters are devoted to family and household issues, is evidence of this. For example, in Surah Nisa, it is emphasized that starting a family is based on strict marriage and says: "O believers, it is not right for you to take wives as an inheritance" (4: 19).

The most authoritative source of Islamic jurisprudence, "Hidaya", also pays great attention to family and marriage issues, and its two books - "Book of Marriage" and "Book of Divorce" - are directly devoted to these issues. It is known that the family is the first and primary unit of society. Society is made up of these small particles. But it is not just a particle, it is a union of living things. A family is not only a husband and a wife. A family is a group of people consisting of a couple, their children, and the closest relatives. Family is a social unit based on natural, economic, legal and spiritual relations of people.

In the work "Hidaya" all aspects of these relationships in family and marriage issues are approached from the point of view of justice. As the main criteria of justice, good concepts such as honesty and piety, avoiding the unclean, and purity are considered.

According to Hidaya, the purpose of marriage is not only to officially emphasize the household and material rights of the couple in relation to each other, but also to prepare the ground for the moral and spiritual purification of the married people.

"...The intended purpose of marriage is to walk chastely and cleanly"³; "The first and primary sign of the purity and chastity of every married woman and man is to avoid adultery. After all, "fornication is forbidden in all religions."

The spiritual and legal significance of the judgments issued in Shariat on family and marriage issues is that, based on the Qur'anic verses, the inviolability of the right of both parties to the marriage contract, especially the woman's right to choose a husband, is considered one of the conditions of marriage. For example, it is written in Hidaya: "...the marriage of a wise, free woman, whether she is a girl or a young man, is bound with her consent even without a guardian... The reason for the permissibility of marriage is that the woman used her impartial right to agree on this issue, because he has the right to marry of his own free will because he can tell the difference between black and white. Therefore, a woman has the right to dispose of property and to choose a husband for herself... Therefore, no one has the right to force her."

One of the rulings in Shariat, especially in Hidaya, which has great educational and educational importance in the matter of family and marriage, is the need for a woman to have knowledge about what rights and rights she has in relation to marriage: "The original nature of marriage is it is necessary to have knowledge about its essence. Because a girl child can manage only when she has knowledge. This world is a destination for learning, ignorance is no excuse".

This judgment of Marginani has educational and educational significance for our time as well as social significance. After all, acquiring legal knowledge and legal culture in all aspects of social life is becoming an objective necessity for building a civil society and a democratic state. Due to the fact that family relations are one of the most important social relations in society, it is extremely important for a woman to have legal knowledge in this matter.

Another aspect of the rulings of Shariat, especially "Hidaya" on family and marriage, is of great social importance - attention is paid to the fact that men and women should be as equal as possible from social, economic, spiritual and intellectual aspects. It is to focus: "Equality is considered in marriage. The Prophet, peace and blessings of God be upon him, said: "Beware that women should be given only to those who are equal to them."

Analyzing the nature of Marginani's rulings on family and marriage in Hidaya, it can be concluded that the issue is resolved primarily from the point of view of high character, moral purity, and human values. The relationship between a man and a woman is aimed at strengthening the family, ensuring its moral purity and honesty, relying on certain laws.

In Islamic teaching, there are various religious and philosophical views and approaches regarding the formation of family relations, preparation of adult children to start a family, legal and moral education. One of these is family demographics. It is known from history that the Uzbek nation has been considered a young nation since time immemorial. Therefore, the growth rate of the population of the Republic has always shown high indicators. Since the 50s of the 20th century, a rapid increase in population has been observed in various regions of the globe. For example, the population growth of Uzbekistan in 1950 was 3.8; 2.4 in 1980; 2.1 in 1990; In 2000, it was 1.88 percent. According to the strategic forecast, it was 2.2 percent in 2006-2010⁴.

² Jabbarov I. Uzbeks: lifestyle and culture. - T.: Teacher, 2003. - P. 90.

³ Burhoniddin Marginani. Hidaya, Volume I, Book of Marriage.-T.: Adolat, 2002.- P.725.

⁴ Abdusamedov N.A. Economic security (social-philosophical analysis). - T., 2008.- P. 19.



On the basis of these statistical data, certain conclusions can be drawn as follows: firstly, the population increase in terms of quantity requires not only the improvement of family relations, but also the preparation of young people to start a family; secondly, taking into account that the number of minors is 42%, it is necessary to seriously deal with their upbringing; thirdly, due to the increase in the population, the number of people starting a new family and getting married is increasing.

The stronger the family, the stronger and more developed the society. That is why the General Assembly of the United Nations decided to celebrate May 15 every year as International Family Day since 1994. Article 16 of the "Universal Declaration of Human Rights" states: Adult men and women have the right to marry and start a family without any restrictions, regardless of their race, nationality, or religion. They enjoy the same rights when they get married, while they are married, and when the marriage is annulled.

After the independence of our republic, great attention was paid to the restoration of national and religious values, in particular, to raising the rights of women and their position in public affairs. In the words of our head of state: "The one who makes a family a family with God's grace is a woman⁵. In fact, the person who makes a family a family, who spends her life on the development of her children in all aspects, is a mother. At the same time, since the husband is the head of the family in the Uzbek family, the role of men in the upbringing of children is considered highly incomparable, and this is an important condition for family stability.

According to the decision of the Cabinet of Ministers No. 820 of December 31, 2020, the Ministry of Neighborhood and Family Support and the district (city) neighborhood and family support departments of the Youth Affairs Agency will establish youth preparation centers for family life. - the proposal on the organization was approved, the following were defined as the main goals of the organization of the centers:

- inculcating the exemplary form of the modern family and the conceptual ideas of "Family is sacred", "Healthy family is a healthy society", "Family is in the protection of society and the state" and "A prosperous family is the basis of the development of society" in the minds of those getting married;
- systematic preparation of married persons on family-legal relations, psychology of family life, family economy and budget, basics of reproductive health, strengthening of spiritual and moral values;
- ensuring family strength, preventing family divorces, respecting family values in married persons, creating a healthy spiritual and moral environment in families, and forming skills to be exemplary parents.
- Marrying persons under the age of thirty who have applied for the registration of marriage to the registration authorities of civil status in the centers and received consent to participate in training sessions, free of charge on the basis of a program with a training load of not less than sixteen hours is marked as 'researched'.

In short, the family is a factor that ensures continuity of generations, values, customs and traditions, as well as the transfer of the spiritual heritage of our people from generation to generation. Because of this, family relations and education of young people are always one of the urgent social issues, and the issue of its support has been in the constant attention of our state.

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ONE OF THE TYPES OF CRAFT IS THE ART OF FELTING

Kamalova Marhabo Negmurodovna,

Graduate Student, Bukhara Institute of Engineering and Technology, Uzbekistan, Bukhara

ABSTRACT

After Uzbekistan gained its independence, the restoration of national values and the application of their good traditions in modern life has become a topical issue. Today, at a time of rapid development of tourism in our country, foreign guests are very interested in national products, their types and patterns of decoration, their spiritual significance. However, at present, insufficient research has been conducted on the spiritual significance of Uzbek national patterns. Therefore, the systematization of gold embroidery patterns and the development of their spiritual significance is a topical issue.

While the study of the history of Uzbek national gold jewelry is the main task of qualified specialists, their systematization and styling, as well as their use in the artistic decoration of modern women's clothing is one of the most pressing issues today.

KEYWORDS: *Felting technology, felt, wool, soap solution, decorative items, environmentally friendly felting*

Felting (felting - English, from the German word felt) - is a special sewing technique of crafts, various large and small toys, decorative items, clothes or accessories are created from felt.



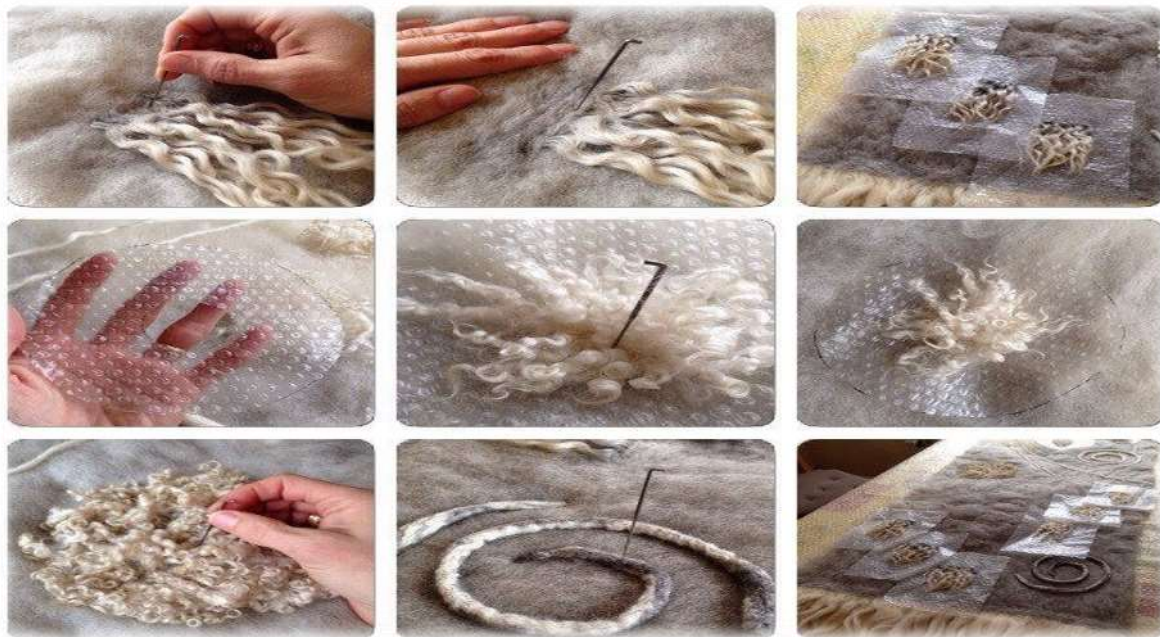


When creating a soft texture from felt, combining wool, silk and thread allows you to create different and wonderful works of beauty. Recently, due to the availability and ecological purity of the materials used, as well as the high aesthetic properties of the finished products, felt has become widespread throughout the world.

There are two types of wool felting - dry and wet. In dry felt, the wool is repeatedly pierced with a special needle until it is wet. In this process, the fibers stick together to form a dense and uniform material.

Wet soaking is done using soap or a special soapy solution. First, the woollen product is laid, moistened with a solution, and the felting process is carried out using friction.

Dry felt is used to create three-dimensional products such as toys, jewelry, figurines, designer dolls, as well as to apply drawings and patterns to felt crafts. Wet felt is suitable for making panels, clothes, in a word, flat products.



A variety of clothes created by felting technology is one of the favorite hobbies of fashionable and actively developing tailors. I want to talk about the history of this technique, what tools are used and what the finished wool products look like. Rest assured that felting is something everyone can do, and the amazing felting you see will inspire you to try this ancient but very modern technique.

Historical Perspective and Modern Development of Felting Techniques The history of wool felting is primarily associated with the settlers who first domesticated sheep. Natural wool has the ability to spin, that is, it can be shaped by felt. No other material can do this. The reason for this is that wool fibers have a layer of top layer. Under the influence of hot water and steam, pieces of wool fiber can stick together. However, the wool of the wild sheep almost does not roll, because it does not have a shell.

Scientists say that felting from wool is the most ancient way of creating textiles. But how did man guess that wool could be felt? The history of felting is also related to the legend of the Great Flood. It tells the story of how various animals, including sheep, were driven onto Noah's ark. They had to stay in small rooms, their hair falling on the floor they walked on. Pieces of wool occasionally fell under the hooves of the animals, and when the flood was over, the sheep were released, and the floor surface was covered with the first felt carpet.

Settlers were the first to appreciate the unique properties of felt. From housing, clothing (heels, coats and men's caps), interior items (carpets, rugs, pillows), livestock equipment (saddle parts, saddles and horse blankets, large felt bags for transportation, etc.) from containers (storage bags) and other small items, such as blankets for newborn calves.

People slept on felt, wore felt clothes, and horses were covered with felt blankets. Felt protected them from evil spirits and enemy arrows, saved them from heat and cold. They even used felt wool in blacksmithing and medicine (healing broken bones) and so on.

Felt appeared in Russia during the Mongol-Tatar yoke. Later, about two hundred years ago, in Russia, they learned to make felt boots from wool. Only in Russia, in addition to felt boots, felt clothes and hats were made, which were very popular.



The skill of wool felting has been passed down from generation to generation. Almost nothing has changed in felting techniques over the years. However, in our time, a new breed of sheep - merino - is being bred. They are famous for their fine and soft wool, which can be used to make very fine products.

Today, felting has become an interesting form of artistic expression. Felt artists even manage to invent new methods of felting wool. Felt accessories and felt decorations, clothes, felt pictures and toys have been in fashion for a long time. The combination of felt with ceramics, metal, glass becomes unexpected.

As for felt boots, their history in Russia began recently, about three centuries ago. The first Russian woolen products were bathing caps, hats and light shoes, which were called "chuni". The people who made them were called wool beaters in Russian.

The first mention of felt boots is found in the tale of Igor's march (12th century). But these shoes are cut and sewn. Valenki appeared in the form of one-piece felt boots only at the end of the 18th century in the Nizhny Novgorod region. However, residents of Myshkin, Yaroslavl region, claim that they were the first to make felt boots.

Initially, felt boots were very expensive, because there were few craftsmen who felt them, and the production technology was kept secret and passed down from generation to generation.

Valenki is protected and inherited. A young man in felt boots was considered an enviable groom in those days.

Royal men also wore felt boots. Peter I always demanded boots after his bath in winter. During the reign of Peter I, the production of felt boots was widespread. Catherine the Great also wore chesanki because her feet hurt. And Anna Ioannovna allowed her women to wear felt boots with formal dresses.

Lenin and Stalin in exile in Siberia also wore felt boots. Nikita Khrushchev spent his entire childhood in felt boots.

In winter, during the war, our soldiers wore only felt boots. Development of the northern regions was also impossible without felt boots.

Currently, boots are worn by units of the Ministry of Internal Affairs, Defense, Emergency Situations, various security forces, as well as fishing and hunting farms. White special scout boots were made for military intelligence at the same time.

In the last few decades, Russian winters have become milder and more slushy, so felt boots have been replaced by moisture-resistant shoes. However, people wearing felt boots can still be seen on the streets today. And for fashion designers, felt boots have become a hot topic of creativity.



I would like to share the personal experience of my colleagues and achieve professional enrichment on the example of making felt boots using the wet felting technique. In addition to the wet felting technique, in my creative work I use the dry felting technique, which allows you to create incredibly beautiful, voluminous products: toys, souvenirs, jewelry.

Selection of materials and tools

Different types of wool are used for felting. It should be noted that the quality of the finished product depends on the quality of the selected material.

A few years ago, it was almost impossible to find wool for felting in Russia, and this type of sewing was simply not available to many people. Now it is available in every sewing store, but its properties are different.

The best quality wool is produced by Australian and New Zealand merino, so it is especially valued among skilled felters. This wool can be used to make very fine art felt. Merino wool is the main type of wool used for felting.

Types of wool

1. *Sliver - guard hairless combed sheep's wool. It is used as a basis for felting. Put wool of a different color on top.*
2. *Tow - pile left after combing, consists of short hairs. It is used to create felt and also to stuff toys.*
3. *Semi-soft wool - felt wool with a diameter of 25 to 29 microns. It is widely used by fillers for dry and wet felting.*
4. *Fine wool - wool with a diameter of 19 to 25 microns. It is preferable to use semi-thin. Easier to roll, thinner products.*
5. *Up to 19 microns is the finest wool and the most expensive.*
6. *Vyblenka - bleached sheep wool, combed and stretched. Can be used as a base. Easily painted at home.*
7. *Camel - combed camel hair. Does not require a wool base.*
8. *Mahir (angora) - wool of angora goat. It can be used for decoration. It has a lovely silky sheen.*

Many other types of wool and animal hair are also used as felt additives, which allows you to achieve unexpected and wonderful results.

For example, silk or a mixture of wool and silk fibers, soybean fibers, bamboo fibers, nettle fibers, cotton, viscose, felt acrylic and other types of synthetic and natural fibers, angora rabbit, alpaca, llama, bison, dog hair.

Making products using the felting technique (for example, felt boots)

Before starting work, you should set yourself the following tasks:

- development of product design, which should be arranged according to shape, color, style;
- show your knowledge and skills in making felt boots modern and practical;
- Product analysis.

And now I am ready to share my experience with you, to tell in detail how to knit woolen microboots.

Materials and equipment needed for the production of felt boots:

- Wool for wet felting (80 - 100 gr),
- Packaging film (with explosive balls),
- Mosquito net or tulle,
- hot water,
- dishwashing detergent,
- pot,
- rolling stock
- Sponge for washing dishes.
- Needle for felting.
- Scissors.
- A pen and a sheet of paper.

CONCLUSION

Felting from wool requires a lot of perseverance and patience, but rewards the craftsman with excellent products. In my educational and pedagogical activities, I actively use "Felting", as a type of art and craft with deep roots, which does not require complex devices and rare materials, and is highly practical.

With the help of felt, you can dress, wear shoes and make the house comfortable. Felt boots and slippers, coats and vests, warm hats and funny hats, jewelry, toys, pictures. You're only limited by your imagination, and we know it's limitless.

I worked in felting technique for almost a year. What conclusions can I draw:

First, it is absolutely safe and environmentally friendly.

Second, it's very exciting. By creating a work, a person forgets his problems.

Thirdly, such work helps to develop creative abilities. From wool, you can make very simple (beads, flowers) and very complex (bags, paintings, panels, outerwear) products. Develops imagination. Any flower can be created from wool, it will be amazingly unique, because wool is as delicate as flowers. Woolen toys are very warm and cute.



Fourth, not only adults, but also small children can feel wool, for example, beads or thick ropes, from which you can make a toy (for example, a funny caterpillar or a butterfly) or an ornament - to develop motor skills very useful.

Fifth, it is very pleasant to work with wool - it is a soft, warm and lively material.

Seventh, it is useful from an economic point of view: for the family budget, this type of sewing is a real find.

In the classes, students voluntarily join the felting technique and participate in creative projects to create finished products, as a result of which they have the opportunity to decorate themselves, the environment, as well as make wonderful gifts for relatives and friends.

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LIGHT INDUSTRY ENTERPRISES ORGANIZATIONAL AND ECONOMIC ISSUES OF INCREASING AND PROMOTING COMPETITIVENESS

Tursunov Alisher Muhammadnairovich

Candidate of Economic Sciences, Temporary Acting Professor, Tashkent State Technical University, Uzbekistan, Tashkent

ABSTRACT

Improving the competitiveness of light industry enterprises will play an important role in attracting foreign investors. The competitiveness index of industries is much higher than in other sectors. One of the key issues is to develop organizational and economic mechanisms to increase the competitiveness of industrial sectors in a free market

KEYWORDS: *Light industry, foreign investment, return on investment, competitiveness*

In order to ensure the competitiveness of light industrial enterprises in our country, many decrees and decisions are being adopted by the head of state, the cluster system is being implemented using the experiences of foreign countries, road maps are being developed and implemented step by step in order to ensure the development of the industry.

To increase the competitiveness of the enterprise, it is necessary not only to determine the most important indicators and factors, but also to systematically analyze these parameters. The main task of the analysis is to determine the proportionality of the enterprises in the competitiveness level of the studied object, to develop and implement measures to improve the quality of the manufactured products. The level of competitiveness of enterprises is determined by summarizing the data determined by analysis or by product, matrix, expert assessment, and combination methods. Depending on the level of competitiveness of enterprises, it is necessary to develop or improve a suitable strategy. In the process of managing the competitiveness of light industrial enterprises, assessing the actual level of the enterprise in the market, determining the means of increasing the competitiveness of the enterprise, and developing a suitable strategy are very important stages. When developing the development strategy of enterprises, it is very important to take into account the fact that the demands of the market, i.e., the specific requirements of consumers for products, are developing in modern economic conditions.

Today, the economic policy implemented on a large scale assumes that the process of integration into the world community will accelerate not only in terms of the structural structure of the state, but also at the level of the private sector. The conditions created for the operation of the free market arouse the interest of Western and Eastern businessmen in our country. This indicates that it is time for our businessmen to expand cooperation with foreign investors.

At the same time, the establishment of light industrial enterprises with the participation of foreign investments includes the following stages:

- taking into account the reasons for establishing the enterprise;
- choosing a reliable partner;
- making a decision on the establishment of light industrial enterprises with the participation of foreign investments.

From the economic point of view, it is possible to distinguish three groups of reasons for establishing a light industrial enterprise with foreign investments. These are:

- The composition of internal reasons includes: use of the created investment environment; mastering new methods of management; to achieve the most modern and convenient arrangement; expand effective use of local labor resources; acceleration of foreign market penetration; expanding social, cultural and political knowledge; staff training.

- The composition of external causes is as follows: access to the world market; a healthy and effective competitive environment; good foreign economic relations; local authority requirements.

- The composition of strategic reasons includes the following: the possibility of using modern business methods in the country; have a solid raw material base; technology transfer; expand production.

A feature of the development of Uzbekistan's light industry is that it has reached a trend of rapid growth of capital return and labor productivity in the processing sectors of light industries.

The average annual growth of labor productivity in light industry was 11 percent in 2017-2020. The rate of growth in machine building, light industry, and food industries was much higher (15.3 percent on average), and 4.1 percent in fuel and



lubricant industries. A positive trend in the rate of rapid growth of fund return was observed in sectors intended for the production of products with a high degree of processing. Fund return in this sector increased by an average of 1.8 times, including 2.2 times in light industry.

The first-category strong competitive group in the processing industries includes the following raw materials and production sectors of the industry: oil and gas, non-ferrous metallurgy, cotton processing industry. These industries account for more than 70 percent of the country's industrial exports. [2] The share of export products in the volume of total industrial production, which is an indicator reflecting the competitiveness of the sector in the foreign market, has a tendency to increase: in non-ferrous metallurgy, from 72 to 85 percent, in ferrous metallurgy from 28.2 to 55 percent, in petroleum gas from 20.1 to 47 percent, in cotton ginning from 87 increased from % to 90%.

The competitiveness indicator of these sectors is much higher compared to other types of production.

The second group of industries focused on the production of consumer goods with competitive potential includes: processing industries of light industry, food industry, automobile industry. The index of competitiveness of domestic consumer goods is somewhat lower compared to the index of competitiveness formed in the production of raw materials. The share of export products in the total volume of production is 35 percent in light industry, 25.5 percent in machine building, and 5 percent in food industry. The competitiveness of these industries in the foreign market is approximately 20-25 percent lower than the average level of the industry.

In general, the problem of low competitiveness of industrial sectors remains. The internal costs of production of the main products in the processing sector are close to the world average price level, but for some product types, they are higher than the world average price. This trend is determined by the fact that the share of material equipment and energy costs remains at a high level.

Table 1

From market requirements based on deep processing of raw materials leather shoes with high added value by origin and production and export of fur products intended for 2020-2025

TARGET PARAMETERS

T/r	Product name	Measurement Unit	2019 Year (Waiting-Gan)	Prognosis						2025 Per Year Growth
				2020	2021	2022	2023	2024	2025	
I.	Production volume of industrial products	million dollars.	349.9	455.9	519.1	660.5	809.1	1 116.0	2 250.0	6.4 times
1.	Shoes	million pairs	86.1	105.8	154.2	205.3	230.2	258.4	289.7	3.4 times
	<i>including:</i>									
	women's shoes	million pairs	17.2	22.1	35.8	51.1	60.0	77.9	104.8	6.1 times
2.	Leather clothes	a thousand pieces	18.5	23.5	26.8	35.3	39.5	44.2	49.5	2.7 times
3.	Leather products	million dollars.	4.8	7.4	8.1	11.2	12.6	14.5	16.4	3.4 times
4.	Tanned leather, total:	million sq. dm	1 125.0	1 460.0	1 617.5	2 179.4	2 470.9	2 772.0	3 148.6	2.8 times
	<i>including:</i>									
	first stage recycled leather (vet blue)	million sq. dm	205.4	115.2	97.5	54.2	-	-	-	-
	leather processed in the second and third stages (crust, finish)	million sq. dm	919.6	1 344.8	1 520.0	2 125.2	2 470.9	2 772.0	3 148.6	
5.	Treated wool	tn	2 260.0	2 400.0	2 880.0	3 500.0	3 920.0	4 390.0	4 931.8	2.2 times
II.	The volume of export of leather-footwear and fur products and woolen products	million dollars.	190.0	230.0	280.0	335.0	520.7	910.7	1 500.0	7.9 times

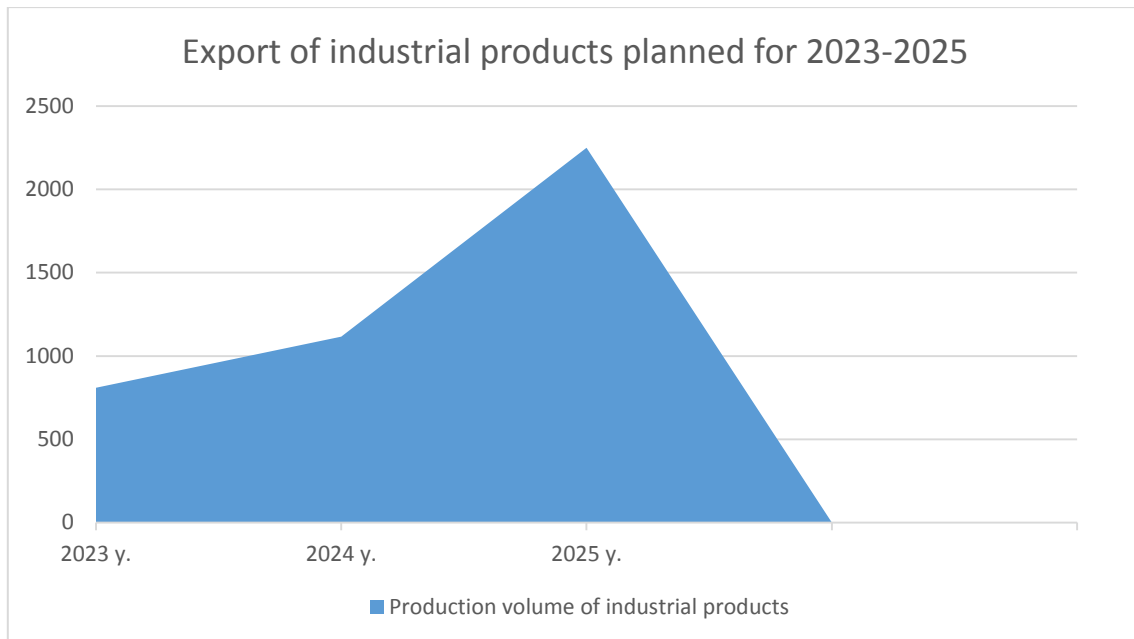


Figure 1 . Export of industrial products planned for 2023-2025

One of the urgent issues of today is the development of organizational and economic mechanisms for increasing the competitiveness of the industrial sectors of the economy and their wide implementation. It is characterized by a system that enables the training of personnel capable of innovative activities in the industry, the implementation of deep technological modernization and innovative development based on advanced technologies in industries, and the creation of new technologies.

The directions of increasing the competitiveness of industrial enterprises with participation of foreign investments show interrelated processes based on various factors. These processes have different effects on the economic efficiency of economic entities.

Negative factors affecting the competitiveness of the joint venture reduce the positive effect of other factors, besides, the effect of one factor may vary depending on specific conditions and circumstances. The variety of influencing factors makes it possible to classify them, that is, to divide them into the following groups based on different signs:

- external and internal according to the place of origin;
- constant and variable according to the time of exposure;
- divided into primary and secondary factors according to the degree of importance.

Taking into account the fact that light industrial enterprises simultaneously participate in increasing competitiveness as a subject and object of market relations, as well as have a number of opportunities to influence the dynamics of various factors, they can be divided into internal and external factors .

Internal factors directly affect the activities of industrial enterprises

related to the system that occurs in management, and external factors are almost independent of enterprises and the enterprise does not have a significant impact on them. In particular, the internal factors that influence the increase of competitiveness in industrial sectors include:

- property condition (size, composition, structure);
- the state of financial resources (size, composition, structure);
- management capacity (organizational, financial and innovative);
- personnel potential (specialization, specialization and level);
- marketing potential (domestic and foreign markets);
- the level of organization of research and design works.

Especially in the conditions of an unstable economy, the macroeconomic situation in the country is the main reason for the unfavorable situation in all sectors. The main external factors influencing the increase of competitiveness in these industries are the following:

- inflation, exchange rate changes;
- tax, credit-financial, customs, insurance, investment policy;



- scientific potential of the country;
- changes in demand level and dynamics of solvency;
- changes in internal and external demand.

In our opinion, the following main characteristics should be distinguished when analyzing the factors influencing the increase of competitiveness in industrial sectors:

- interdependence of external and internal factors;
- increased influence of external factors and their complexity;

—information about the factor influencing the activity of enterprises and the uncertainty of its level of reliability, that is, the more uncertain the external information, the more difficult it is to determine what consequences this or that external factor will have.

The main directions of production organization, improvement of techniques and technologies in order to fight against the factors that have a negative impact on increasing competitiveness and increase competitiveness in light industries are as follows:

- to increase the quality of products, improve the use of raw materials and expand the base of raw materials by creating and applying completely new technological processes for the production of new types of products;
- improving the existing system in order to rationally use production capacities, improve technical and economic indicators;
- the level of automation and mechanization of production , create an automated system for managing technological processes;
- wide use of new methods of specialization and cooperative relations in the network.

Thus, increasing the competitiveness of industrial enterprises in Uzbekistan, efficient use of the country's natural resources , increasing the export potential of industrial enterprises and their importance in the country's economy, sustainable development of the industry will ultimately increase the well-being of the population and the sustainable growth of the country's economy.

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UDC 591

THE FAUNA ORTHOPTERA INSECTS OF CABBAGE AGROCENOSIS NUKUS DISTRICT OF KARAKALPAKSTAN

Begjanov Muratbay Kuralbaevich¹, Bekjanov Muratbay Turganbaevich²

¹*Docent, Doctor of Philosophy in Biological Sciences Karakalpak State University General Biology and Physiology of Department*

²*Postgraduate of Karakalpak State University*

It is known from time immemorial that the fruit of the vegetable plant is a valuable food product with dietary properties. They cure many diseases and are used as nutritious feed for livestock.

The climatic conditions of Karakalpakstan are somewhat favorable for the spread and development of cabbage phytophages. White-headed cabbage is mainly cultivated in the region as a vegetable crop. Among the insects found in field crops, representatives of the Orthoptera family are distinguished by their morphological characteristics, biology, life forms, and biocenotic relationships in nature [1,2,4,7].

Taking this into account, the research work was carried out in the spring, summer and autumn seasons of 2022 in the conditions of Nukus district in cabbage agrocenoses.

Based on the research, collected data on species composition, quantitative number of species, density, distribution of orthoptera belonging to the order Orthoptera were summarized.

Collection of insect samples was collected using methods developed for general entomology and taxonomy [1,5,6]. In addition, the works of a number of scientists were used in the study of long-whiskered insects [3,4,7].

Order - Orthoptera - Orthoptera

Sub-group - Dolichera - Longbeards

Large family - Tettigonioidea - Ironclads

Family - Tettigonidae - iron beetles

Subfamily - Tettigoninae

Genus - Tettigonia L. 1758

Tettigonia caudata (Charp.1845)

Tettigonia viridissima L., 1758

Location, duration and distribution: Nukus district, (2♀.♂.1L. 17-22.05.22 y.).

Distribution: Central Europe, Turkey, Iran, India. Kyrgyzstan, Uzbekistan [5,6,8]. Permanent type.

Larvae and adults damage the large leaves of cabbage.

Tettigonia viridissima L., 1758

Location, duration and distribution: Nukus district, (4♀.1♂. 17-22.05.22).

Distribution: North-West Africa, Europe, Turkey, Russia, Iran, Central Asia, Kazakhstan, Russia, Uzbekistan [5,6,8].

Permanent type.

Larvae and adults damage cabbage seedlings and large leaves.

Decticus Aud-Serv., 1831 - gen

Decticus verrucivorus (Lin., 1758)

Place of detection, period and distribution: Nukus district, (3♀.2♂. 17-22.07.22 y.).

Distribution: Europe, South, Central Russia, Kazakhstan, Mongolia, Central Asia, Uzbekistan [5,6,8].

Larvae and adults damage cabbage leaves.



The large family Grylloidea - Grylloids

Family - Grylloidae - Gryllos

Subfamily - Oecanthinae

Oecanthus Aud.-Serv., 1931 - gen

Oecanthus turanicus Uv., 1912

Place of detection, period and distribution: Nukus district, (3♀.2♂. 17-22.07.22 y.).

Distribution: Kazakhstan, Iran, Pakistan, Arabian Peninsula, Central Asia, Uzbekistan [5,6,8].

Being an omnivorous species, its larvae and adults gnaw newly sprouted cabbage seedlings, its stems and root nodules.

Gryllotalpidae - The species composition of the calfs

Gryllotalpa Latr., 1802 - gen

Gryllotalpa grullatalpa (L., 1758)

Place of detection, period and distribution: Nukus district, (6♀.5♂. 17-22.05.22y.).

Distribution: Europe, North Africa, America, Russia, Turkey, Iran, Arabian Peninsula, Kazakhstan, Central Asia, Uzbekistan [5,6,8].

Larvae and adults severely damage the sown cabbage seeds, young seedlings, plant roots, especially in wet areas of the crop, in greenhouses and greenhouses.

Acridoidea MacLeay are true grasshoppers

Acrididae is a family of true grasshoppers

Catantopinae is a subfamily

Calliptamus Aud.-Serv., 1831 - descendant

Calliptamus italicus italicus L., 1758

Place of detection, period and distribution: Nukus district, (7♀.4♂.L3. 17-22.07.22 y.).

Distribution: Europe, Asia, Uzbekistan [5,6,8].

Larvae and adults were found to gnaw cabbage leaves.

Heteracris Walk., 1870 - descendant

Heteracris pterosticha (F.d.W., 1833)

Place of detection, period and distribution: Nukus district, (2♀.17.07.22 y.).

Distribution: Russia, Kazakhstan, Central Asia, Western Asia, Afghanistan, Uzbekistan [5,6,8]

Larvae and adults were observed to feed on cabbage leaves.

Mesasippus Serg. Tarb., 1931 - generation

Mesasippus kozhevnikovi kozhevnikovi (Serg. Tarb., 1925)

Place of detection, period and distribution: Nukus district, (3♀.1♂. 22.07.22 y.).

Distribution: South Kazakhstan, Uzbekistan [5,6,8].

It was found that larvae and adults feed on cabbage leaves.

Hilethera Uv., 1923 - descendant

Hilethera turanica Uv., 1925

Place of detection, period and distribution: Nukus district, (1♀.1♂. 02.09.22 y.).

Distribution: Central Asia, China, Iran, Afghanistan, Uzbekistan [5,6,8].

It was noted that larvae and adults severely damage the crop (cabbage).

Eyprepocnemis Fieber, 1853 - descendant

Eyprepocnemis unicolor Serg. Tarb., 1928

Place of detection, period and distribution: Nukus district, (2♀.1♂. 22.07.22 y.).

Distribution: Central Asia, South Kazakhstan, Uzbekistan [5,6,8].

It was noted that larvae and adults cause serious damage by feeding on cabbage leaves.



Chorthippus Fieb., 1852 - gen

Chorthippus (s.str.) albomarginatus karelini (Uv., 1910)

Place of detection, period and distribution: Nukus district, (5♀.2♂. 17-22.07.22 y.).

Distribution: Europe, Russia, Kazakhstan, Mongolia, Uzbekistan [5,6,8].

It was found that larvae and adults feed on cabbage leaves and cause damage.

Glyptobothrus Chop., 1950 - Genus

Glyptobothrus meridionalis (Mistsh., 1950)

Place of detection, period and distribution: Nukus district, (1L. 17.07.22 y.).

Distribution: Europe, Kazakhstan, Turkmenistan, Mongolia, Uzbekistan [5,6,8].

It was found that larvae and adults feed on cabbage leaves and cause damage.

According to the results of our research, it was noted that 1 family, 3 species of grasshoppers belonging to 2 genera, 1 family of grasshoppers, 1 species belonging to 1 genus, 1 species of grasshoppers belonging to 1 genus, and 1 family, 7 species of grasshoppers belonging to 7 genera were distributed in cabbage agrocenoses of Nukus district

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A STUDY ON SIGNIFICANCE OF E-COMMERCE IN EMERGING MARKETS

Sandhiya.M¹, Ruban.I², Mrs.Revathi.N MCA.,M.Phil³

¹I MCOM, Department of Commerce with Computer Application, Dr.N.G.P Arts and Science College, Coimbatore.

²I MCOM, Department of Commerce with Computer Application, Dr.N.G.P Arts and Science College, Coimbatore.

³Assistant Professor, Department of Commerce with Computer Application,
Dr.N.G.P Arts and Science College, Coimbatore-48,

ABSTRACT

The term “e-commerce” is one way to express the potential of ICT to reshape all kinds of economic transaction processes. It affects all stages of communication before, during and after deliver of goods or services, and the payment flow respectively. This paper finds out how within the field of e-commerce a new breed of B2C and P2P market segments for buying and selling digital goods and services is emerging. The paper also focuses on the integration of payments and payment related steps in both areas of retail e-commerce. The paper makes an in depth analysis of the interfaces between actors and their respective systems, e.g. between customer and merchant, merchant and payment service provider, payment service provider and banking system. The paper is basically intended to make us understand how the process of economic development within a community is integrated with the new ICT based services especially e-commerce in developing countries.

KEYWORDS: Principal components, Community economic development, E-Commerce Opportunities and E-Commerce Business Models.

INTRODUCTION

Electronic Commerce (E-Commerce) has almost overnight become the dominant on-line activity. Equally quickly it has become a significant element in commercial activities globally, both in the developed and developing countries where suitable infrastructure support is available or likely to be available. E-Commerce, of course, has no single definition, meaning only commercial activity which is somehow linked to or supported by electronic communications. It may be anything from a simple advertising presentation available on the World Wide Web, or an e-mail communication; all the way to an entire multi-million dollar transaction initiated and promulgated in electronic form up; to and in some cases including the actual delivery via the net of information intensive goods or services.

ADVANTAGES OF E-COMMERCE

The advantages of E-Commerce from a commercial perspective are numerous:

1. Online and more or less instantaneous searches with an unlimited number of criteria such as description, category, subcategory, location, color, size, and price range-i.e. The use of computerized information management for a huge and rapidly expanding globally distributed knowledge/information base along with the availability of full color media including graphics, animation, sound and now video and no space or time limitations as to information delivery.
2. Full two-way 24 hours/day, 7 days/week communications/information access capability which allows for instantaneous response and feedback concerning product/services and related information.
3. Full processing of transactions (including delivery) for information intensive goods such as software, text, images, video, and music; downloadable directly to the consumer's computer at the time of purchase and including the opportunity for limitless product comparison. All of this leads directly to greatly intensified competition in these markets and lower margins, reducing costs to the end user.
4. The elimination of the need for middlemen (disintermediation), leading to lowered transaction costs (including marketing, sales, transaction processing), reduced overhead, and reduced inventory and labor costs.
5. The delivery of after-sales service and support directly and low cost.



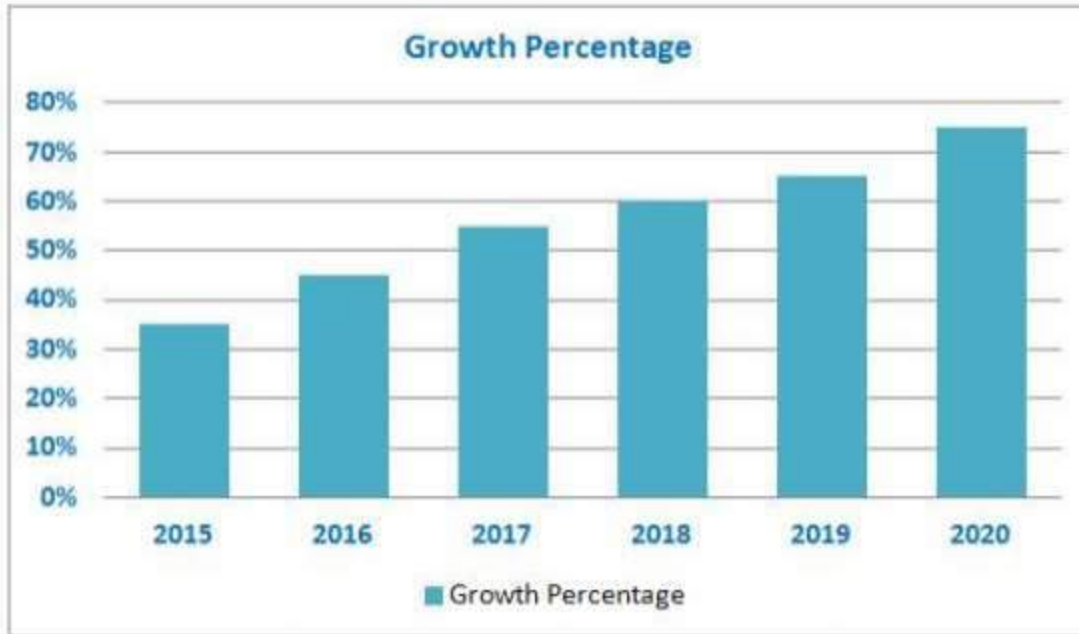
COMPONENTS OF E-COMMERCE

The principal components of e-commerce include:

1. Web Browser– A software program that allows people to access the World Wide Web. Internet Explorer and Netscape Navigator are the two most popular Web browsers.
2. Web Servers– Computers that host the information that Internet users access via their Web browser. Web servers are special Internet computers that store and deliver (serve) Web pages. A Web page is a specially formatted document that you can view in your Web browser. A Web server can host one or more Web sites.
3. Payment System/Transaction Manager– Electronic money exchanges including via (primarily) credit cards, electronic checks, smartcards, digital cash, and electronic funds transfer (EFT). The Significance of E-Commerce in Emerging Markets 75.
4. Standards (existing and emerging)– Methods for facilitating e-commerce interactions include and are meant to ensure transaction security, reliability, Electronic Data Interchange, and privacy.
5. E-Commerce Software– To the end user, the most visible part of the e-commerce system is the software that puts it all together. The basic functions of e-commerce software include: customer registration and authentication, online catalog viewing, order capturing and processing, customer service (e.g. enable customers to check order status and order history), and reporting and analysis (tools to analyze the activity on the e-commerce site for customer tracking). Optional functions include order fulfillment and payment processing, to name a few.
6. E-mail– Electronic mail serves as a support E-commerce Web sites.
7. Mailing List Server– An optional component of E-commerce is a mailing list server which automates the management of mailing lists for groups of users.
8. Search, Intelligent Agent, and Knowledge Management technologies these include the variety of software tools for “managing” information on the Net- “spiders”, “bots”, “inference agents” and so on.
9. Multimedia and broadband access technologies.

E-COMMERCE AND COMMUNITY ECONOMIC DEVELOPMENT

- E-Commerce tends to shift economic activity towards pools of skill or in otherwise advantaged locations (because of climate, geography and so on) and away from marginal or disadvantaged regions.
- The success of E-Commerce is often at the expense of local enterprises who now find themselves in direct competition with huge number very low cost suppliers who maybe located anywhere.
- The range of goods available on the Net is very large and cannot be matched by any supplier let alone smaller local ones thus putting local enterprises at a significant disadvantage in certain sectors.
- The cost of developing an effective E-Commerce site has risen dramatically and is now out of the range of many local enterprises.
There is an on-going migration of the variety of information intensive services to the Net and away from local delivery (and local employment) as local distribution or service agents are centralized and down-sized as for example banks, government information offices, the producers of local directories and so on.
- Disintermediation allows local purchasers to by-pass local suppliers or local wholesalers and buys directly from manufacturers thus eliminating whole strata of local intermediaries.



Ecommerce Growth for emerging markets- 2015-2020

E-COMMERCE OPPORTUNITIES FOR COMMUNITY ECONOMIC DEVELOPMENT

It is notable and interesting that one of the most active areas for business development in E-Commerce has been attempts to develop “community” E-Commerce web-sites or portals. There have been a number of attempts in this direction including failed attempts by Microsoft and a variety of start-ups which looked to create E-Commerce portals. These for example, attempted to provide substitutes for local newspapers with local news, sports and entertainment information, or in other cases civic and civic government information. In general, they are looking to “capture eyeballs” through these locally oriented web-sites, on the well known principle that individuals are mostly interested in things that are relatively close physically to themselves and their families.

Many of the free-standing commercial “community portal” sites have disappeared or are not being updated. They do not have sufficient advertising revenue to support the cost of the staff required to keep the sites up-to-date. A number of sites linked to local newspapers are still surviving since they can reuse information collected for other purposes, but even these do not appear to be independently profitable.

E-COMMERCE BUSINESS MODELS FOR COMMUNITY ECONOMIC DEVELOPMENT

A quite large number of business models have evolved in the short lifespan of E-Commerce to support the transactions and to take advantage of the unique capabilities which the Internet and the World Wide Web afford. A number of these models are being or could be adapted to support local and CED enterprises along with the enterprises at a distance for which they were originally developed. There are a number of E-Commerce business models and here the paper suggests how they are being or could be used in a Community Economic Development (CED) context.

THE WEB-SITE AS AN ON-LINE BILLBOARD

The first and still most common use for the WWW is as a substitute for conventional display advertising whether in paper, billboard or other format. The idea is that one does one’s advertising copy and then finds someone to put it into HTML and onto a server and then waits for the traffic to flow. Of course, sometimes it does and there are anecdotes about rug weavers and hammock makers who have increased their sales by factors of 1000 or more but there are fewer stories about the hundreds and thousands of local business folk who have paid for display web-sites and found that no one visited them. A variation on this are sites which attempt to consolidate information and links relating to a sector or region (also known as a “portal”). The advantage of a portal is that where one enterprise might have difficulty in generating traffic to the site, a site which gives access to a number of enterprises might generate much more traffic. This principle has proven partially true, but the problem has been that the proliferation of sites has now been matched by the proliferation of “portals” all competing for the same users and often in overlapping areas.



THE ATTENTION BUSINESS: PORTALS AND TRAFFIC-BUILDERS

The first and still most common business model on the WWW is based on the initial function of the web-site as a place to display/present information or graphics and in this way capture “attention”. Having captured the attention, the use to which that attention was put has been primarily to push advertising at the site user and then to charge the advertiser for having captured the users attention and used it in this way. The more “attention” captured and thus the more and more elaborate, eye-catching, knowledge and service rich the site/portal, the more the advertising on the site could be sold for.

ADDING VALUE: A “SERVICE” MODEL

A number of web-sites have been developed whose function is to grab attention by providing the user with one or another type of service-email, web hosting, rate calculations and soon. The notion here is again that by getting the user’s attention this in turn can be re-sold. In the CED world it maybe possible to see a different opportunity. Since the local users will be one’s with a clearly specifiabale range of interests and service requirements, it should be possible to develop a range of locally focused services including information, news, links, useful applets and so on which are ofsufficient value to their local users that they may either be willing to pay a subscription fee, or give a contribution to support the site or alternatively it may be possible to find someone willing to sponsor the site simply to be associated with it. This kind of development serves two functions-developing a local E-Commerce activity (and employment) and also providing an otherwise unavailable or costly set ofservices to the local community.

A COMMUNITY “E –COMMERCE COMMUNITY” MODEL

A very “hot” area in commercial E-Commerce is the building of “virtual communities” in association with web-sites and linking these to their associated products or sponsors. The notion is being that ifan individual comes to identify with a (in this case “virtual”) community then they are more likely to accept the norms of that community and their behavior as a consumer will be influenced as a result, including and not incidentally overcoming the distrust which seems to accompany much on-line interaction.

BROKERING OR FACILITATING TRANSACTIONS

One of the most active areas for development on the net has been the replacement of brokers or mediators in some areas and their redevelopment in others. The range of information access and the speed of communications allows for the development of a new brand ofintermediaries who are in a position to negotiate “with the world” on behalf of the individual or the group as for example by putting together groups ofunconnected consumers as units for negotiating best prices with suppliers.

AUCTIONS OR DYNAMIC PRICING

A very familiar by now form ofbusiness activity on the Net is the “auction” as for example that undertaken by eBay. These are now also available for a very wide range ofgoods and services where previously auctions were unknown such as for airplane tickets, hotel rooms, industrial components and so on. The unique communication and information management features of the Net (not excluding the capacity of the net for facilitating and presenting feedback on suppliers and purchasers) have facilitated this development.

E-MONEY

An intriguing development is what is being called E-Money or money which only exists in the virtual domain. An example ofthis is “Beanz.com” which provides a facility for electronic payment in an on-line currency they call “Beanz” which can be used in the purchase of goods or services from co-operating sites or businesses. Individuals in this case, receive “Beanz” for visiting web-sites, for undertaking transactions on web- sites and so on. Importantly the management of the transaction and of individual client and supplier accounts is done electronically and for free to the user, through the “Beanz” site (and back office).

E-MARKET

E-marketing is the marketing of goods and services through the internet. It makes it easy for businesses to reach a wide range of potential customers due to the large number of people using the internet today. E-marketing is crucial for business for a few reasons, as it:

- Allows you to find and target potential customers online
- Let you more efficiently communicate with your audience
- Personalize your marketing strategy based on customers’ interests
- Increase your brand’s visibility



- Get quality leads actually interested in your product

Various technologies are used in e-marketing, allowing shoppers to read ads, use/receive coupons, view pictures of products, compare prices, and make purchases with a few clicks of a mouse. Which saves time and money.

CONCLUSION

The future as they say in technology circles is wireless, mobile, multi-media (voice, video, 3D) and broadband. All of these technology changes are rapidly developing and being incorporated into on-line and E-Commerce activities. From a CED perspective they are also following the path of earlier on-line technologies with a very steep decline in entry cost and ease of use or the non-professional user. Thus while CED enterprises need not be “first” users they certainly need not be “last” users nor should they be. Commercial firms are discovering that at least one leg of the stool on which virtual commerce is resting and will continue to rest is face to face physically delimited communities and it is here, where the on-going and future strength and opportunities for growth and development of CED rests. By recognizing that E-Commerce and the opportunities it presents is no more technologically or dare it is better to say that they are ideologically daunting than credit cards or ATM machines and thus the possibility for E-Commerce to enhance the growth and local contribution of CED is significant.

E-commerce still represents one of the business methods that take advantage if done the right way, even if the stock market and commodities fell, but E-Commerce still able to survive and receive high transaction. E-commerce has a tremendous opportunity in the course of or business in Malaysia. In addition, it is also to introducing new techniques and styles in a transaction. Use the extensive E-Commerce in the Internet world is actually much better to bring the goodness of the individual or the state. E-Commerce has undeniably become an important part of our society. The successful companies of the future will be those that take E-Commerce seriously, dedicating sufficient resources to its development. E-Commerce is not an IT issue but a whole business undertaking. Companies that use it as a reason for completely re-designing their business processes are likely to reap the greatest benefits. Moreover, E-Commerce is a helpful technology that gives the consumer access to business and companies all over the world.

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ASSESSING VULNERABILITY, PREPAREDNESS AND MITIGATION MEASURES OF NATURAL DISASTERS IN MUNNAR PANCHAYAT OF IDUKKI DISTRICT, KERALA

Halil Rahuman S

ABSTRACT

Disaster preparedness is a broad notion that covers steps taken to mitigate the effects of disasters and support the vulnerable community's activities. Disaster management plans are required to guarantee that communities are adequately prepared, disaster management plans are required, and community involvement in DRR planning is crucial. In a disaster management strategy, the vulnerability of the poor community must be taken into consideration. In order to make the community resilient to catastrophes and provide it with the capacity to withstand the conditions on its own, the community should be included in the development of the community management plan. It can be challenging to take the first step, but doing so will ensure community safety for future generations.

Highlight: *In this study, the vulnerability, preparedness and mitigation of the community during a disaster time are highlighted in a broader manner.*

KEYWORDS: *Mitigation, Vulnerability, Recovery, DRR committee, DRR plan, Kerala, Munnar*

INTRODUCTION

Disaster preparedness is a wide concept that includes actions made to lessen the consequences of disasters and strengthen the activities of the vulnerable community. It envisions a scenario in which community growth is facilitated by an ongoing, integrated process. National Society programmes, also entail increasing community-organized planning and preparation. Improving the effectiveness and efficiency of community-level emergency response to disasters. This involves assisting local communities and populations in their ongoing efforts to lower risks and set up local response systems to handle emergency situations brought on by disasters. In disaster-affected areas, disaster management is used to deal with the damage caused by floods, landslides, cyclones, etc. The main goal of disaster management initiatives and programmes is to lessen community vulnerability. The inability of an individual or society to anticipate, control, withstand, and recover from the effects of disasters leads to vulnerability. Community-based strategies and initiatives that increase a group's ability to deal with disasters and lessen their consequences on daily life might lessen the vulnerability effect. Disaster mitigation is a method to enhance the community's preventative actions to get rid of or lessen the effects and hazards before a disaster happens. Mitigation is also a part of disaster management activities it is of two types 1) Primary Mitigation and 2) Secondary mitigation. The primary mitigation focuses to reduce the presence of hazards in the community and also to reduce the vulnerability of the community. The secondary mitigation involves people to make them prepared for the hazards its main concept is to create a preparedness capability among the community to reduce the impacts

One of the states that were unable to withstand the effects of the 2018 floods in its districts was Kerala. August of the year 2018 had tremendous flooding that severely damaged 13 of the 14 districts. Beginning on August 14 and lasting till August 19, a second strong rainstorm caused torrential downpours and landslides in several locations around Kerala. The results of many studies show that the smaller the repercussions on the community, the greater the mitigation and preventative actions. Disaster management plans are necessary to ensure that communities are adequately prepared, and community involvement in DRR planning is essential. Idukki's accident caused significant harm that shouldn't occur anywhere else. This study mainly focuses on evaluating the disaster's susceptibility, preparedness for the circumstance in the future, and the mitigation process carried out by various stakeholders in order to improve the community's condition.

METHODOLOGY FOR STUDY

The Munnar Panchayat of the Devikulam block in Kerala was chosen to conduct the study. The criteria used to select these 7 villages was where the previous tragedy occurred. To perform the disaster research study, a sample size of about 100 sample households was chosen. Depending on who was available, 7 to 15 houses from each village were chosen. Using a pre-formatted questionnaire, the sampling data was gathered. With the aid of a baseline, the study was heavily focused on research and information. By randomly selecting 10 families to interview, a questionnaire underwent a piloting test. Based on the results, the



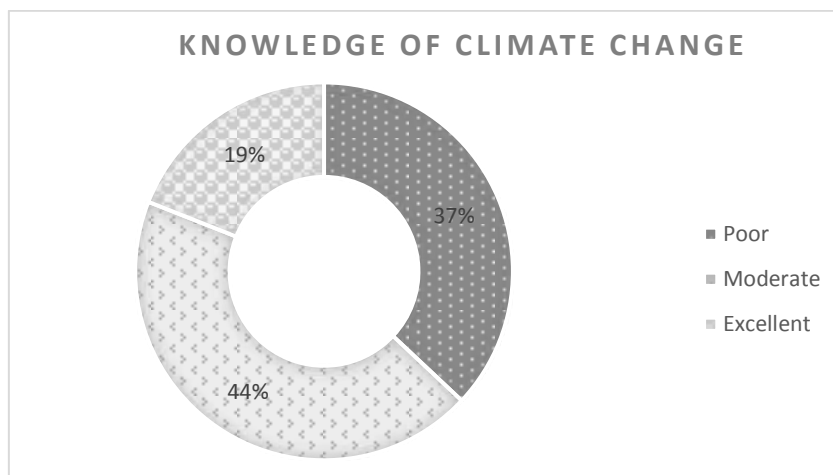
questionnaire was then revised, and data was gathered from sample respondents in the field. The information was gathered between May and July of 2022. Many mathematical and statistical tools were used to complete the analytical representation of the data.

RESULTS AND DISCUSSION

The state of Kerala has its uniqueness in nature and beauty in culture. In July 2018, Kerala, a state in southern India, experienced the worst natural disaster on record. These catastrophes in Kerala during the monsoon season were brought on by the unexpectedly high and severe rainfall. Almost a century's worth of records was broken by this catastrophic deluge. According to the study's statistics, the primary means of subsistence for the population is working on tea estate plantations, where one can make up to Rs. 400–Rs. 500 per day. The estate offers housing for employees, but because it is built on the mountain's base, the community's living circumstances are extremely susceptible to natural calamities. A significant landslide or downpour in this case might have a significant impact on the entire neighbourhood. According to prior experience, the state is susceptible to monsoon rains and landslides from June to August. It has a negative impact on livelihood and cattle, which are essential to the rural economy. By improving the community's preparedness and disaster mitigation, people will be able to leave hazardous areas when a disaster strikes.

Community's Knowledge of Disaster

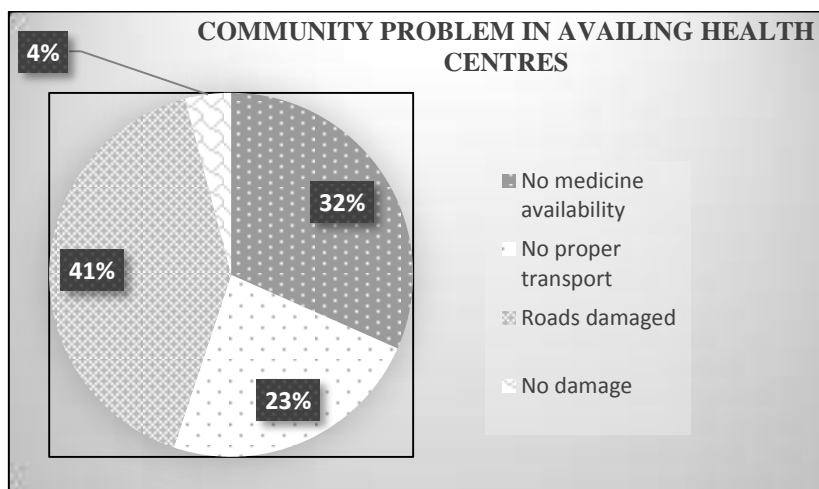
The research study focused to understand the knowledge, and preparedness of the community towards disaster. The capturing of existing status from the locality will help to increase the mitigation of the community. Local residents can significantly help to lessen the loss of life and property. They are typically not helpless victims; instead, they are the most at risk of calamity and bear the brunt of its effects.



According to the previous study, people's activities before to the crisis will significantly lessen its impact on both the individual and community levels. According to the above Chart, 44% of respondents have average awareness of disasters and climate change, compared to 37% who have no concept of what climate change is or how it will affect their lives. The lack of ideas and such poor knowledge make the community more vulnerable.

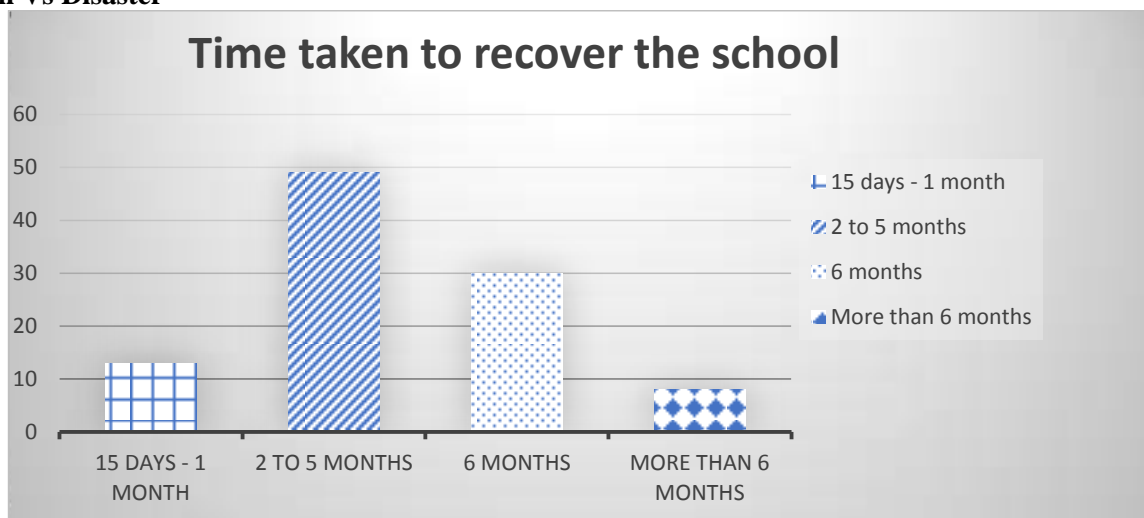
Health Vs Disaster

"Health is a condition of total mental, bodily, and social well-being and not only the absence of disease or disability," according to the World Health Organization. The women in the houses struggled greatly to control the situation during the catastrophe. Children, pregnant women, and elderly people were among the most vulnerable populations in terms of health characteristics. The survey's findings show how challenging it can be for these vulnerable people to access health care during a crisis. Also, it revealed that people are quite vulnerable to disease attacks.



From the above chart, it was noted that 96 of the 100 participants in the sample survey suffered to avail the health services during the disaster. Road conditions were severely damaged and blocked during the disaster period. According to the survey, 41% of the population was unable to reach the hospital due to road obstructions, 23% of people were unable to access sufficient transportation to the hospital, and 32% of community hospitals lacked medical facilities during disasters. In order to limit the risk of losing community life, a major helping hand is required or preemptive activities are required for health reasons.

Education Vs Disaster



After the disaster, it had a terrible effect on the students' schooling. The pupils had a lot of challenges carrying forward with their schooling after the accident. According to the FGD, in order to keep people safe and secure, a portion of the relief camps was held in colleges and schools. Some families stayed there for almost six months, which put the government in a difficult predicament in deciding how to respond. The main challenge students experience in carrying on with their studies following a calamity was discussed throughout the sampling survey. The loss of their books, certifications, friends, and families had an impact on their mental health.

In disaster management efforts, the time frame for recovering the loss is crucial. The graph demonstrates that it typically takes students time between two and five months to experience normal conditions at school events. The Kerala government assisted the students during that particular 2018 period by issuing grades for the upcoming academic year. It was mentioned at the FGD with the afflicted school children that the students had plenty of time to heal from the effects of the calamities.

Gender Vs Disaster

Women were crucial in getting things back to their original state under the post-disaster situations. The survey and focus group discussion with women revealed that the burden of family responsibilities falls disproportionately on women, which has a



significant psychological impact on married women. According to the research, the economic situation and the decreased flow of money to families had a significant negative impact on women's ability to lead stable families.

Difficulties faced by women in disaster

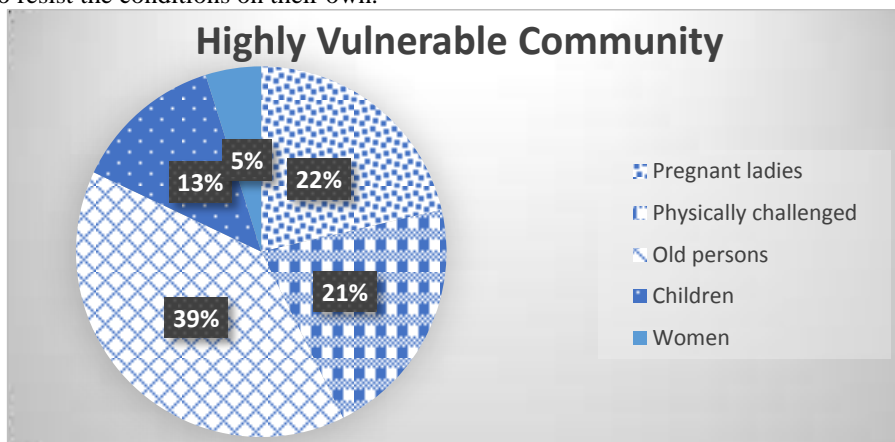
The scenario during the tragedy and the challenges experienced by women and adolescent girls were noticed from FGD with women's groups.

- ✓ The lack of hygienic and sufficient sanitation has a significant negative influence on the health of the women in the community. During the menstrual cycle, adolescent girls are particularly vulnerable to illnesses brought on by germs and other health risks. The girls are put in an unimaginable scenario due to the lack of napkins following the crisis. The majority of the women claimed that amid the crisis, they didn't eat properly. They just ate one meal a day and managed to escape the catastrophe.
- ✓ This is due to the fact that they intended to maintain food for their young children and elderly relatives in the house for their well-being. The fact that they were more concerned with each other's conditions than their own shows that the ladies are infinitely responsible for the catastrophic pattern.
- ✓ For women and teenage girls, the camp experience is also challenging. According to the study's analysis, 34% of community women claimed that the staying camps lacked appropriate amenities and privacy for them. Another key reason why community women preferred not to stay in the camps was the absence of restroom facilities.

Women play a crucial role in maintaining the stability of the family through all disasters and hardships. The benefits of the need they express will go to family members rather than to themselves. For the sake of the family's safety and security, the attention paid to women during impending disasters needs to be improved.

Vulnerable community on forthcoming disasters

The vulnerability of the underprivileged community must be taken into account in a disaster management plan. The community should be included in the evolution of the community management plan in order to make them catastrophe resilient and provide them with the ability to resist the conditions on their own.



These sensitive populations are seriously threatened by climate change. A community that lacks preventive measures and preparation efforts is extremely vulnerable to disasters since the consequences will be severe and it places an unbalanced burden on a family. To the respondents, it was questioned about who is more vulnerable during a time of disaster. The aforementioned diagram illustrates how the local population views the susceptible neighbourhood during a tragedy. According to 39% of respondents, elderly people are extremely vulnerable, and the consequences will be felt both widely by them and by children. Children and the elderly are particularly vulnerable to local illness epidemics during disasters.

Age	Female	Male	Total
1-11	27	17	44
11-21	27	27	54
21-31	36	43	79
31-41	33	30	63
41-51	28	25	53
51-61	23	26	49
61-71	7	11	18
71-81	1	1	2

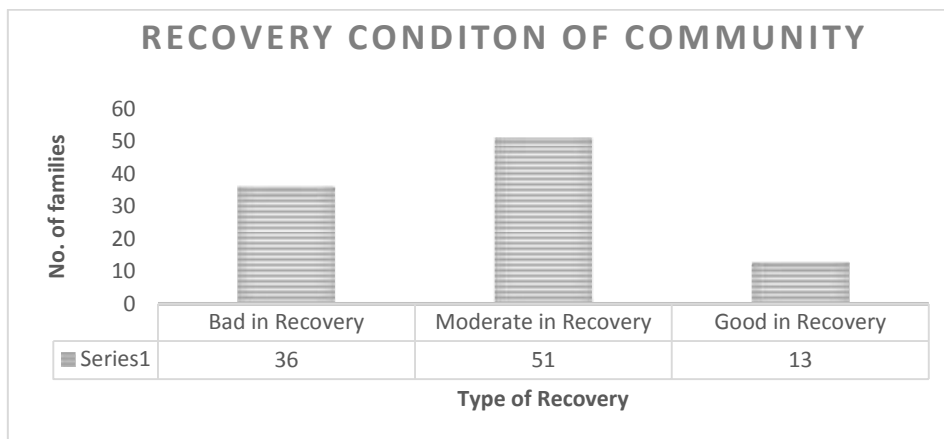


The age distribution of the sample population is shown in the table above. Families with little children under 10 years old and seniors over the age of 50 are particularly at risk in the event of a disaster. Although this sample situation implies a high level of vulnerable conditions the community is coping with in daily life, there are approximately 115 vulnerable members in the set of 100 samples, including children and elderly people.

The risks associated with pregnant women and physically challenged people were discussed throughout the FGD. Pregnant women were put under a lot of stress as a result of the severe mobility restrictions and the lack of medical facilities in the area during the disaster time. Some of them moved as soon as possible to their mothers' homes before the disaster struck, but others stayed and managed it because the risk to them during a disaster is high. The impact of disaster places a heavy burden on the women because they must take care of the children, prepare food, maintain the family's finances with the available funds, and manage the family in a good way until the disaster is over. The women stand by every situation inside and outside the home to protect the children. Yet, none of the women who were interviewed stated that they are particularly vulnerable during a disaster; this indicates that they have accepted it as a yearly occurrence in their lives.

Recovery from disaster

Rebuilding endurance or going back to a normal state is referred to as recovery. Two indicators, "Money spent on the process of recovery after the disaster, and time spent on recovery process after the disaster," were used to evaluate the community's response to the disaster.



After analyzing the respondent's data, it was discovered that 13% of families were in a position to recover quickly from the effects of the disaster, while the remaining 36% of families were in poor condition, and the midrange is high more than 50% of families. Even though the calamity cannot be stopped, individuals nevertheless need to improve their ability to recover from its effects. Since they were the first to respond to the disaster, it is a crucial component.

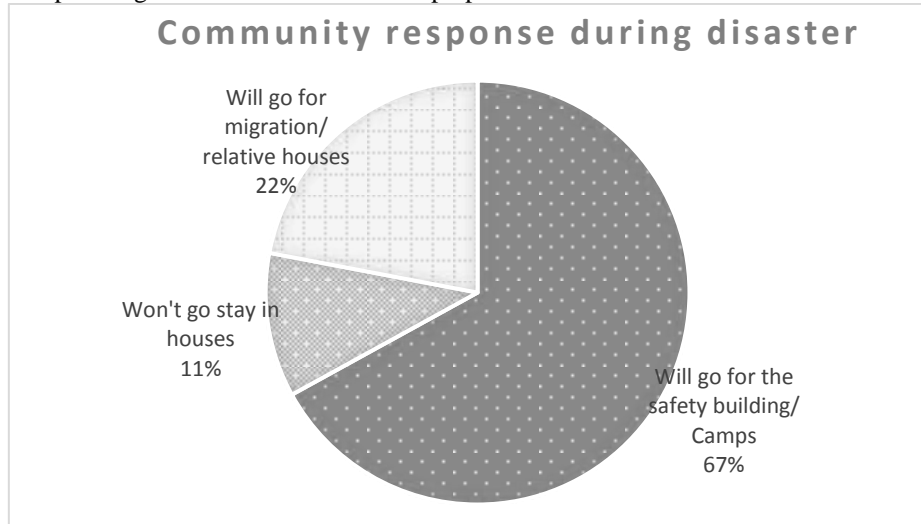
4 - Very low			2 - 4 (Bad in Recovery) - 1
3 - Low			5 -7 (Moderate in Recovery) - 2
2 - Medium			8 - 9 Good in Recovery - 3
1 - High			
Coding on Money spent	How much time your family took to revive back to normal Situation?	Sum	Coding
3	3	6	2
1	1	2	1
2	3	5	2
2	4	6	2
2	4	6	2
1	3	4	1

According to the community's answer, the above table displays the computation and outcomes for two indicators (Time taken for recovery and money spent).

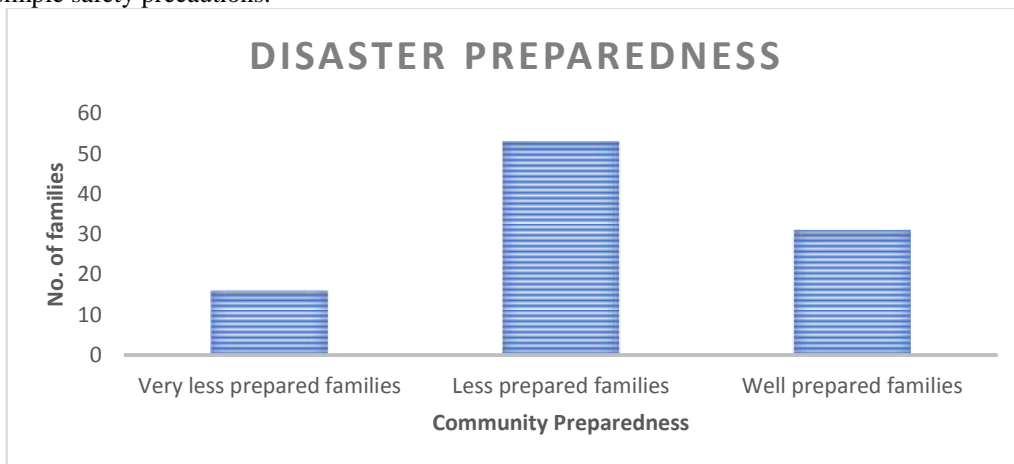


Disaster Preparedness

Disaster preparedness refers to the actions made beforehand to lessen or eliminate the effects of the event. This preparedness involved a variety of activities. The community must act as the first responder to the calamity. They must create the catastrophe plan on their own with assistance from existing planning efforts and the relevant parties. There are numerous methods by which the other stakeholders are planning for disaster readiness and preparedness.



As a result of the lack of disaster safety structures in the communities, individuals became trapped during the 2018 floods. If there was no safety building, the community lost the choice of entering safe areas with the unexpected occurrence of the calamity. In order to securely evacuate the population, the authorities set up camps as soon as possible in and around the estate regions. The community was questioned about their early responses after such a terrible tragedy. The FGD made it quite obvious that the community has developed to take proactive steps to lessen the impact on their family. From the samples taken, 67% of respondents said they would visit the local disaster relief camps. Another 22% of people wish to migrate or go live with a relative in order to be safe. Another 11% of people believe they should take care of their own living arrangements since they don't want to burden the camps any further. If we examine the responses from the past, 90% of the respondents indicated that they were unfamiliar with relief camps. It shows that people in the neighbourhood have taken note of the terrible event and realized they must take some simple safety precautions.



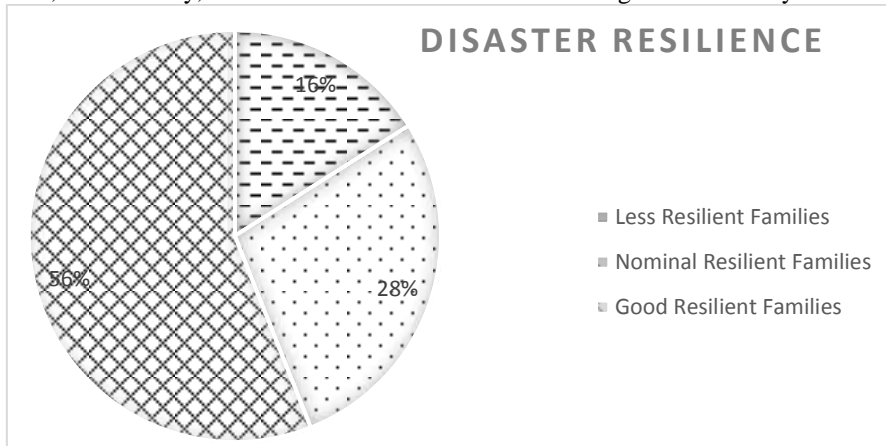
After examining the other sets of data (Safety measures by community, knowledge of disaster safety buildings, prior experience and time to reach safety buildings) from the samples gathered, it was discovered that 16% of families are extremely underprepared for disasters, 53% of families are comparatively underprepared to deal with the disaster's effects, and the remaining 31% of families are well-prepared to deal with the disaster's effects.

Disaster Resilience

The ability to bounce back to normal after a calamity is what resilience is. The safety precautions that a specific household has taken for any danger, such as insurance etc., will determine how resilient they are. The role of the community in lessening the



impact of the calamity on the family is crucial. After the disaster occurred, their forecast or impression should either address the family's current damages or, alternatively, should concentrate on the future damages that a family will face.

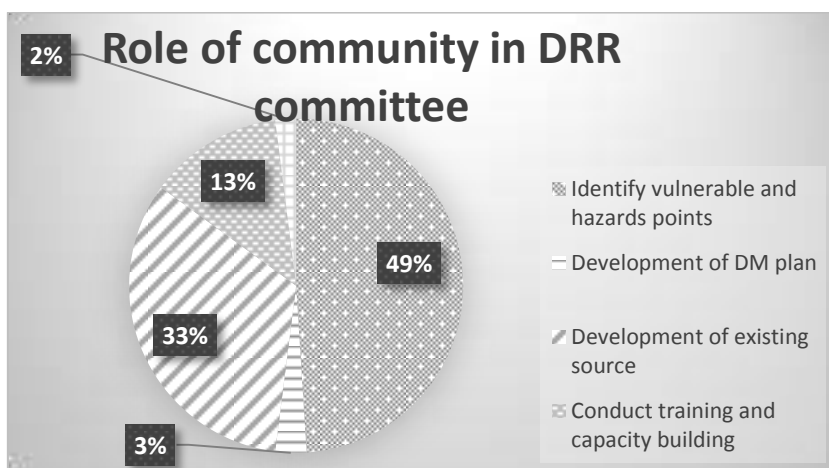


"How much they spend to revive back," "Losses that a family incurs in terms of economics," and "How many months to revive back to the same condition" are indicators to measure the resilience of the families. and insurance that will lower the family's risk. The individuals used to live in estate homes, and they started saving money from their daily expenses to build a more resilient future. The study of the samples obtained aids in understanding community resilience. According to the graph, 16% of families have lower resilience, 28% have nominal resilience, and the remaining 56% have strong resilience. For that 16% of families, strengthening their emergency preparedness is essential and such families need to be covered under the disaster management plan.

Disaster Risk Reduction Committee

In order to lessen the risks and effects of a disaster, the community is given access to safe spaces by the panchayat and the local government. The panchayat members stated in the FGD that in the current scenario during the monsoon season, they began to go at the basic facilities attached structures for the purpose of providing camps to the community in the event of a landslide or flood, under certain criteria.

- There should be enough room at the camp for at least 100 to 150 people to remain, and sleeping arrangements should be made, as well as basic amenities like toilets and power.
- The ability to transport people shouldn't be a barrier to evacuating them to those safe locations.
- For estate workers, it should be on the estate; if not, it should be close by so that people can arrive safely in a short amount of time.



To handle the effects of disasters on the hamlet, the panchayat established a DRR (Disaster Risk Reduction) committee. Once every two months, a meeting is held to discuss the status of the panchayat. This committee's main objective is to develop mitigation measures in advance in order to lessen the impact and increase community resilience to disasters.

It is a well-known reality that in any tragedy, the community is both the first to be impacted and the first to respond. Two-thirds of the female respondents and more than half of the male respondents shared this opinion. A thorough curriculum must be developed in order to train the community, and the training must be formal. The district officials and specialists should deliver the training.



NGOs, Fire & Emergency Services, and Police may also be involved in providing training in their specialized sectors. All three major stakeholders—the community, district governments, and business sector—should contribute at the time of disaster. The preparedness circumstances, in particular the community's participation in the DRR committee, are the main focus of this section. The sample poll reveals that half of the respondents want to concentrate on taking proactive measures before the disaster strikes to save the people and that 49% of the respondents want to identify the susceptible area to take action. The remaining 33% of individuals wish to develop the current sources, which is crucial for being ready to handle impending calamities. The development should concentrate on each and every area mentioned in the current sources, including the staying housing, DRR committee, Recovery steps, and Rehabilitation measures, in order to build an effective working environment for the community.

Disaster Vs Four Capitals

It evaluated the effects of potential disasters or climate change on four types of capital: natural, physical, financial, and human. Via the FGD, the community and its members explored social capital, and the community's DM plan included this discussion. The matrix for calculating climate resilience was also included in the replies.

The Absorption (need to deal with the disaster with no chance to avoid the hazard), Adaptation (option for preparation and moving to a safe zone), and Transformation (3-variable scale) scales were utilised (a permanent change to avoid the entire threat).

Disaster Resilience Matrix	Absorption	Adaptation	Transformation
Physical Capital	57	29	14
Human Capital	6	53	41
Natural Capital	94	0	6
Financial Capital	42	58	0

The evaluation of the five capitals shows how vulnerable, resilient, and ready the community is for the future. The impact on the community throughout the four capitals, the affected assets, and the chosen disaster relief measures are the indicators for the disaster resilience matrix.

CONCLUSION

The research effort has amply demonstrated that Munnar Panchayat is more susceptible to natural and man-made calamities. Even the fundamentals of disaster management would have to be included in the capacity development sectors because the community does not have the knowledge necessary for their safety in the event of a disaster. The results of the research show that the community is vulnerable to disasters including landslides, floods, and high rainfall during the monsoon season, which puts the poor and marginalized groups at greater risk. The stakeholders should develop a safe space for the community to deal with and address calamities.

The local populace must understand their part in the community in order to carry out their duties competently enough to lessen vulnerability. Nature is always an unforeseen factor in everyone's daily lives. In every human-nature conflict, nature triumphs and lessens the conditions of living all over the place, which is why there is a lack of preparedness.

WAY FORWARD

- Regarding the residents' living arrangements in this panchayat, quick action is required. 93% of guests are staying in homes with thatched roofs and asbestos sheeting. When compared to concrete homes, these homes have a very low storm or heavy rain resilience.
- There needs to be immediate action taken in regards to the living conditions of the citizens in this panchayat. Homes with thatched roofs and asbestos sheeting are where 93% of visitors are staying. These homes have a very low storm or heavy rain resistance when compared to concrete homes.
- As a result of the widespread adoption of digital technology, people will benefit greatly from early warning systems and effective monitoring of water flow. Installing such digital surveillance throughout the panchayat will lessen the impact on the populace because many developed such a comprehensive strategy for a specific area and because the government supports those projects.

As a result, the crisis was unexpected, and it will take a long time and significant financial resources to put everything in place that will keep the community safe and resilient during the disaster. In order to improve the quality of life throughout the panchayat, NGOs, people organizations, and the panchayat will work together. Despite the fact that taking the initial step is usually difficult, doing so will ensure community safety for future generations.



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SMART PILL REMINDER BOX

Prof. Amar V. Sable¹, Purva Bandabuche², Mayank Tiwari³, Pranav Kate⁴

¹Professor, Dept. of Computer Science & Engineering, Sipna College of Engineering & Technology, Amravati, Maharashtra, India,

²Student, Dept. of Computer Science & Engineering, Sipna College of Engineering & Technology, Amravati, Maharashtra, India,

³Student, Dept. of Computer Science & Engineering, Sipna College of Engineering & Technology, Amravati, Maharashtra, India,

⁴Student, Dept. of Computer Science & Engineering, Sipna College of Engineering & Technology, Amravati, Maharashtra, India,

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ABSTRACT

The paper presents a Smart Pill Reminder Box (SPRB) prototype. The System reminds the patient and caregiver of the medication's timing. Smart Pill Reminder Box will allow doctors to monitor patients' health status. The Smart Pill Reminder Box can reduce the responsibility of an elderly family member to administer the appropriate doses of medication at the right time without the human intelligence required to recall the exact date or time. Also, SPRB provides users with an Android application on their smartphone that allows them to manage and control medicine schedules and usage data remotely.

KEY WORDS: Smart Pill Reminder Box, Node MCU, IoT, Pillbox, Stepper Motor, etc.

1. INTRODUCTION

In today's hectic life, the elderly face problems remembering and taking their medicines on time. They often cannot recognize which pills to take at that particular time. Because of this, a dose of medication may be missed.

One of the most common reasons for unsuccessful progress in a patient's health is not taking the correct medication at the prescribed time. Over 50 people may face diseases such as high blood pressure, diabetes, and Alzheimer's. This type of person must be constantly monitored for medication. These people would be significantly harmed if they missed a dose of medicine.

Patients and their caregivers, or even people who often forget to take their medication, will find this System helpful. This System will provide information on whether the patient has taken their medication. If the patient has not taken his medicine, the System will alert him to do the same by sending alerts or messages or through calls. It also stores this information in the cloud or the developed application.

In section 2, we present some related works of medication systems. Then, the objectives of the System will be given in section 3. Finally, the Smart Pill Reminder Box (SPRB) methodology is described in section 4. Similarly, the conclusion in section 5 is followed by the references in section 6.

2. RELATED WORKS

Several types of pill dispensers are available in the market and have been produced by different companies consisting of built-in alarms to notify the users without having an online database to save the users and pills or having remote access functionality.

To state a few:

This article proposed a Smart and Secure Medical Box using IoT in which they have used Fingerprint Sensor, Arduino UNO, and Global System for Mobile Communication (GSM) Module, WiFi Module, LCD, Power Bank, Real Time Clock, Servo Motors, Weight Sensor, Switches, etc. The System kept track of patients by notifying them of their medication timings through notifications such as messages or phone calls. A fingerprint Sensor was used to identify the user for Security purposes. The weight Sensor was used to calculate the proper medicine dosage patient would take. Real-Time Clock sets the time and date the user is notified of



medication. Notifications are generated with the help of the GSM Module. All the process is uploaded to the cloud so that the user and the doctors can have detailed information about the patient. But there might be some difficulties in handling such a complex hardware structure [1]

This System is an Android application where users can set their medicine time. In this application, some features will help the user to have more details about their medicine. It will keep track of the medication, that is, how much medication the user has to take, and that can be fixed in the Android application. The device setup consists of an IoT-enabled pill box, and that pillbox consists of multiple compartments and an IR sensor will be attached to it. The IR sensors are used for observations and reporting the state of medications. The Arduino device fetches real-time data and sends it to the application. [2]

According to this Paper, The proposed System is targeted at Online Health Communities (OHC). It is based on a Medical Dispenser, modeled using various components such as BeagleBone, Servomotors, and Pill Containers. A Dispenser can dispense the medicines to the patients according to the prescribed time by the doctors. Here they have used the Barcodes for security purposes. The Pharmacies own these dispensers. [3]

The proposed SPRB system takes the idea of an automated dispenser to the next level, as it has some functionalities not included in any other automatic dispensers. An account is provided for each patient, and no one else can access it except the patient and the caregiver if the credentials were provided to them. Also, some statistics are provided about the pills taken with their alarms and the already existing ones. An online database of the users, tablets, and their notices is also a great feature that helped design the project. The alarms can be edited and created using an Android application remotely through smartphones.

3. SYSTEM OBJECTIVE

The Below section will describe the Objectives of our Proposed System.

- a) To create user-friendly wireless electronic apparatus.
- b) To achieve automation where appropriate pills come out at appropriate times.
- c) To notify the patient and the caretaker of the patient about the timings of patient medicines.
- d) To keep the records of each pill whether it is taken or not by the patient.

4. SMART PILL REMINDER BOX METHODOLOGY

This section describes the whole methodology of the SystemSystem. The method includes internal processing and its related data flow. In this paper, we built an Android application responsible for controlling the SystemSystem.

It's the primary way of interacting with the SystemSystem; the application stores its data and performs synchronization upon login. The phone will automatically connect to NodeMCU and sends commands indicating from which container the Servo Motor should be rotated, as shown in Figure 1.



Fig 1. Design Breakdown

A. Overview of Android Application

The whole System of the SPRB relies on its Android application that provides the user interface to the patients and their caregivers, controls the medicine dispenser, and also manages user schedule and usage data.

The user authentication is performed on the login screen shown below in Figure 2.

If the user is new, they can Sign Up with their details in the Sign-Up form instead of logging in, as shown above in Fig.3.

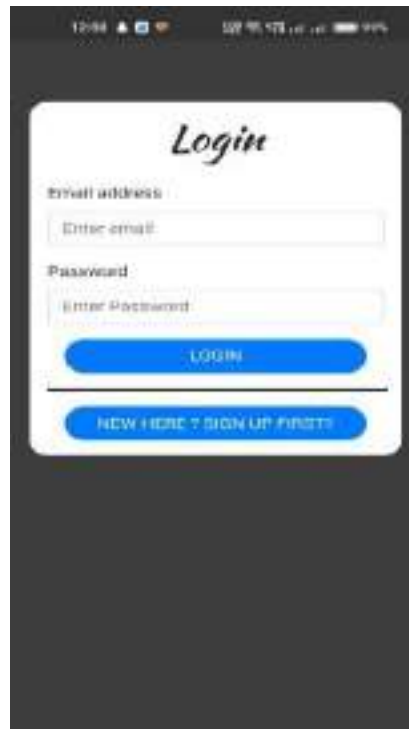


Fig 2. Login Screen

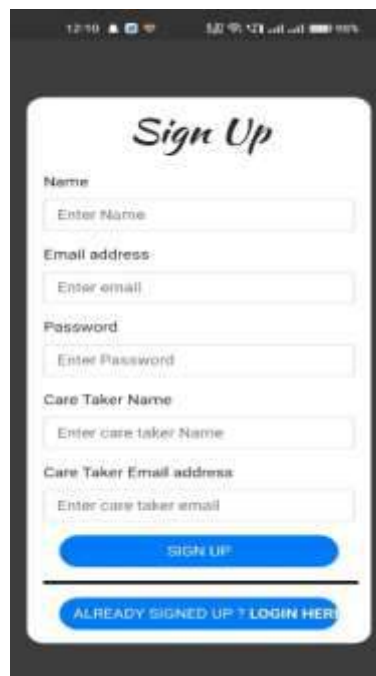


Fig 3. Sign Up Screen

To add a new pill reminder user should click on the "Set alarm" label, and then he needs to specify which pill and at what time it should be taken. The view of adding an alarm is shown in below Figure 4.

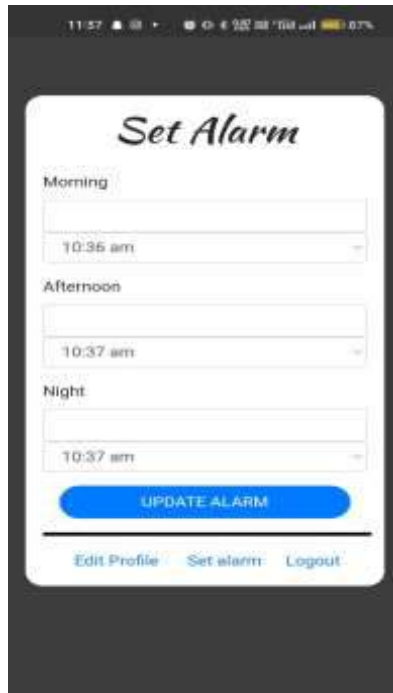


Fig.4. Set Alarm

If the user wants to change the details, then he can update the details in the "Edit Profile" Section. Then, according to the set time, the corresponding pill comes out of the box.

B. Database Management

The pill alarms and usage data are stored on an online Database. This database is hosted on the 000webhost.com servers for free whenever the user enters the application or changes something in the schedule using PHP and JSON to communicate and transfer data between databases.

C. Hardware Design

Figure 5 shows the prototype of the Smart Pill Reminder Box (SPRB). The box containers will operate separately with their servo Motor and Buzzer. The servo motors here are used to rotate the pins of the servo. All the servo motors are controlled by the Node MCU microcontroller using signals that make the servo rotate for a bit, then stop, and are connected, as shown in Figure 5.

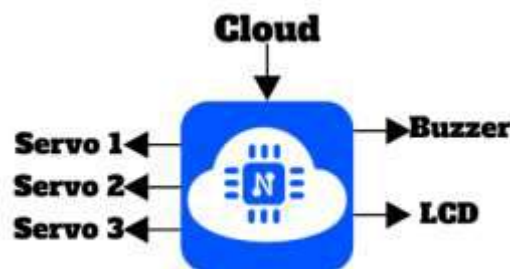


Fig 5. Hardware Architecture

5. CONCLUSION

When the user wants to take his pills, his smartphone will connect to the Node MCU via WiFi-, and sends it to which container should be rotated.

This paper summarized the significant points about our SPRB. Elderly patients, especially those with chronic and periodic medicine, will benefit the most for the SPRB since it will significantly increase their medication adherence, ensuring better treatment effectiveness or even saving their lives.



Insurance companies will surely benefit from the SPRB since it will help their customers to live a healthier lifestyle away from life-threatening accidents caused by forgetting to take their medicines on time or with the correct dosage. Moreover, in case of skipped pill, the Caretaker will get alerted almost instantly via a notification on the application. Finally, the user interface, which is the same on all the devices, including the machine, is intuitive, straightforward, and easy to use, even for elderly patients. In addition, the design allows the user to add more containers or more pills per serving.

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NETRA RASAYANA

Dr. Shama Sarmokadam¹, Dr. Rajan Goyal², Dr. Kashavva Hiremath³

¹PG Scholar, Dept. of Rasayana evam Vajikarana, KAHER'S Shri B.M.K Ayurveda Mahavidyalaya, Belagavi, Karnataka

²PG Scholar, Dept. of Rasayana evam Vajikarana, KAHER'S Shri B.M.K Ayurveda Mahavidyalaya, Belagavi, Karnataka

³Reader, Dept. of Kayachikitsa, KAHER'S Shri B.M.K Ayurveda Mahavidyalaya, Belagavi, Karnataka

ABSTRACT

Eye is the main Indriya among all the indriyas. It is given utmost importance among all the indriyas Eye is one of the most important sense organs among all the senses: 80% of what we perceive comes through our sense of sight.

Good vision contributes to improved learning, comprehension, athletic ability, better driving skills and better quality of life.

For the man who is blind, this world is useless, the day and night are the same, though he may have wealth.

The appropriate use of Chakshushya Rasayana Dravyas will help to maintain the health of the Netra and prevents age related eye disorders.

KEY WORDS- Netra, chakshushya, Rasayana

INTRODUCTION

“Sarvendriyanam Nayanam Pradhanam”⁽¹⁾ Eye is the main indriya among all the indriyas. It is given utmost importance among all the indriyas, 80% of what we perceive comes through our sense of sight.

According to physiology eye health starts to deteriorate in 6th decade (51 – 60 yrs)⁽²⁾ but now a days due to over exposure to cell phones, computer screens and due to faulty lifestyle, we are proponing that age.

Faulty visual practices can now be determined as the common aggravating factor for many diseases like cataract, glaucoma, age related macular degeneration, dry eye, retinal vein occlusion disease, retinopathy, etc

Now a days the major causes of blindness are cataract, corneal scarring and retinal diseases (ARMD) which are age related⁽³⁾

Rasayana is classified in swasthasaurjaskara and aturasyavikaraprashamam⁽⁴⁾

So, we should focus more on preventive aspect

AIMS AND OBJECTIVES

1. To explore the classical Ayurveda and related literature for understanding the fundamental concept of Rasayana and its effecting Netra Roga.
2. To compile rasayana formulations mentioned in the classical Ayurvedic text books which are beneficial for Netra Roga.

MATERIALS AND METHODOLOGY

Rasayana which can be adopted in netra are, Rasayanas for preventive purpose, Achar rasayana & Naimittikarasayana 1) Swasthya rakshanartha rasayana 2) **Achara rasayana**– Based on conduct and behavior. 3) **Naimittika Rasayana** - To be used in person suffering from specific disease Naimittikarasayana is not the specific medical treatment for particular diseases, but it is used as adjuvant along with the specific management of disease

**Table no. 1**

<u>Netra Formation</u> ⁽⁵⁾	
Muscular portion	Prthvi + rakta + agni
Krishna bhaga	Vata
Ashrumarga	Akasha, akasha – jala
<u>Netra patala</u> ⁽⁶⁾	
Pratham patal	Tejojalashrit
Dwitiya patal	Mamsashrit
Tritiya patal	Medashrit
Chaturthapatal	Asthyashrit

Rasayanas for preventive purpose (Table no. 2)

Chyavanprasha	(Balamindriyam) strengthens eye sight ⁽⁷⁾
Asanrasa siddha dugdha	(indriyavardhan) -increases eye sight
Amalaki Brahma Rasayanam	(IndriyaBalaprada) strengths eye sight ⁽⁸⁾
LauhadiRasayanam	(AtiBalendriyam) – strengthens eye ⁽⁹⁾
Amalaka Rasayanam	(IndiyabalaSamudhita) - strengthens eye ⁽¹⁰⁾
HaritakiRasayana	Indriyabalam - strengthens eye ⁽¹¹⁾
Amalaka Ghrita	(SthirendriyamAtibalendriyam) ⁽¹²⁾
<u>Aayu Vardhan yoga</u>	Bijaka sara + agnimanthakwatha + masha + chittrak moola kalka + 1/4 th amla rasa + madhu + ghee, Phala shruti - should have it for 3 months - Drishti like eagle
Bhringarajadichurnam	(vimalendriya) – strengthens eyes
Amruta vartika	Chakshulakshayorjanadarshanam - strengthens eyes
Dhatri-tiladi yoga	(Vimalendriya)
AmbunasyaRasayana	DrushtiJanana – improves eyesight
DhatryadiRasayana –	Vimalendriya
Gandhakakalpa	Prafulla netra
Gandhakrasayan	Divya Drishti

Triphala -Triphala is the best rasayana for eye disorders.

Triphala is a wonderful formulation which is used in different forms in almost all the Netra Rogas. Being Kapha-pittaghna Chakshushya and Rasayana it helps to nourish the eye. Being antioxidant, it acts as a free radical scavenger which is helpful in the maintenance of transparency of the lens fibers. It reduces intraocular pressure by virtue of its purgative action. Vitamin C helps to maintain the normal level of glutathione which is necessary for normal metabolism of the lens. The content of poly phenols and tannins are responsible for radio-protecting ability in the diseases like pterygium, cataract and catarrhal conjunctivitis is Presence of cystine helps to repair the protein present in the lens and zinc helps to store vitamin-A in retina.

ACHAR RASAYANA

Anjana -Sauviranjanam should be done every day, Rasanjana should be used once a week by this the accumulated kapha dosha can be taken out and it helps to increases the blood circulation in the eyes and prevent the eye diseases.⁽¹³⁾

Gandusha– (Netra-Hitam) beneficial for eyes

Abhyanga - Drushtiprasadan

Padabhyanga⁽¹⁴⁾, **Padatranadharan**⁽¹⁵⁾ – (Chakshushya)- According to Dalhana, there are four major nadis that cross from the foot to the eyes, hence any treatment for the pada tala directly affects the eyes. Since both the feet and the eyes are in the same region of the cortex, area II, according to physiology, the somatic sensory area in the brain may be stimulated by padabhyanga. This stimulation may affect the eyes, improving their functionality and lowering eye strain.

Vyayama⁽¹⁶⁾ - Acc to Ayurveda one has to practice vyayama and yoga to maintain the health of the body by yogasanas. The blood circulation to the organs can be increased and efficacy of organs can be achieved by Dhyana, pranayama, Trataka, the health of eyes can be achieved.



Snana - Generally all the sense organs get stimulated by snana. Hot water is advised for body wash and cold water is indicated for shirahsnana. If hot water is used for headbath its adversely affects the hair & eyes and cold water to shirahsnana is considered as chakshusa.

Navana, Nasy Mode of action - Following mucous membrane absorption. Via the inferior ophthalmic veins, there is direct pooling into the brain's venous sinuses. The extra ocular muscles and the actual eye are nourished by this medication, which is absorbed in ophthalmic veins. Additionally, antioxidant properties play a role in sustaining tissue growth..

Shirobhyanga-This is a procedure where oil is applied to head. This helps to improve the blood circulation to brain & scalp and there by nourishes the cranial nerves & improves the visual perception. Shiro abhyanga nourishes all sense organs and also it is Drustiprasadhaka.

Mukhalepa- Application of medicines to face in the form of paste is called mukhalepa. The facial artery, facial nerve and trigeminal nerve are passing along the cheeks having branches to eyes and even lepa will have an effect over brajaka and alochaka pitta and thus improve the vision.

Nidra - Sleep is one of the adharaneeya Vega, it should not be suppressed. If suppressed will lead to indriyavibramsha and becomes one of the nidana. Susrutha has mentioned "swapnaviparyaya"-irregular sleeping habits are one of the main causes for eye disorders. Sleep rejuvenates mind and body.

KRIYAKALPA

The drugs that given by kriyakalpa procedures can cross the blood aqueous, blood vitreous and blood retinal barriers to reach the target tissues of the eye. The topical drugs can reach there and achieve higher bio-availability.

Mode of Action: -The medicines are absorbed through srotasa via shringatakamarma in the cranial region will expel vitiated doshas. The procedures like tarpana, putapaka, seka, ashchyotana, anjana, pindi, vidalaka and all other kriyakalpas are aimed at improving netrabala.

NAIMITTIK RASAYANA

Here are few examples of naimittikrasayana mentioned (Table no. 3)

Mahalakshmvilasras	(Akshirogavinashayet)
UshasiJalapana	Akshiroga
Rutuharitakirasayana	(Netra roga haram)
Amalakirasayana	Timira
Shivagulika	Akshiroga
Kharparakhyarasayana	Sarvanetraroga-hara
Triphalaambu	Drushtijanan
Madhu haritaki	Netra roga hara
Narasimha churna	Andhyatava hara

If a person consumes Purana Ghrita, Triphala, Shatavari, Patola, Mudga, Amalak, Yava every day then the person will not have fear of dreadful Timira(can be corelated to blurred vision)

Payasa prepared from Shatavari alone; or that prepared from Amalaka or Yava-Odana mixed with ghee, consumed followed by drinking Triphala Kashaya cures timira. Leaves of JivantiSunisannaka, Tanduliyaka, VastukaMulakapotika and meat of birds are all good for eyesight. Leaves of PatolaKarkotaka, Karavella, Vartaka, Tarkari, Karira&Shigru cooked with ghee is chakshushya (strengths eyes)

General action of rasayana:- Degeneration is the process of a tissue or organ's cells deteriorating and losing their specific function. As oxidative stress, which produces free radicals, primarily oxygen-free radicals known as reactive oxygen species, plays a significant role in the development of degenerative eye illnesses (ROS). Age-related macular degeneration, cataracts, premature retinopathy-thy, uveitis, keratitis, and ocular inflammation are all caused by this ROS. Antioxidants found in RasayanaDravya inhibit the creation of free radicals and the oxidation process, hence preventing the ailments listed above.

The Rasayana medication contains superoxide dismutase, which catalyses superoxide radicals' dis-mutation into regular molecular oxygen. creating new tissue to replace the old. Additionally, the Rasayana medication has immunomodulatory properties that



guard against a variety of primary and secondary eye conditions. Since amla is a component of the majority of Rasayana medicines, they are high in vitamin C, which helps to maintain a normal level of glutathione, which is essential for the lens's regular metabolism. Rasayana medications contain tannins and polyphenols that function as radio-protective agents, reducing the risk of pterygium, cataract, and catarrhal conjunctivitis development. The lens protein can be repaired thanks to cysteine found in Rasayana.⁽¹⁷⁾

DISCUSSION

Few studies are being coated which shows good effects of rasayana in eye problems

1) "Chakshushya effect of rasayanachurna on refractive errors a case study"⁽¹⁸⁾

In this study patient consumed rasayanachurna (Amalaki, Gokshura, Guduchi) for about 2 years. This study shows positive effect of *Rasayanachurna* on myopia.

In this study symptoms of the subject related to myopia like Double vision, Haziness, Glare or Haloes around bright lights without using spectacles, has remained same (i. e severe) after one year and the after another one year it has been decreased from severe to moderate. And symptoms like headache, eye strain without using spectacles, it has been decreased after six months and remained same at the end of two years.

2) "Comparative study of "Haritaki" & "Hrutu-Haritaki-Rasayana" with Special reference to vision."⁽¹⁹⁾

In this study 2 groups were made and Haritaki + Pippali & Hrutuharitaki + Pippali were given for 2 months

Subjects with specific refractive errors i.e. between 0 to ± 2 , Without any severe diseases were included, *Rutu-Haritaki* was much more superior than plain *Haritaki* in terms of Refractive Errors, visual acuity and dryness of eyes.

3) "Clinical study of Amalaka rasayana in patients suffering from age related macular degeneration"⁽²⁰⁾

Amalaka rasayana was found to be effective in improving vision in dry ARMD and helps to stabilise the condition in wet ARMD. No recurrence was observed during 3 years of study.

CONCLUSION

Not only chakshsharasayana, but all the Rasayana dose poshan till dhatu level, Aseye is made of panchamahabhuta and saptadhatu as mentioned above rasayana does poshan of each and every part of eye and will eventually improves functioning and delays early degeneration of eye and protects from age related disorders. We can also co-relate like utpadana is function of shukra dhatu, rasayana does poshan till shukra dhatu, so only rasayana does regeneration till degenerative changes at retinal level, according to charaka shukra sara purusha has good vision. This review attempts to summarize the various facts about effect of rasayana in netra.

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A STUDY ON CONSUMER BUYING BEHAVIOR TOWARDS ONLINE SHOPPING IN THOOTHUKUDI

Dr. V. Gopalakrishnan¹, Mr. M. Thangajesu Sathish²

¹Assistant Professor, Department of Commerce, Kamaraj College

²Assistant Professor, Department of Commerce, Kamaraj college

ABSTRACT

Consumer buying behavior refers to the actions taken (both online and offline) by consumers before purchasing a product or service. This process may include consulting search engines, participating in social media posts, or other actions. Understanding this process is valuable to companies because it helps them better align their marketing initiatives with marketing efforts that have been successful in driving consumers to buy in the past. As people increasingly shop online, they also expect a wide selection of different payment options from online retailers. As consumers increasingly opt for digital channels for browsing and buying, brands need to make sure that their digital experience is on par with what someone would get in-store. This study focuses the consumer behavior in Thoothukudi town and analyse with the help of chi-square test.

KEYWORDS: Consumer, Buying behavior, Digital payments

I. INTRODUCTION

The use of the internet has created a new experience for consumers regarding gathering information about the product. The Internet is used as a communication channel as a part of direct marketing. It has developed markets into a highly competitive market. Business organizations use the internet as a main vehicle to conduct commercial transactions in the online platform.

Consumer buying behavior is a method how individual or group customers select, buy and use the products to satisfy their needs and wants. It examines how emotions, attitudes and preference affect the buying behavior. The study of consumer behavior explores individual qualities such as personality, lifestyle and behavioral variables such as usage rate, usage occasion, loyalty, band etc. as an attempt to interpret the people's wants and consumption patterns. Customer behavior is concerned with purchase activities, use or consumption activities and disposal activities. Purchase activities are concerned with how customers acquire products and services. Consumption activities are concerned with who, where, when and how of consumption and the usage experience. Disposal activities are concerned with the way that consumers dispose of products and packaging and also include reselling activities.

II. REVIEW OF LITERATURE

Upasana Kanchan, Naveen Kumar and Abhishek Gupta (2015) in their article "A Study of Online Purchase Behavior of Customers in India" Published in ICTACT Journal on Management Studies stated that online shopping is gaining popularity among people of young generation. Higher income groups and educated people are purchasing more via e-retailing websites. People have hesitations in doing online shopping due to security concerns. At the same time people are resistant to change because of technological complexity in making online purchases. Companies involved in online retailing should focus on building trustworthy relationships between producers and customers.

III. STATEMENT OF PROBLEM

The study of consumer buying behavior towards online shopping with special reference to thoothukudi, is an area where both high income and low-income groups live. So, the preferences and attitudes may be different. It is important to look at the situation from an academic point of view to the questions. The study mentions the reasons for increase in online shopping, the factors that influence consumers to purchase through the internet. It also helps to get an idea about consumer buying behavior towards online shopping.

IV. OBJECTIVES OF THE STUDY

- ✓ To find out the consumer buying behavior towards online shopping with special reference to Thoothukudi.



- ✓ To understand the factors that lead consumers towards online shopping.
- ✓ To identify the preference of consumers towards different sites.
- ✓ To identify the mode of payment used by consumers in online shopping.

V. NULL HYPOTHESIS

Based on the objectives of the study the following hypothesis have been framed and tested.

H0: There is no significant relationship between the age of respondents and opinion about the reasons affecting online shopping.

H0: There is no significant relationship between the gender of respondents and the factors affecting your online purchase decision.

H0: There is no significant respondent factors affecting your online purchase decision.

H0: There is no significance of respondents' opinion about the reasons affecting online shopping.

VI. METHODOLOGY

The present study adopts an analytical and descriptive research design. By adopting a convenience sampling method. Data was collected by using two main methods., primary data and secondary data. The tools used for analysis One-way ANOVA and Chi-Square test.

VII. LIMITATION OF THE STUDY

1. The information given by the respondents might be biased because some of them might not be interested in providing correct information.

2. Respondents tried to escape some statements. This was one of the most important limitations faced, as it was difficult to analyse and come at a right conclusion.

3. Due to time and cost factor, only limited respondents were surveyed

VIII. ANALYSIS AND DISCUSSIONS

TABLE NO: 1 GENDER

Particulars	No of respondents	Percentage
Male	69	57.5
Female	51	42.5
Total	120	100

Source: Primary data

From the table, it is clear that out of 120 respondents, 57.5% are male and 42.5% are female. Hence, the majority of the respondents are Male.

TABLE NO: 2 AGE

Particulars	No of respondents	Percentage
Below 20 years	28	23.3
21 years - 30 years	70	58.3
31 years – 40 years	15	12.5
40 years and above	7	5.8
Total	120	100

Source: Primary data

From the table, it is clear that out of 120 respondents, 23.3 % of the respondents are between the age group below 20, 58.3 % are between the age group 21-30,12.5 % are between the age 31-40 and the rest 5.8% above 40. Hence, the majority of the respondents are between the age group of 21-30.

TABLE NO: 3 EDUCATION QUALIFICATION

Particulars	No of respondents	Percentage
School Level	4	3.3
Degree/Diploma	49	40.8
Post graduates	44	36.7
Professional	20	16.7
Others	3	2.5
Total	120	100

Source: primary data



From the table, it is clear that out of 120 respondents, 40.8% of the above respondents are Degree/Diploma holders, 36.7 % of them are postgraduate level, 16.7% are professionals, 3.3% are school level and the rest 2.5 % are Others. Hence, the majority of the education qualifications of the respondents Degree/Diploma holders.

TABLE NO: 4 OCCUPATIONAL STATUS

Particulars	No of respondents	Percentage
Homemaker	19	15.8
Govt. Employee	5	4.2
Private Employee	46	38.3
Business	13	10.8
Others	37	30.8
Total	120	100

Source: primary data

From the table, it is clear that out of 120 respondents, 10.8% of the respondents are doing business, 4.2 % are government employees, 15.8 % are home makers, 38.3 % are private employees and the rest 30.8% are others. Hence, the majority of the occupational status wise respondent's Private employees.

TABLE NO: 5 MONTHLY INCOME

Particulars	No of respondents	Percentage
Up to 10000	43	35.8
10000 - 20000	30	25
20000 - 30000	20	16.7
30000 - 40000	8	6.7
Above 40000	19	15.8
Total	120	100

Source: primary data

From the table, it is clear that out of 120 respondents, 35.8% of the above respondent's monthly income is less than Rs.10000, 25% respondent's monthly income is between Rs.10000-20000, 16.7% respondent's monthly income is between Rs.20000-30000, and rest 6.7% respondent's monthly income is between Rs. 30000-40000 and rest 15.8% respondents is above Rs.40000. So, the majority of the respondent's monthly income is less than Rs.10000.

TABLE NO: 6 MONTHLY SPENDING OF RESPONDENTS FOR ONLINE SHOPPING

Monthly spending	Frequency	Percentage
Less than Rs 1,000	84	70
Rs 1,000 - Rs 3,000	22	18
Rs 3,000 - Rs 6,000	7	6
Rs 6,000 - Rs 9,000	2	2
Rs 9,000 - Rs 12,000	1	1
Above 12,000	4	3
Total	120	100

Source: Primary data

The above table shows that 70% of respondents monthly spend less than Rs 1,000 for online shopping. 18% of respondents monthly spend Rs 1,000 - Rs 3,000. 6% of respondents monthly spend Rs 3,000 - Rs 6,000. 2% of respondents monthly spend Rs 6,000 - Rs 9,000. 1% of respondents monthly spends Rs 9,000 -Rs 12,000. 3% of respondents monthly spends above 12,000 for online shopping.

TABLE NO: 7 SHOWING WHAT RESPONDENTS LOOK WHILE ONLINE SHOPPING

What respondents look	Frequency	Percentage
Price information	58	48
Brand information	49	41
Information of the dealer that carry product	11	9
Others	2	2
Total	120	100

Source: Primary Data



The above table shows that 48% of respondents look at price information while online shopping. 41% and 9% of respondents look at brand information and information of the dealers that carry products respectively. Respondents look for Others of product are 2% each.

TABLE NO: 8

H0: There is no significant relationship between the age of respondents and opinion about the reasons affecting online shopping.

ANOVA						
Factors		Sum of Squares	df	Mean Square	F	Sig.
Price	Between Groups	.826	3	.275	.247	.863
	Within Groups	101.532	116	1.116		
	Total	102.358	119			
Product	Between Groups	.208	3	.069	.084	.968
	Within Groups	95.383	116	.822		
	Total	95.592	119			
Discount	Between Groups	3.815	3	1.272	1.211	.309
	Within Groups	121.776	116	1.050		
	Total	125.592	119			
Delivery time	Between Groups	7.098	3	2.366	2.118	.102
	Within Groups	129.569	116	1.117		
	Total	136.667	119			
Convenience	Between Groups	6.296	3	2.099	1.982	.121
	Within Groups	122.829	116	1.059		
	Total	129.125	119			

(Source: Primary data)

The above table shows the p value of the variable Price value, Price, Product, Discount, Delivery time and convenience are more than 0.05 at 5% level of significance. Hence the null hypothesis is accepted and inferred that there is no difference between the mean scores of these two factors of opinion about the reasons affecting online shopping and Age.

TABLE NO:9

H0 - There is no significant relationship between the gender of respondents and the factors affecting your online purchase decision.

ANOVA						
Factors		Sum of Squares	df	Mean Square	F	Sig.
Previous Experience	Between Groups	.580	1	.580	.614	.435
	Within Groups	111.545	118	.945		
	Total	112.125	119			
Family members	Between Groups	2.009	1	2.009	1.609	.207
	Within Groups	147.316	118	1.248		
	Total	149.325	119			
Friends	Between Groups	1.635	1	1.635	1.560	.214
	Within Groups	123.690	118	1.048		
	Total	125.325	119			
Online advertisement	Between Groups	.110	1	.110	.122	.728
	Within Groups	107.090	118	.908		
	Total	107.200	119			
Time saving	Between Groups	.594	1	.594	.613	.435
	Within Groups	114.397	118	.969		
	Total	114.992	119			

Source: Primary data

The above table shows the p value of the variable Previous Experience, Family members, Friends, online advertisement and time savings are more than 0.05 at 5% level of significance. Hence the null hypothesis is accepted and inferred that there is no difference between the mean scores of these two factors of factors affecting your online purchase decision and Gender.



TABLE NO: 10

H0- There is no significance of respondents' opinion about the reasons affecting online shopping.

Test Statistics					
	Price	Product	Discount	Delivery time	Convenience
Chi-Square	32.526 ^a	24.467 ^b	47.917 ^c	46.667 ^c	57.667 ^c
df	4	3	4	4	4
Asymp. Sig.	.000	.000	.000	.000	.000

(Source: Primary data)

This table reveals the relationship between opinions about the reasons affecting online shopping. For Price value, Price, Product, Discount, Delivery time and convenience are less than the table value. As a result, null Hypothesis is rejected. So, Alternative Hypothesis is accepted. It concludes that there is a significant difference of opinion about the reasons affecting online shopping.

TABLE NO: 11

H0 - There is no significant respondent factors affecting your online purchase decision.

Test Statistics					
	Previous Experience	Family Members	Friends	Online Advertisement	Time Saving
Chi-Square	64.333 ^a	37.083 ^a	50.583 ^a	73.167 ^a	62.417 ^a
df	4	4	4	4	4
Asymp. Sig.	.000	.000	.000	.000	.000

(Source: Primary data)

This table reveals the relationship between factors affecting your online purchase decision. Previous Experience, Family members, Friends, online advertisement and time savings are less than the table value. As a result, null Hypothesis is rejected. So, Alternative Hypothesis is accepted. It concludes that there is a significant difference of factors affecting your online purchase decision.

CONCLUSION

In today's world, the attitude of the customers towards online shopping is different. They choose their convenient mode of shopping as per their comfort. From this study on consumer buying behavior towards online shopping. We could reach the conclusion regarding the behavior of consumers towards online shopping. Different consumers have different attitudes and buying behavior. The factors influencing consumer buying behavior are psychological factors, social factors, economic factors, personal factors, cultural factors. The main feature behind online shopping is (B2B) Business-to-business, (B2C) Business-to-consumers, (C2C) consumers-to-consumers. The reasons for online shopping are price, quality, quantity, brand, convenience, discount etc. Due to revolution in telecommunication sector no. of users of internet have increased in India in recent time and customers are using internet for online shopping but still for regular purchase most of customers first choice is manual shopping. To increase no. of customers for online shopping there is need of extensive publicity and promotion by online shopping companies to attract all class of customers

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A COMPREHENSIVE REVIEW ON LEMONGRASS (*CYMBOPOGON CITRATUS*) OIL EXTRACTION AND ITS APPLICATIONS

Okpo, Samson Onoriode^{1*} and Edeh, Ifeanyichukwu²

¹Department of Chemical Engineering, Delta State University of Science & Technology, Ozoro

²Department of Chemical Engineering, University of Port Harcourt, Rivers State

^{1*} Corresponding Author

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ABSTRACT

This article presents a comprehensive review of methods of extraction, properties, compositions and industrial application of lemongrass essential oil. Lemongrass (Cymbopogon citratus) essential oil has been used traditionally since ancient days in medicine as remedy to improve blood circulation, treat fever and malaria, promote digestion and as well used to increase immune system of the human body. Essential Oils of lemongrass are used in various industries. Some of the industries in which they are used extensively include Aromatherapy, Food and drink industry, Pharmaceuticals industry, Fragrance and Flavour industry, Agriculture and Livestock industry, Cosmetic and Soaps industry, House hold and Domestic. The quality of the essential oil from lemongrass strongly depends on the extraction method and operating conditions. Basically lemongrass essential oil can be obtained by various extraction methods, such as steam distillation, conventional solvent extraction, Soxhlet extraction, ultrasound-assisted extraction (UAE), hydrodistillation (HD), microwave-assisted hydrodistillation (MAHD), Simultaneous-distillation-extraction technique (SDE), Solvent-Free-Microwave-Extraction Technique (SFME) and supercritical fluid extraction (SFE) with CO₂. The composition of essential oil of Cymbopogon citratus contains α -pinene, β -pinene, delta-3-carene, myrcene dipentene, β -phellandrene, β -cymene, methyl heptanene, citronellal, β -elemene, β -caryophyllene, citronellyl acetate, geranyl acetate, citral A, citral B, geraniol, elemol, and β -caryophyllene oxide, etc. In addition, lemongrass oil also contains essential minerals such as Fe, Zn, Mg, Na, K, Ca, Mn, P etc. The most important physicochemical properties of lemongrass oil includes specific gravity, Optical rotation, refractive index, percentage of citral, freezing point, moisture content, acid value, ester value, carbonyl value and phenol content. Nevertheless, the chemical composition of the essential oil of Lemongrass also varies with the geographical origin, cultivation practices, plant age, photoperiod, harvest period, cultivars, and extraction methods. However, for extraction of lemongrass oil, green technology such SFE, SDE, SFME and MAHD that are consumer and environmental friendly in industrial-scale essential oil production should be considered as a method to overcome the limitations of traditional distillation methods.

KEYWORDS: Essential Oil, Lemongrass, Microwave-Assisted-Hydrodistillation. Solvent Extraction, Steam Distillation, Supercritical Fluid Extraction

1.0 INTRODUCTION

Lemongrass is a tropical perennial and aromatic plant which belongs to the family Graminae (Poaceae) and the genus *Cymbopogon*. The name *Cymbopogon* came from Greek words 'kymbe' (boat) and 'pogon' (beard) meaning arrangement of flower spike (Shah *et al.*, 2011). The herb is cultivated and distributed in sub regions of Africa, Asia, North America, South America, Australia, Oceania till present day (New Directions Aromatics, 2017; Suryamanshi *et al.*, 2016; Chantal *et al.*, 2012;). There are about 55-80 species of lemongrass already identified which includes *Cymbopogon citratus* (West Indian lemongrass), *Cymbopogon flexuosus* (East Indian lemongrass), and *Cymbopogon pendulus* (Jammu lemongrass) (Jayasinha *et al.*, 1999; Lawal *et al.*, 2017; Chowdury *et al.*, 2015). Out of all the species identified, only two have economic importance as cultivated plants namely *C. citratus* and *C. flexuosus* (Avoseh *et al.*, 2015). According to Directorate Plant Production (2012), *Cymbopogon citratus* as shown in Figure 1 is a fast-growing, lemon-scented, perennial herb having average height of about 1m. It has distinct bluish-green leaves and usually does not produce seed. It produces many bulbous stems that increase the clump diameter as the plants mature.



Figure 1: West Indian Lemongrass (*Cymbopogon citratus*)

On the other hand, *Cymbopogon flexuosus* which is the second most important lemongrass specie is a tall, fast-growing, lemon-scented, perennial grass reaching an average height of about 1.5 m. It has distinct, dark-green foliage and also produces seed. Lemongrass plants persist for many growing season and it produces essential oil. It contains many phytochemical compounds like phenol, citral, geraniol, terpenoids, benzenoids and other nitrogenous compounds which help in metabolic process of plant. The leaves of lemongrass and its oil possess lemon-like odour characteristic aromatic flavours due to its citral contents which is the most dominant constituents. Dry leaves of lemongrass contain approximately 1-2 percent essential oil (Carlson *et al.*, 2001). Lemongrass extracts has found industrial application in pharmaceutical, cosmetics, food processing and perfumery industries (Ganjewala and Luthra, 2010; Joy *et al.*, 2006). Scientific studies have showed that *Cymbopogon citratus* oil possesses various pharmacological properties such as antibacterial, anti-amoebic, anti-filarial, antidiarrheal, anti-inflammatory, antifungal, antimalarial, anti-mycobacterial, anti-mutagenicity, hypoglycemic, antioxidants and neurobehavioral. antiprotozoal, anti-carcinogenic, antioxidant, anti-rheumatic and cardio-protective (Aly, 2021; Ajayi *et al.*, 2016; Chukwuocha *et al.*, 2016; Ekpenyong *et al.*, 2015; Avoseh *et al.*, 2015; Akono *et al.*, 2014). For instance, in India, China, Thailand among other countries, lemongrass is generally used as food flavoring agent, ingredient in beverages because its ability to aid digestion, boost body immunity and blood circulation. Also, Okpo and Edeh (2022) has reported that in some parts of Nigeria, lemongrass is use for the treatment of fever, convulsion in children, throat inflammations, stomach upset, skin diseases, and ears/eyes infections. Particularly, in Isoko part of Nigeria, lemongrass is used as ingredient in pepper soup, curries, and local drink. Lemongrass extract have been reportedly used for treatment of diarrhea, skin infections and painful irregular menstruation in females. In sub-regions of the world, lemongrass is reportedly used to reduce blood pressure (Rodrigues and Carlini, 2004). Devi, *et al.*, (2011) affirmed the use of lemongrass extracts for local treatment of gastrointestinal discomfort. In Guatemala, an extract of lemongrass leaves have been reportedly applied for various purposes (Selvi *et al.*, 2011; Jayasinha, 1999a). For other application of lemongrass especially in the manufacturing industries, it had been reportedly used as a major ingredient of perfumery, cosmetics, soaps, tea, cleansing agent and confectionary products (Ganjewala, 2008; Akhila, 2010). It is also said that lemongrass oil can help accelerate the healing of scratches and cuts, but Karma (2006) confirmed a burning sensation from direct application of lemongrass oil on the skin. The essential oil of lemongrass is in high demand due to its commercial value. Extracting and characterizing bioactive molecules from medicinal plant is very important for drugs with high therapeutic value. This review is aimed to provide information on harnessing the existing extraction methods of lemongrass essential oil, its chemical composition and its application in pharmaceutical, cosmetics, food processing and perfumery industries.

2.0. PHYSICOCHEMICAL PROPERTIES OF ESSENTIAL OIL

The chemical compositions of lemongrass oil vary with the age of the grass. Fresh lemongrass contains 0.67% of essential oil, which has substantial amount of citral (Maiti *et al.*, 2006). Lemongrass oil can be regarded as a semi viscous liquid with darkish-yellowish or darkish-amber colour that change to red as it gets older. Presence of moisture in the oil makes the oil have a turbid appearance. The most important physicochemical properties of lemongrass oil usually considered includes specific gravity(SG), refractive index(RI), percentage of citral, freezing point, moisture content, acid value, ester value, carbonyl value and phenol content (Pushpakumari, 1987).



However, Standard Organization has specified standard reference characteristics/properties for Lemongrass oil. International standards Organization(ISO) and Indian Standards Institute (ISI) for physico-chemical standards for *Cymbopogon citratus* and *Cymbopogon flexuosus* are presented in Table 1.

Table 1: Physico-chemical properties standards for *Cymbopogon citratus* and *Cymbopogon flexuosus* (Rajeswara Rao, 2013)

Parameter	ISO 3217:1974 standard for <i>Cymbopogon citratus</i>	IS:327:1961 standard for <i>Cymbopogon flexuosus</i>
Colour	Yellow	Dark yellow to light broenish-red mobile liquid
Odour	Lemon-scented	Intense lemon-like
Specific gravity	0.872-0.897(at 20°C)	0.888-0.898 (at 30°C)
Refractive index	1.4830-1.4890(20°C)	1.4786-1.4846 (at 30°C)
Optical rotation	-3° to+1°	-3° to+1°
Carbonyl value as citral	Not less than 75%	75%
Solubilty	Fresh oil soluble in 70% (v/v) alcohol at 20°C. Insoluble in 90%(v/v) alcohol	Soluble in 3 volumes of 70% alcohol by volume Occasionally with slight turbidity

Furthermore, Table 2 presents various physico-chemical properties of lemongrass oil that have been reported in literatures by researchers.

3.0: COMPOSITION OF LEMONGRASS AS OBTAINED BY DIFFERENT INVESTIGATORS

Many researchers have reported that lemongrass oil contains so many compounds, functional and elemental minerals (Okpo and Edeh, 2022; Okpo and Otaraku, 2020).

3.1. Chemical compositions of the essential oil of Lemongrass

Lemongrass oil is majorly composed of citral. The percentage citral content varies with locality of the plant (Ranade, 2004; Tasldnen *et al.*, 1983; Nath *et al.*, 1994). Citral is used as crude material for vitamin A, confectionery and perfumery products (Viabhav *et al.*, 2013; Singh *et al.*, 2011; Carlson, *et al.*, 2001; Suryawansh *et al.*, 2016).

Table 2. Physico-chemical properties for *Cymbopogon citratus* researchers

Parameter	Abera (2020)	Benoudjit, et al.,(2022)	Dao, et al.,(2020)	Mustapha (2018)	Olayemi, et al.,(2018)
Appearance		Mobile, clear liqiud	Liquid	-	
Acid value	2.805	1.402±0.036	2.948	4.09	0.55
Boiling point	212			299	
Colour		Pale yellow	Light yellow	Dark yellow	
Iodine value		69.795±1.521			105
Ester value			6.402		189.21
Moisture contents	20.7				
Odour		Fresh with strong lemon odour	Specific		
Optical rotation		4±1			
Peroxide value		3±0.082		6.0	6.0
pH	5.5				
Refractive index		1.488±0.001		n20/D2.487	1.4838
Residue on evaporation at 100oC					10%
Saponification value	140.25		9.35	143	189.76
Solubility		Immiscible		Insoluble in water	
Specific gravity		0.891±0.001	0.8865	0.896	0.8960

The composition of *C. citratus* essential oil varies widely depending on genetic diversity, habitat and agronomic treatment of the culture (Ranitha *et al.*, 2014), as well as on the part of the plant (Olayemi, 2017), maturity stage (Tajidin *et al.*, 2012) and



extraction method (Bossou et al., 2015). The oil of West India lemongrass (*Cymbopogon citratus*) grown in Kaduna Nigeria shows that the lemongrass contains about 34, 26 and 16 compounds respectively for root, stalk and leaf (Olayemi, 2017). Jayasinha *et al.*, (1999b) identify about 70 constituents of essential oil of the three (3) species of lemongrass. Okpo and Otaraku (2020) established and nineteen (19) different components in *Cymbopogon citratus* oil sample as presented in Table 3.

Table 3: Composition of lemongrass essential oil (Okpo and Otaraku, 2020)

Component	% Composition
α -pinene	12.9
2- nonanone	10.3
Acetonitrile	7.5
β -cedrenes	6.6
Camphor	6.4
Citronellal	6.0
4- nonanone	5.9
Terpinolene	5.4
Decanal	5.3
α -cedrol	5.3
Citral A	5.0
β -pineane	4.4
Atlantone	3.6
Pentane	3.3
p-cymene	3.1
γ -terpinene	2.8
α -cedrenes	2.6
Thujopsene	2.0
Genaniol	1.7
Total	100.0

As reported in the work of Joy *et al.*, (2006), various researchers have also reported on the composition of three (3) species of lemongrass oil. For East Indian lemongrass oil, Weiss (1997); Ranade (2004) asserted that the oil contains 75-85% of aldehydes consisting largely of citral, linalool (1.34%), geraniol (5.00%), citronellol, nerol (2.20%), 1,8 cineole, citronellal (0.37%), linalyl acetate, geranyl acetate (1.95%), α -pinene (0.24%), limonene (2.42%), caryophyllene, β -pinene, β -thujene, myrcene (0.46%), β -ocimene (0.06%), terpenolene (0.05%), methyl heptanone (1.50%) and α -terpineol (0.24%). Likewise, the composition of essential oil of West Indian lemongrass oil *Cymbopogon citratus* contains approximately α -pinene (0.13%), β -pinene, delta-3-catrene (0.16%), myrcene (12.75%), dipentene (0.23%), β -phellandrene (0.07%), β -cymene (0.2%), methyl heptanene (2.62%), citronellal (0.73%), β -elemene (1.33%), β -caryophyllene (0.18%), citronellyl acetate (0.96%), geranyl acetate (3.00%), citral b (0.18%), citral a (41.82%), geraniol (1.85%), elemol (1.2%) and β -caryophyllene oxide (0.61%) (Saleem et al, 2003a; Saleem et al, 2003b). And that of *C. pendulus* oil is reported to contain pinene (0.19%), camphene (0.01%), β - pinene (0.16%), car-3-ene (0.04%), myrcene (0.04%), dipentene (0.35%), phellandrene (0.3%), pcymene (0.36%), methyl heptanone (1.05%), citronellal (0.49%), linalool (3.07%), β -elemene (0.7%), β -caryophyllene (2.15%), citronellyl acetate (0.72%), geraniol acetate (3.58%), citral b (32.27%), citral a (43.29%), geraniol (2.6%), elemol (2.29%) and β -caryophyllene oxide (1.56%) (Shahi, 1997; Sharma et al, 2002). Similarly, olayemi (2017) discovered 34,24 and16 compounds respectively for the root, stalk and leaf of oil lemongrass.

3.2. Functional group composition of lemongrass

It has been reported that lemongrass oil contains different functional groups which include halo-compound, alkene, alkane, sulphate, aldehyde, thiol, isothiocyanate, carboxylic acid, primary amide, amine, ketone, ester, carboxylic acid, alcohol, and aromatic compound in lemongrass oil (Benoudjit, et al., 2022; Okpo and Otaraku ,2020; Olayemi et al., 2018,)

3.3. Mineral composition



The mineral content of lemongrass oil has also been reported in literatures. *Cymbopogon citratus* contains important elemental minerals such as Sodium, Magnesium, Potassium, manganese, zinc, Phylate, phosphorus, calcium among. Table 4 presents results of mineral/heavy metal contents of lemongrass oil in comparison with W.H.O. and Indian standard for medicinal plants.

Table 4. Mineral contents of lemongrass by various researchers

Mineral	Indian specification (mg/100g)	WHO specification (mg/kg)	Okpo & Edeh (2022).	Nimenibo-Uadia and Nwosu (2020)	Uraku et al., (2015)	Sulaiman et al., (2019)
Cadmium			0.080			
Calcium				$40.08 \pm 0.00 \times 10^{-2}$	2.14 ± 0.02	1.00 ± 0.002
Chromium			0.530			0.05 ± 0.002
Cobalt					0.39 ± 0.01	
Copper	0.05-0.07	20-150	0.267	$4.45 \pm 0.46 \times 10^{-3}$	0.39 ± 0.01	0.08 ± 0.002
Iron	1.5-1.98	261-1239	0.167	$7.45 \pm 0.25 \times 10^{-2}$	0.11 ± 0.02	
Lead	0.14	10	1.379			
Magnesium			14.159	$13.77 \pm 0.40 \times 10^{-2}$		
Manganese	0.0.19-0.27	20-150	0.009		2.57 ± 0.04	
Mercury			0.728			
Phosphorus				$11.20 \pm 0.65 \times 10^{-2}$		
Potassium				$38.50 \pm 1.85 \times 10^{-2}$	0.64 ± 0.01	2.55 ± 0.015
Sodium				$2.70 \pm 0.21 \times 10^{-2}$	0.41 ± 0.01	6.63 ± 0.034
Zinc	2.23	50	0.844		0.03 ± 0.03	0.08 ± 0.002

Similarly, for sample of lemongrass leaves analyzed in Nigeria by Asaolu *et al.*, (2009) revealed that lemongrass leaves were rich in essential mineral elements, while the recorded concentrations of Fe, Zn, Mg, Na, K, Ca, Mn, P and Se were 43, 16, 226, 323, 298, 242, 25, 1245 and 2 mg/kg. In addition, analysis of lemongrass leaves extract done by Aftab *et al.*, (2011) from Punjab province of Pakistan also revealed high contents of K (53.40%), Ca (26.19%) and Si (10.01%) while 2.57% and 2.05% were recorded for sodium and Magnesium respectively.

4.0. METHODS OF EXTRACTIONS OF LEMONGRASS

Extracting and characterizing bioactive molecules from medicinal plant is very important for drugs with high therapeutic value. Dutta *et al.*, 2014 has suggested that distillation method is the best approach to extract essential oil of lemongrass. However common methods reported by researchers to extract essential oil from medicinal plants including Lemongrass (*Cymbopogon Citratus*) are hydrodistillation (HD), steam distillation, steam and water distillation, maceration, destructive distillation and expression (Dhobi *et al.*, 2009; Abderrahmane *et al.*, 2013). A lot of studies have showed that essential oils quality depends mainly on its constituents which is significantly influenced by the extraction techniques (Desai and Parikh, 2015; Abderrahmane *et al.*, 2013; Ashgari *et al.*, 2012; Schaneberg and Khan, 2002). Besides, methods involving heating may induce degradation, hydrolysis and water solubilization of some fragrance and volatile constituents (Dhobi *et al.*, 2009; Karakaya *et al.*, 2014). Additionally, the oil obtained through solvent aided extraction contains residues that may pollute the foods fragrances to which they serve as additive. As a means to overcome this drawbacks, some advance and improved techniques which includes microwave-assisted extraction (Hong *et al.*, 2010), ohmic-assisted hydrodistillation (Mohsen *et al.*, 2012), supercritical fluid extraction, subcritical water extraction and ultrasound-assisted extraction (Porto and Decorti, 2009) have been suggested researchers to shorten extraction time, improve the extraction yield and reduce the operational costs among other advantages. Below is the description of various methods;

4.1. Steam Distillation

According to Hesham *et al.* (2016), steam distillation is widespread method for isolating essential oils commercially. About 80 to 90% of vital plant constituents are obtained using steam distillation method. The technique is good for fresh plant materials that have a high boiling point most especially roots and seeds. In this method, the plant matrix(solid) is placed in the perforated grid, steam is released from steam boiler to the extraction still(pot) passing through the plant matrix(solid) and oil is removed from the plant matrix by diffusion process and comes out with steam to the condenser, then to the separation unit. Generally, Clevenger steam distillation apparatus in Figure 2 is used for recovering small quantities of solid plant material. Advantages of this method includes easy control of steam quality and quantity at any instance, low risk of thermal degradation as temperature is generally not above 100°C. Its only disadvantage is that of high level of technicality, repairs and maintenance.

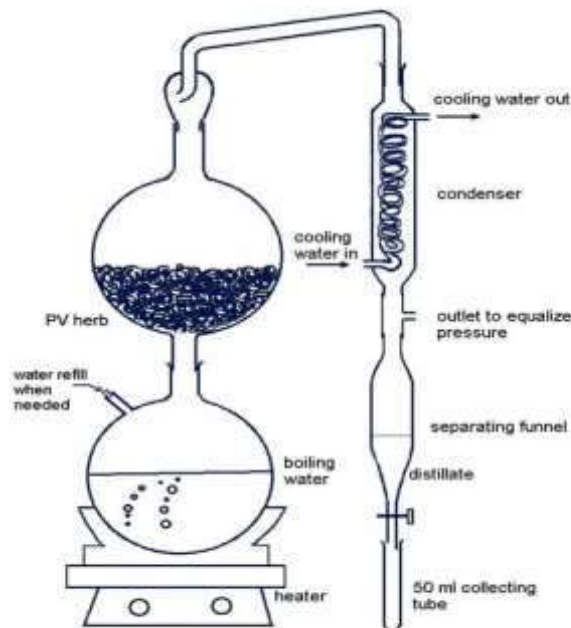


Figure 2. Steam distillation apparatus (Mak and Walsh, 2021)

4.2. Water (Hydro) Distillation

Li *et al.* (2014) have stated that, hydro-distillation differs from steam distillation. Hydro-distillation is used to bring out aromatic plants oil via boiling water. This method has some disadvantages which include slow distillation process resulting into long distillation time thereby leading to consuming more energy that makes the process uneconomical, extraction of herbs (leaves) is not always complete, Long stay of plant materials in hot water may cause changes in composition, The plant raw material very close to bottom walls of the pot have direct contact with the heat source, therefore, there is likelihood of plant material getting burned resulting to bad odour to the oil. Figure 3 is a typical schematic hydro-distillation apparatus.

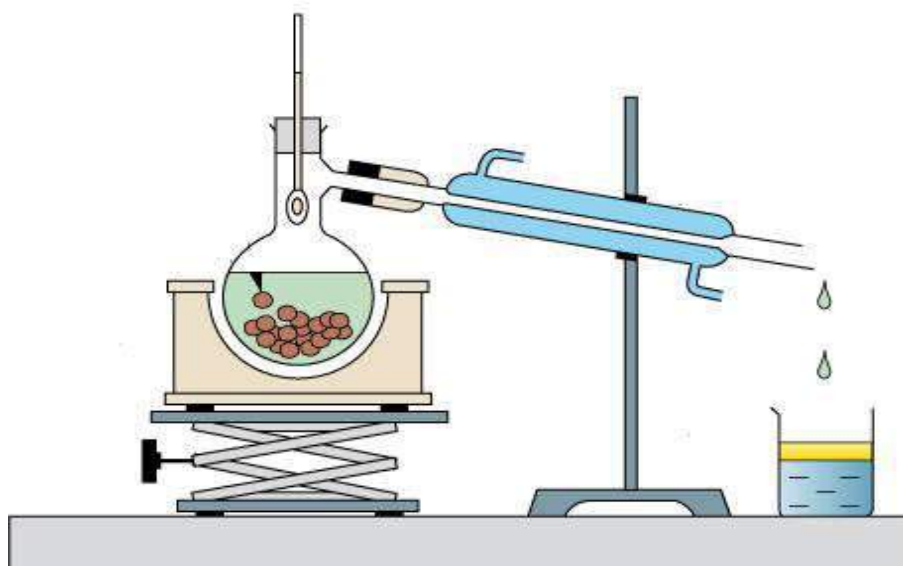


Figure 3. Hydro-distillation apparatus (Hesham *et al.*, 2016)

4.3. Effleurage

Effleurage method of extraction has its origin from Grasse, a southern part of France where it was first used for extraction of flower oils. In this method, the glass plate is covered with thin-layer of purified fixed oil or fat upon which fresh flowers are spread. In effleurage process, the volatile oil is recovered in a fatty base. In this method, the essential oil is usually separated from



fatty compounds by adding alcohol. After a time, the alcohol evaporates leaving the essential oils. Effleurage is highly labor-intensive method of extraction (Trease and Evans, 1978).

4.4. Maceration

This method involves soaking (macerating) the sample plant material in solvent, then after a while, filtering and concentration of the extract will take place. This method uses very cold solvent that reduces the chances of decomposition. But, it has a disadvantage of taking longer time as well consuming a lot of solvent (Joy *et al.*, 2006).

4.5. Solvent extraction

In solvent- extraction, raw materials are placed in a glass vessel and soaked in either of petroleum ether, hexane or benzene etc. In this method, as soon as extraction is completed, the solids are separated from the liquid mixture. The latter is heated so that the more readily vaporizing (diffusing) component of the oil can be evaporated, then subsequently condensed. Solvent extraction uses very little heat as a result; it is advantageous to obtain oils with whole fragrances that would have been otherwise destroyed by excess heat and steam. One disadvantage associated with the solvent-extraction method is that of solvent residues which often contaminate the product thereby resulting in side effects that makes the use of essential oil undesirable for skin applications but may still be used in cosmetics and household products (Ndou, 1986). Reports have shown solvent extraction method has a higher yield than steam distillation and effleurage method of obtaining essential oil of lemongrass (Suryawanshi *et al.*, 2016; Shetty *et al.*, 2017).

4.6. Soxhlet Extraction

Soxhlet extraction is one of commonly used method for extraction of nutraceuticals, but has its own limitations which include use of a large quantity of solvent and the process can be quite time consuming, taking from a few hours up to several weeks (Kaur, 2016). Castro and Priego-Capote, 2010; Luque de-Castro and García-Ayuso, 1998 explained Soxhlet extraction that, sample solid material containing desired compound is placed inside a thimble made from thick filter paper that is loaded into the main chamber of the Soxhlet extractor as depicted in Figure 4. The Soxhlet extractor is placed onto a flask containing the extraction solvent. The Soxhlet is then connected to a condenser. The solvent is heated to reflux. The solvent vapor travels up a distillation arm and floods into the receiving chamber housing the thimble of solid. The condenser ensures that any solvent vapor cools and drips back down into the chamber housing the solid material. The chamber containing the solid material slowly fills with warm solvent. Some of the desired compound will then dissolve in the warm solvent. When the Soxhlet chamber is almost full, the chamber is automatically emptied by a siphon side arm, with the solvent running back down to the distillation flask. This cycle may be allowed to repeat many times over hours or days.

4.7. Supercritical Fluids Extraction

Supercritical fluid extraction (SFE) involves separating one component (extractant) from another (plant matrix) using supercritical fluid (CO₂) as solvent (Kaur, 2016). One of the most common supercritical fluids employed in this extraction technique is CO₂. Supercritical extraction is quicker and more effective than ordinary solvent extraction; besides, supercritical fluid solvents are more easily removed. Recovery is usually accomplished when pressure is reduced to release the solvent from the extracted analytes. Figure 5 is a typical Supercritical fluid extraction (SFE) process. In this method, CO₂ is used as solvent. These desirable properties of CO₂ makes the essential oils that are produced have organoleptic properties closely resembling those of the plant from which the oil was extracted. CO₂ is inexpensive, safe and abundant.

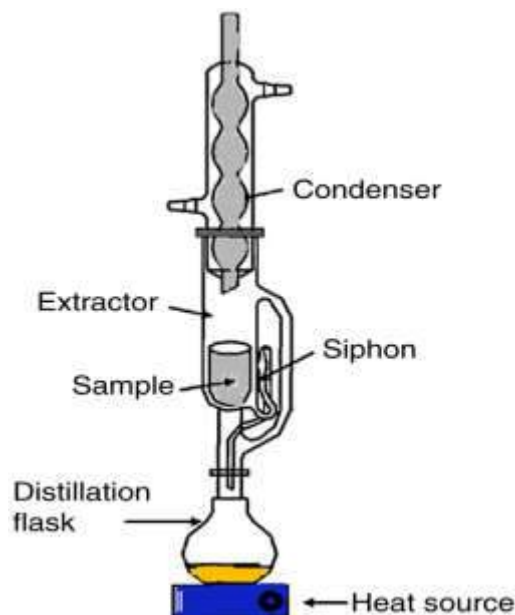


Figure 4. Soxhlet Extractor Apparatus (Kaur, 2016)

4.8. Ultrasound Extraction (Sonication)

According to Sukhdev *et al.* (2008), ultrasound extraction procedure involves the use of ultrasound with frequency range of 20 kHz - 2000 kHz. This method is function of frequency. Ultrasound-assisted extraction is recommended to accomplish vital valuable compounds. This technique was developed in 1950 (Vinatoru, 2001). In ultrasound extraction as shown in Figure 6, the plants raw materials are immersed in solvent like water, methanol or ethanol and then subjected to ultrasound. This technique has also been featured as a worthwhile technique in food and plants processing (Bhaskaracharya *et al.*, 2009).

4.9. Simultaneous-distillation-extraction technique (SDE)

In this method, the combination of either hydro-distillation and or steam distillation with solvent extraction is utilized. This technique is mostly used for isolation of volatile constituents from oils bearing plants. Solvent of choice must be indissoluble in water as well as possess high purity. Simultaneous distillation process has been modified into several variants with the consideration of efficiency, scale and quality of end-products. The technique uses less solvent; eliminates excessive thermal degradation and dilution of extract with water. The only disadvantage is that, it introduces an artifact into the extract as well as loss of compounds that have a strong affinity for water.

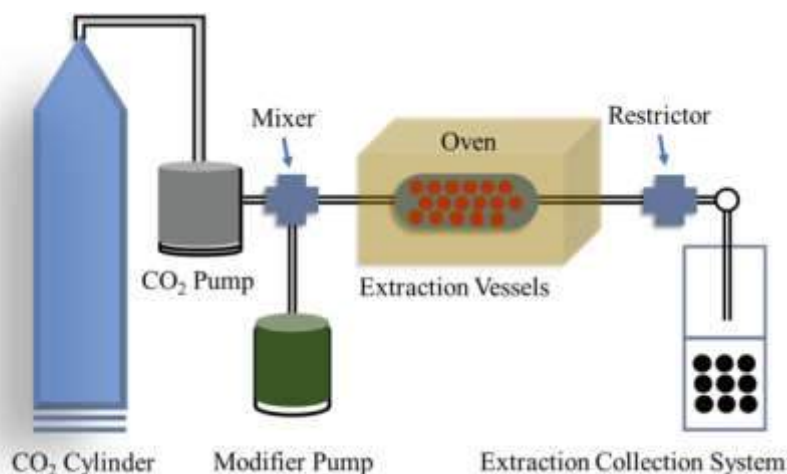


Figure 5. Supercritical fluid extraction (SFE) process (El Hamd, et al., 2022)

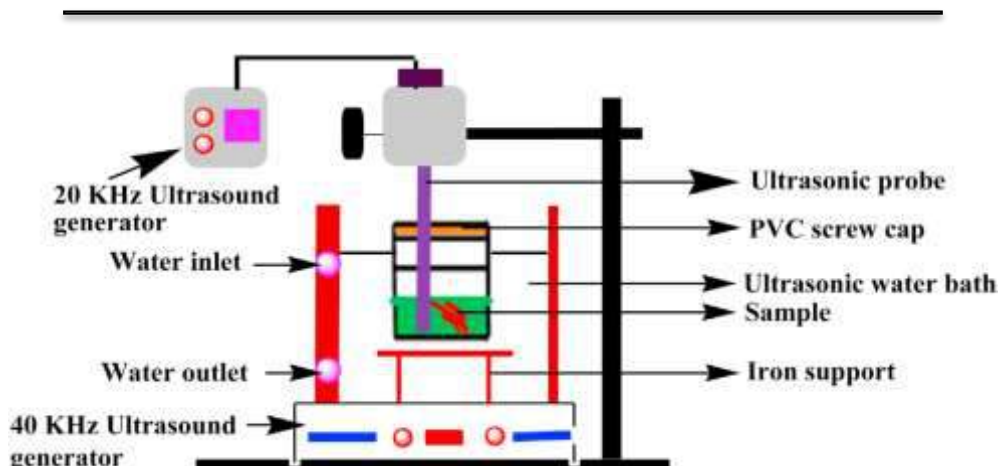


Figure 6. Sonication assisted extraction (Kaur, 2016)

4.10 Microwave-assisted hydro-distillation technique (MAHD)

The MAHD's technique is an advanced hydro-distillation techniques which utilized microwave oven. Golmakani and Rezaei (2008) have reported the use of MAHD in removal or recovery of bioactive compound (components) from plants raw material. The performance efficiency of MAHD strongly depends on the insulation of water and plant material to be extracted (Brachet, *et al.*, 2002). MAHD is represented in Figure 7. MAHD is a new technology presently used to separate biological materials from its carcass. It is being considered as an important alternative in extraction techniques because of its merits in reduction of extraction time, solvents and selectivity. The heating process is easily monitor and controllable.

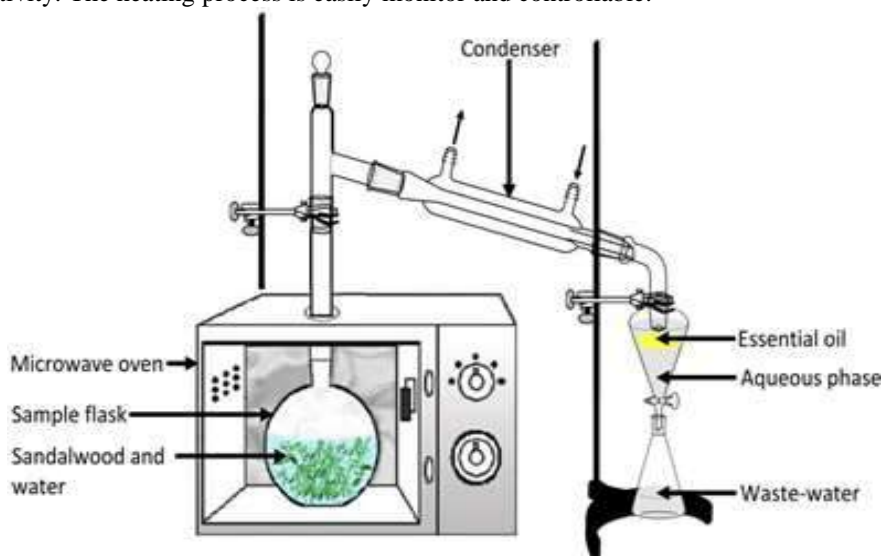


Figure 7 Microwave-assisted hydro-distillation (Kusuma and Mahfud, 2016)

4.11. Solvent-Free -Microwave-Extraction Technique (SFME)

SFME show in Figure 8 does not required solvents for its operation of bringing out oil from plant materials (Lucchesi *et al.*, 2007). In operation, the solid plant materials are moistened by soaking in a certain considerable quantity of water for about 1 to 2 hours. Thereafter, surplus H₂O is discharged off from the mixture. After this, the moistened plant materials are made to stay in the microwave oven cavity of which the condenser that will receive the extracted essential oils will be preset to predetermine condition. The separated essential oil is kept dry over and stored at 4°C in the dark. The control panel attached to equipment front is used to manipulate irradiation power, temperature and extraction time.

5.0. OIL YIELD METHODS REPORTED BY DIFFERENT INVESTIGATORS ON LEMONGRASS OIL EXTRACTION

5.1. Steam Distillation

This is still being considered as one of the preferred lemongrass essential oil extraction method among others. Suryawanshi *et al.*, (2016) in their work, "methodology to extract essential oils from lemongrass leaves: solvent extraction approach", solvent

extraction and steam distillation method were used to extract essential oil from lemongrass. The oil yield using steam distillation method by different researchers is presented in Table 5.

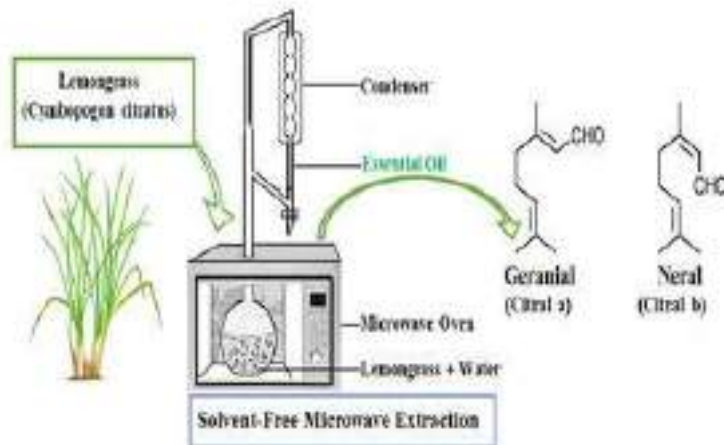


Figure 8 Solvent-Free Microwave Extraction (Boukhatem et al., 2022)

Table 5. lemongrass essential oil yield using steam distillation method by various researchers

Oil yield (%)	Quantity lemongrass used (g)	Ref.
0.85	150	Suryawanshi et al. (2016)
0.24	1272	Anggraeni et al. (2018)
0.3	-	Santin et al. (2009)
0.6	200	Boukhatem et al. (2014)
0.46 (dry plant)	45	Sargenti and Lancas (1997)
0.03 (fresh plant)	45	Sargenti and Lancas (1997)

Also in the work of Akhihiro et al. (2013), there is progressive increase of the essential oil yield from 0.51 to 0.84 as the particle size increases from 4 mm to 20 mm and the distillation time increases from 30 minutes to 120 minutes. Similarly, oil yield increases as temperature increases from 10 to 50°C for all the different sizes of the leaves.

5.2. Microwave-Assisted Hydrodistillation (MAHD) and Hydrodistillation(HD) method

In the research conducted by Ranitha et al.,(2014), “comparative study of lemongrass(*Cymbopogon Citratus*) essential oil extracted by microwave–assisted hydrodistillation and conventional hydrodistillation method, the result of their work after 90 minutes of extraction shows that the oil yield of 1.46% and 0.98% respectively for MAHD and HD. According to Ranitha et al., (2014), oil yield of 1.46% obtained for lemongrass at optimum operating parameters of; water to plant material ratio of 8:1, microwave power of 250W and 90 minutes of extraction. Similarly results of research work conducted using microwave-assisted hydrodistillation (MAHD) and hydrodistillation (HD) method are presented in Table 6.

Table 6. Results of MAHD and HD method on extraction of lemongrass

Oil yield (%)	Amount of lemongrass used(g)	Time (minutes)	Method	Ref.
1.46	50	90	MAHD	Ranitha et al. (2014)
0.98	50	90	HD	Ranitha et al. (2014)
0.35	100	90	MAHD	Tran et al. (2019)
0.15	100	90	HD	Tran et al. (2019)
2.6	250	180	HD	Olayemi (2017)

5.3. Solvent extraction and Soxhlet extraction method

In their research, “extraction and formulation of perfume from locally available lemon grass leaves”, Alhassan et al., (2018) reported oil yield of 4.5% and 3.8% for solvent extraction and soxhlet extraction methods respectively. In cases, 300g of lemongrass sample were used in their experiment. Solvent extraction method produced an oil yield of 4.5% which is 0.7% more than 3.8% obtained for Soxhlet extraction. The results of other researchers who have used these methods of extraction of lemongrass EO are presented in Table 7.



5.4. Supercritical Fluid Extraction Method (SFE)

Sargenti and Lancas (1997) explained the SFE Method for EO lemongrass is more efficient and effective with respect to time than steam extraction but less than by Soxhlet extraction. In their report, SFE of *Cymbopogon citratus* (DC), they reported oil yield of lemongrass with varied modification of organic solvent. The result of their findings is presented in Table 8. It was found that SFE using CO₂-10% hexane provides extract yields very similar to those obtained by steam distillation but yields additional compounds. The modification of the organic solvents influenced the oil yield as seen in table 8. Similarly, Marongia et al., (2006), also reported oil yield of 0.65% and 0.43% respectively for SFE and HD method that was employed in the extraction Lemongrass EO.

Table 7. Oil yield for Solvent extraction and Soxhlet extraction method

Oil yield (%)	Amount of lemongrass used (g)	Solvent	Method	Ref.
4.5	300	n-hexane	Solvent extraction	Alhassan et al. (2018)
3.8	300	n-hexane	Soxhlet extraction	Alhassan et al. (2018)
1.30	150	n-hexane	Solvent extraction	Suryawanshi et al. (2016)
6.27	300	n-hexane	Solvent extraction	Abera (2020)
7.8	82	n-hexane	Soxhlet extraction	Ojewumi et al. (2017)
2.9	82	ethanol	Soxhlet extraction	Ojewumi et al. (2017)

Table 8. Extraction yield and time of SFE of lemongrass (Sargenti and Lancas, 1997)

Extraction	Yields (%)	Extraction time (h)	Amount extracted with time (% h ⁻¹)	Total amount extracted per hour (% h ⁻¹)
For Dry plant				
Steam distillation	0.46	4	0.11	0.11
Soxhlet, Hexane	2.83	4	0.71	
Soxhlet, Acetone	1.22	4	0.31	1.02
Cold extraction, Hexane	2.96	72	0.04	
Cold extraction, Acetone	1.76	72	0.03	0.07
SFE-CO ₂ -10% Hexane	0.05	1.5	0.03	
SFE-CO ₂ -30% Hexane	0.94	1.5	0.63	
SFE-CO ₂ -10% Acetone	0.02	1.5	0.01	0.84
SFE-CO ₂ -20% Acetone	0.01	1.5	0.00	
SFE-CO ₂ -10% Methanol	0.26	1.5	0.17	
For Fresh Plant				
Steam distillation	0.03	4	0.01	0.01
SFE-CO ₂ -10% Hexane	0.25	4	0.06	
SFE-CO ₂ -10% Acetone	0.05	4	0.01	0.07

6.0. USES AND APPLICATIONS OF LEMONGRASS OIL

Lemongrass and its bioactive components has been comprehensively used in traditional medicines from long past around the world in many nations due to presence of many therapeutic properties like antifungal, antimicrobial, anti-inflammatory and analgesic which it possesses (Yousef, 2013). Shah *et al.*, (2011) has stated that, stalks and leaves of lemongrass are also used as an anticonvulsant, antispasmodic, antiemetic, hypotensive, antibacterial, analgesic, antitussive, antirheumatic, and in the treatment of nervous and gastrointestinal problems traditionally around the world. Furthermore, essential oil of lemongrass are used for food and beverages, cosmetic, perfumery, pharmaceuticals, nutraceuticals, sanitary, agronomy and drinks flavoring industries (Swamy et al., 2016). Generally, lemongrass oil had found great application in aromatherapy, cosmetics, perfumery, foods and drinks flavouring industries.

6.1. Cosmetics

Lemongrass oil is an ingredient in soaps, detergents, and cosmetics formulations. It is also used to aid systematic recirculation of blood and muscle toning. Lemongrass non-irritating, inexpensive, eco-friendly deodorant that is long-lasting without side-effects in proper dilution (NDA, 2018).



6.2. Pharmaceutical and Therapeutic

The oil from lemongrass is administered to treat diarrhea, stomach-ache, headaches, fevers, muscle pains/pull and flu. Apart from the aforementioned medicinal uses of the lemongrass oil, studies have also shows that lemongrass oil have antimicrobial and antifungal effect on some phartogenic organisms which make it to be useful in pharmaceutical industries (Boukhatem *et al.*, 2014; Sridhar *et al.*, 2003). Nambiar *et al.*, (2012) has reported possible Role of Lemongrass oil (*Cymbopogon citratus*) in treatment of coughs, constipation, elephantiasis flu, gingivitis, headache leprosy, malaria, ophthalmia, pneumonia, vascular disease. The anti-inflammatory and antioxidant properties have been well documented in numerous literatures. Promila and Madan (2018) have revealed that lemongrass essential oil has anti-inflammatory, anti-viral, anti-cancer, anti-hyperglycemic, anti-oxidant, anti-malaria, anti-mutation and antibacterial properties. These properties and chemicals in lemongrass make it a very important medicinal plant for the curing and prevention of various ailments.

6.3. Food and Drinks

Joy *et al.* (2006) has reported the used of lemongrass oil in culinary flavoring. Lemongrass oil have been used in food flavoring alcoholic products such as spices, tea leaves, candy baked foods, confectionery , meat/meat products. Mishra and Dubey (1994) confirmed that lemongrass oil is effective to fight against postharvest fungitoxicant for the protection of foodstuffs against storage fungi. Moreover, quite a lot of studies have been carried out to determine the efficacy of lemongrass essential oil in preserving different types of finished food products and the possibility of using them as substitutes for synthetic preservers in food productions. Abd-El Fattah *et al.* (2010) has reported that lemongrass EO has been used for the decontamination of mycotoxigenic fungi and prevention of mycotoxin formation in dairy products. The antifungal and antibacterial activities of lemongrass essential oil against different activities of microbial species have been well documented in literatures (de Silveira *et al.*, 2012; Abd-El Fattah *et al.*, (2010); Tzortzakis and Economakis, 2007; Mishra and Dubey, 1994). The antifungal activities of lemongrass EO against fungi known to cause the spoilage of bakery products have also been demonstrated (Guynot *et al.*, 2003; Suhr and Nielson, 2003). For the reason that lemongrass has antimicrobial properties, its EO is applied in the cheese-making industry as a natural preservative (Khorshidian *et al.*, 2018), preserve meat products against spoilage and pathogenic microbes (Pateiro *et al.*, 2021).

6.4. Industrial Uses

Due to its attractive fragrance, lemongrass oil is used as an additive ingredient in several products which include deodorant, mosquito and insect repellents cream, candles, polish, waxes, pesticides, anti-fungal cream and perfumes (Toungos, 2019; Sharma *et al.*, 2020).

6.5. Agriculture Uses

In spite of numerous uses of lemongrass oil in various industries, it has been widely used also in agricultural sector. The oils of certain species of lemongrass have been found application in germicide and bactericide production. Moreover, insecticidal, nematocidal and fungicidal activities of lemongrass oil have also been reported (Saksena and Tripathi, 1985). Moustafa *et al.*,(2021) reported that lemongrass essential oil has potential anti-insecticidal activity against the second-instar larvae of *A. ipsilon* and other insect pest, black cutworm, *Agrotis ipsilon* (Lepidoptera: Noctuidae) that attacks the seedling stage of many field crops in several countries around the world.

7.0. CONCLUSIONS

Essential oils of lemongrass consist of many volatile molecules that find applications in pharmaceutical, cosmetic, agricultural, food and aromatherapy etc. Extraction of lemongrass essential oils could be carried out by various methods. However Innovative methods devoid of shortcomings techniques to reduced chemical risk, extraction time and high energy input and obtain yield quality of essential oils are being sort for in the recent time. Therefore, for extraction of lemongrass oil, green technology such SFE, SDE, SFME that are consumer and environmental friendly recommended as the products are solvent free, saving time and energy consumption. Moreover, the chemical composition of the essential oil of Lemongrass also varies with the geographical origin, cultivation practices, plant age, photoperiod, harvest period, cultivars, and extraction methods. Findings from this present review indicates that lemongrass essential oil has significant potential for the advancement of drugs for the treatment of various types of infectious diseases and other ailments affecting humans and as well find countless applications industries.

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ROLE OF NIDANAPANCHAKA IN NETRA ROGAS

Dr.Ashutosh Kar¹, Dr.Sreeshma V²,Dr.Savita S Angadi³

¹PG Scholar, Dept.of Shalakyatantra,KAHER's KLE Shri BMK AyurvedaMahavidyalaya,Belagavi,Karnataka

²PG Scholar, Dept.of Shalakyatantra,KAHER's KLE Shri BMK AyurvedaMahavidyalaya,Belagavi,Karnataka

³Professor&HOD Dept.of Shalakyatantra,KAHER's KLE Shri BMK AyurvedaMahavidyalaya,Belagavi,Karnataka

ABSTRACT

The knowledge of Nidana helps in diagnosis of diseases.Nidana is divided as five parts. Its known as PanchaNidana. The PanchaNidana is described in Charak Samhita. These are Nidana, Purva Rupa, Rupa, Upasaya, and Samprati. They help in Netra roga diagnosis.

KEY WORDS: Nidan, Purva Rupa, Rupa, Upasaya, Samprati, Netra rogas

INTRODUCTION

In Charaksamhita Nidanstana (chapter one) panchanidan is described. These are Nidana not only help in all the disease of Netra but also in other diseases. Without knowledge of Nidana a Vaidya is unable to treat the Roga as well as the Rogi. According to Maharsi Susrut there are 76 Netra rogas. All the rogas are having different type of purva rupa, rupa. If a vaidya having good knowledge of the Nidana Panchaka then the disease diagnosis and treatment can be done properly.

NIDANA

NidanaPaanchak is the best tool not only for Diagnostic but also we can apply for treatment. In Susrut Samhita it is mention that the main principle of the treatment is NidanParivarjana.According to Ayurveda the cause of all disease is Nidansevan. Nidan is divided into 4 types. i.e.Sarnnikrusta, biprakrusta, byavichari, pradhanika. In sarnnikrustanidana a vadya can able to know about the diets which increase the dosa in body.in biprakrustanidan we can found the dosa sanchaya and prakopa condition. Inbyavicharinidana we can found the dosa which is directly effect to our sharira. In pradhanikanidana we can able to know about the toxicity of aharadravya in our body. In those 4 types of nidana Vaidya can found the dosa which cause for a disease.

In general the main hetus/nidanas of Netra rogas are Ushnabhitaptasyajaleprabeshat(exposing to cold just after the hot exposure), Doorekshanat(looking at a distant object for long time), swapnaviparyavachha (disturbed sleeping), prasaktasamrodana(crying), kopa(anger), shoka(depressed), klesha(stress), abhighata(injury), ati-maithuna(more sexual activity), intake of sukta-aranala-amla-kullayha-masa, vegavarodha, dhooma-nisevanat(smoking), chadrivigrahat(suppress of vomiting urge), vamana-atiyogat(excess vomiting), vasma-grahat, sukshmanirikshanat(observe to micro things for long time). These are the main causative factor of Netra rogas.¹

PURVA RUPA

Its known as pragutpati laxyana.²This laxyan starts before the disease.The main purpose of this panchanidana to know the Sadya and Asadyata of a disease. If All the signs and symptoms of a disease found in Purva rupaavasta, that time we can know that the disease is untreatable as it also known as Asadyaavasta of disease. Ex. In Jwarapurvarupa having all the signs and symptoms then it is known as Asadyaavasta. Also we can do final diagnosis of a disease according to our knowledge of Purva rupanidana. Ex. If a patient having the yellow or pale colour urination (mutra tyaga) without the signs of Prameha then this disease known as Raktapitta. Also all disease having treatment principle according to the purvarupa, ex. In JwarapurvarupaLaghuAhara is indicated in Charak Samhita³

In Netra rogas Purva-rupas are avilanetra(dirtiness of eye), sasarambha-kandu(itching of eye), upadehavat(discharge), guru-ushna-toda(burning and pricking pain), sashulavatmakosa(pain in lid), sukapurnabha(forign body sensation)⁴.

In this condition vaidya should treat the rogi according to the dosas like elimination of etiological factor, by using of panchakarma therapy etc. if the vaidya is not treat the rogi then the disease condition will aggravate.

RUPA

This nidana helps to proper diagnosis of a disease, because the signs and symptoms are more clearly⁵.In this nidana we can able to found the sadhya, asadhya or kruchhasadhyata of a disease. Ex. The hetu, purvarupa, and rupa having



madhyamavasta then that disease becomes *kuchrasadya*. All the *Netra Rogas* having separate *rupas* (signs and symptoms). In *Netra rogas* we can find particular signs and symptoms in all the disease.

The rupa of Utsangini eye disease described by maharsi Susrut is *Avyantromukhi bahyautsanf* that means a nodule like swelling in lower lid with an opening in inner surface. This sign and symptoms help to know the disease.

In Anjana-Namika, Maharsi Susrut described *Dahatodavati-tamra pidaka*, that means burning, pricking is present in this disease with the colour of vatma becomes tamra. This particular rupa helps to know the disease as Anjana-Namika.

So the Rupa avasta is so much helpfull for diagnosis and treatment of the *Netra rogas*.

UPASAYA

The laxyan of vyadhi can be examine by Upsaya. It is of two types. One is upasaya and another known as anupasaya. This is the best *nidana* for a unkown disease. This principle is following by all the doctors till now. If a Vaidya or Doctor is unable to know about the disease after doing all the examination like *trividhaparikshya*, *sadvidhaparikshya*, *astavidhaparikshya* then only one way for knowing the disease i.e *Upasaya* and *Anupasaya*. Ex. If a drugs is able to cure a disease then we can able to know about the disease name. According to Acharya Chakrapani the 18 types of *Upasaya* is described⁶

SAMPRATI

After use of the above four *Nidana* we can able to known the name of the disease. This *samprapti* is help to know the *dosa* and *dusya* of the disease. Also it helps to known the place of the disease. Also its help to know the *samuthita dosa*. We can also know the *dosa* having effect on *nadi-samstana* or *raktabaha-samstana* etc.

If a *Vaidya* having the *panchanidanagyana*, then all disease can be diagnosis in proper time and the treatment will be very easy. It also help to patients as save their money and health. In *Charaksamhita* 5 types of *Samprapti* is described. i.e *Sankhya-Samprapti*, *Pradhanya-Samprapti*, *Bidhi-Samprapti*, *Bikalpa-Samprapti* *Bala-Samprapti*, and *Kala-Samprapti*⁷

According to Susrut Samhita after intake of the *Nidanas* the *doshas* are going to *Urdhamarga* and reach the *Netra Mandala* and creat so many diseases. According to *Astang-samgraha* the intake of *Achaksyusa dravya* increase *Pitta dosha*. That increase the mala in head. These mala and dosha affect the *vatma mandala*, *sandhi mandala*, *paksma mandala*, *sukla mandala*, *krushna mandala* to produce the diseases.

DISCUSSION & CONCLUSION

Here the term *Nidana* known as the cause of the disease. This *nidana* is divided by two types. One is *sarnnikrusta* and another is *biprakrausta*. The *nidana* is also divided in to another two types, one is *avyantara* and *bahya*. The disease is *Asadhya* if we get all the *purvarupa* in the disease. *Purva Rupa* is also help in treatment principles like in *purvarupa of Jwara* indication of *laghubhojan* and in *purvarupa of vatajjaraghrith-pana* is indicated. If the *hetu*, *purva-rupa* and *rupa* not aggravate then the disease is known as *Sadhya Roga*. The knowledge of *Nidana* is very much important in all diagnosis and treatment of *Netra rogas*.

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INSTABILITY IN THE LINKAGE OF TOPOLOGICAL SPACES DUE TO BACKGROUND GHOSTS

Sanjeevan Singha Roy^{1,2} Deep Bhattacharjee²⁺ Riddhima Sadhu¹

¹*Birla Institute of Technology, Mesra, Ranchi, 835215*

²*Electro – Gravitational Space Propulsion Laboratory, India*

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ABSTRACT

The linkage of geometric structures in certain dimensions with each other provided the ‘link node’ is stable, can in essence establish the Hopf fibrations in the homotopy theory but under certain ‘oscillating backgrounds’ or ‘topological ghosts’ as termed in this paper might destroy the link and make each ‘geometric structure’ independent on their own.

KEYWORDS: Ghosts – Factor – Nodes

METHODOLOGY

Taking a background space B having the boundary ∂ for a coherent norm of boundary space ∂B there can be a relation through nodes N acting on a stable parameter γ on the before mentioned background space ∂B which in essence is a complex topological space denoted as T^* for a mapping parameter \star such that the nodes or links N can take two values for ∂B ^[1-4],

$$\# \begin{cases} \text{stable parameter } \gamma \\ \text{unstable parameter } \gamma_{\times} \end{cases}$$

Denoting $\#$ as an affine parameter for the periodicity ρ determining the oscillation factor ε to give the notions^[5-6],

$$\# = \sum_{\rho=1}^{\infty} \varepsilon_{\rho} \Rightarrow \star: \begin{cases} \gamma \hookrightarrow \gamma_{\times} \\ \gamma_{\times} \hookrightarrow \gamma \end{cases} \exists \begin{cases} \star_0: \gamma \rightarrow \gamma_{\times} \\ \star_1: \gamma_{\times} \rightarrow \gamma \end{cases}$$

Over a dependency parameter ∇ with a sub ∇_f such that f is the frequency parameter which takes two values^[7-10],

$$f \ni \begin{cases} f_{\Pi 1} \ni 1 \text{ is the increase in order of frequencies via multiplicity} \\ f_{\Pi 0} \ni 0 \text{ is the decrease in order of frequencies via no multiplicity} \\ \nabla \text{ stability and instability conditions} \\ \downarrow \\ N \ni \begin{cases} N_{++} := \partial B_{\star_0} \xrightarrow{f_{\Pi 1}} \partial B_{\star_1} \\ N_{\times \times} := \partial B_{\star_1} \xrightarrow{f_{\Pi 0}} \partial B_{\star_1} \end{cases} \end{cases}$$

Thus, considering two topological structures T_1 and T_2 which can be extended up to T_n for a finite order of $n < \infty$; this can be represented via the dependency parameter ∇_f this can be represented via^[11,12],

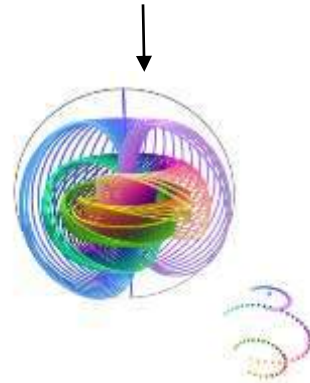


$$\eta_\nu^{\zeta_{S^i}} : T_1 \xrightarrow{\nabla_f} T_2 \dots \xrightarrow{\nabla_f} T_n$$

Hopf connectivity cannot be possible if in ζ_{S^i} for ζ as the mapping with S^i representing the sphere with the suspension η_ν acting on ζ_{S^i} for $\nu \equiv +$ in case of suspension with no connectivity or fibrations with the background oscillations and $\nu \equiv -$ the structural suspensions without background oscillations nullifying the linkage of spheres S^i for the various dimensions represented by i if and only if ∇_f represents with the fibration parameter $\mathcal{F}^{[13-18]}$,

$$\mathcal{F}_\epsilon \begin{cases} \mathcal{F}_\pm \Rightarrow \text{no fibrations} \\ \text{else} \\ \mathcal{F}_c \Rightarrow \text{fibrations} \end{cases} \quad \exists \{\pm, c\} \subset \epsilon \xrightarrow{\eta_\nu}$$

$\nabla_f = \{N_{++}, N_{\times\times}\}$				
$\eta_\nu^{\zeta_{S^i}}$	$\xrightarrow{\eta_+}$	$\forall N_{++} \subseteq \nabla_f$	$\xrightarrow{\mathcal{F}_\pm}$	no Hopf fibrations
$\eta_\nu^{\zeta_{S^i}}$	$\xrightarrow{\eta_-}$	$\forall N_{\times\times} \subseteq \nabla_f$	$\xrightarrow{\mathcal{F}_\pm}$	no Hopf fibrations
$\eta^{\zeta_{S^i}}$		$\forall \phi^\# \subseteq \nabla_f$	$\xrightarrow{\mathcal{F}_c}$	$\begin{cases} S^0 \hookrightarrow S^1 \hookrightarrow S^1 \\ S^1 \hookrightarrow S^3 \hookrightarrow S^2 \\ S^3 \hookrightarrow S^7 \hookrightarrow S^4 \\ S^7 \hookrightarrow S^{15} \hookrightarrow S^8 \end{cases}$



[#]Null set ϕ is the element of every set.



The ghosts which here termed as instabilities arise out of the background oscillations of the topological space T^* where the instabilities arise out of two factor and affects the third which is the boundary of the geometric structure ∂B which links to each other in a way of dimensions that can be same or cannot such that this ∂B can be formulated via the structure dependent on the geometric spaces having the form^[19-23],

	<i>inequalities</i>
$(\partial B)_d$	$d, \bar{d} = \bar{\bar{d}} \{ S^0 \hookrightarrow S^1 \hookrightarrow S^1$
$(\partial B)_{\bar{d}}$	$d \neq \bar{d} \neq \bar{\bar{d}} \begin{cases} S^1 \hookrightarrow S^3 \hookrightarrow S^2 \\ S^3 \hookrightarrow S^7 \hookrightarrow S^4 \\ S^7 \hookrightarrow S^{15} \hookrightarrow S^8 \end{cases}$
$(\partial B)_{\bar{\bar{d}}}$	

The two factor for which the instability arises which has been termed as ghost on the background space $T^* \exists (\partial B)_{d, \bar{d}, \bar{\bar{d}}}$ exists on T^* are^[24-26],

- N the node of the lineage between $d, \bar{d}, \bar{\bar{d}}$ acting on S .
- ρ is the oscillation of N implying N is a function of ρ as $N(\rho) = \eta_\nu$ where η_ν vanishes for Hopf fibration where frequency f won't act on ρ ,

$$\begin{aligned} \circ \exists f &\xrightarrow{\{\phi\}, \mathcal{F}_c} \rho \Big|_{\eta_\nu \text{ vanishes in } \eta_\nu^{\zeta_{S^i}}} \\ \blacksquare \text{ else } f &\xrightarrow{\quad} \rho \text{ for } \xrightarrow{\{N_{++}, N_{\times\times}\}, \mathcal{F}_\pm} \rho \Big|_{\eta_{\nu=+,-} \text{ in } \eta_\nu^{\zeta_{S^i}}} \implies \text{no fibration} \end{aligned}$$

CONCLUSION

At certain frequency the suspension η_ν vanishes. So, the Hopf fibration won't exist resulting in independency of the geometric structure in dimensions.

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KNOT THEORETIC CLOSURE FOR A DEFINITE METRIC IN A FINITE TIME

Sanjeevan Singha Roy^{1,2}, Deep Bhattacharjee², Saptashaw Das³

¹Birla Institute of Technology, Mesra, Ranchi, 835215

²Electro-Gravitational Space Propulsion Laboratory, India

³Bennett University, India

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ABSTRACT

Any topological space endowed with a metric (H, g) for a Euler-Poincare' polyhedral equation RHS of $\mathcal{X} \equiv 2 - 2g = 0$ for the throat ∂ can twist in and out from the genus by making a knot for a time evolution $\{T \nearrow\} \ll \infty$ for a transition from ΔN to NM .

KEYWORDS: Genus – Twist – Closure – Knot

METHODOLOGY

Considering a topological space H with a metric signature (H, g) in the geometries^[1],

$\Omega > 1$ applicable

$\Omega < 1$ applicable

$\Omega = 1$ not – applicable

For a generator of the evolution Δ there exists, over a genus parameterization $\mu > 0$ satisfying Euler Polyhedral equation RHS of $\mathcal{X} = 0$ in a finite evolution of time $\{T \nearrow\}$; the generator Δ takes a finite period for the operation of twisting to complete^[2],

$$\int_{\bar{\nearrow}}$$

$$\int_{\bar{\searrow}}$$

Such that for any twist, there exists two operations; the 'in' operation $\bar{\nearrow}$ where the manifold bends by entering into the genus $\bar{\nearrow}$ and the 'out' operation $\bar{\searrow}$; such that $\bar{\nearrow}, \bar{\searrow}$ exists as a subset of \nearrow as $\bar{\nearrow}, \bar{\searrow} \subset \nearrow$ for the evolution period $\{T \nearrow\}$ over a metric representation (H, g) in such a way that there exists a generation of a 'throat' or a 'space arising out of deforming the metric (H, g) ' for a structure formulation of that generating throat having an affine value $\partial^{m,n}$ where the representation takes place as^[3],



$$\begin{aligned} \partial^{m,n} &\equiv \partial^{(H,g),n} \\ &\downarrow \\ \partial^{m,n} &\equiv \partial^{m,(H,g)} \\ &\downarrow \\ \partial^{m,n} &\equiv \rho^{-1} \partial^{m,n} \end{aligned}$$

For a representation of the $\bar{\lambda}, \bar{\lambda}$ in a case where there is $\partial^{(H,g),n}$ for the throat to make 'in' and the 'out' - $\partial^{m,(H,g)}$ for a critical knot to establish in the around the genus as ρ^{-1} where for the potential of developing the 'knot' - ρ in a 'inverse representation' ρ^{-1} to structure the whole process of intertwined m, n as a 'orbit parameterization'^[4],

$$\sum_{m,n}$$

Through a finite temporal evolution $\{T \lambda\}$ to develop the knot ρ^{-1} with the throat being $\rho^{-1} \partial^{m,n}$ through the evolution^[5],

$$\left\{ \begin{array}{l} \text{for } \Lambda N \xrightarrow{\Lambda \text{ being constant for}} \text{metric } (H, g) \cong N \\ \downarrow \\ \downarrow \\ \downarrow \\ \text{for } NM \xrightarrow{\Lambda \text{ changing for throat}} \text{metric } \partial^{m,n} \exists \left\{ \begin{array}{l} \Lambda \xrightarrow{\Lambda \text{ being constant for}} N \\ \Lambda^{-1} \xrightarrow{\Lambda^{-1} \text{ changes to } \partial^{m,n}} M \\ \exists M = N/v \times (\mu \times \Gamma) \end{array} \right. \\ \downarrow \\ \downarrow \\ \downarrow \\ \rho^{-1} = M \end{array} \right.$$

$$\xrightarrow{\sim} \Gamma$$

is the point of the initiation of deformation with the value of genus $\mu > 0$ is the multiplier for which the curve v starts to contract to develop the throat $\partial^{m,n}$ in the resultant formulation of the mapping with $Q \cong M$,

$$\zeta: Q \xrightarrow{\tilde{\Delta}} N/\rho^{-1} \text{ for evolution } \{T \lambda\} \ll \infty$$

for the generator of the **knot** $\tilde{\Delta} \exists \rho \approx v \times (\mu \times \Gamma)$ and $\rho^{-1} \approx N/v \times (\mu \times \Gamma)$ for the throat manifold M in the transformation $\Lambda N \rightarrow NM$ having the potential for creating the knot $\rho^{-1} \partial^{m,n}$ through a closure of further repetition restricted via the closure index i such that,

$$\prod_{i \in \tilde{\Delta}} \zeta_i / \sim$$

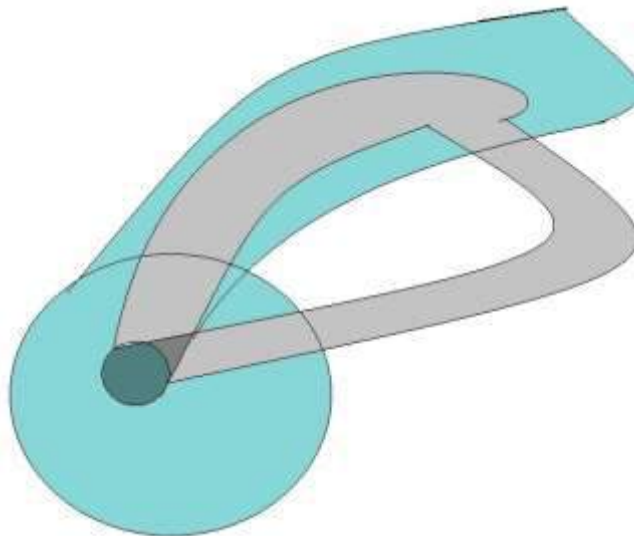


Figure: The representation of the ‘in’ and ‘out’ of the topological manifold that closed via a closure thereby with twists from the original manifold having extensions makes a knot of Euler – Poincare characterises 1 as in the Trefoil case of Knot.

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ISA IBN ABAN, GREAT MUHADDIS OF HANAFI SCHOOL

Ibrohim Temirov Qobiljonovich

Master's Degree Student, International Islamic Academy of Uzbekistan, Teacher of Mir Arab Higher Madrasa.

ABSTRACT

We know that the leaders of our sects have given us jurisprudential rulings from verses and hadiths for ignorant people like us. Because it is difficult to read all the verses and hadiths. The imam is a master of hadith, a scholar of usul al-fiqh, an Iraqi jurist. He learned hadith, jurisprudence and usul from the scholar Muhammad Ibn Hasan al-Shaybani, the spreader of the Hanafi school and wrote it down, and he reached advanced levels in his presence.

KEYWORDS: *Usul al fiqh, nasikh and mansukh, Hanafi sect, Abu Hanifa rahmatullohi alayh, al-Hujjatus sog'ir, Abdulhay Laknaviy.*

We know that the leaders of our sects have given us jurisprudential rulings from verses and hadiths for ignorant people like us. Because it is difficult to read all the verses and hadiths. In addition, in order to understand them and make a judgment, a very large and diverse knowledge is needed. Knowing hadiths by heart is a separate science, and getting judgment from them is another science. As an example of this, we can find out by quoting the incident that happened in the life of one of our great early scholars, Isa ibn Aban.

Imam Isa Ibn Aban Ibn Sadaqah, a scholar of Hadith science, a scholar of Usul al-Fiqh science, an Iraqi jurist, Basra Judge Isa Ibn Aban Ibn Sadaqa died in Basra on Wednesday in the month of Muharram in the year 221 Hijri. He learned hadith, jurisprudence and usul from the scholar Muhammad Ibn Hasan al-Shaybani, the spreader and writer of the Hanafi school, and he reached advanced levels in his presence.

In the year 211 Hijri, Ismail Ibn Hammad was appointed as the judge of Basra when he was released from the position of Qazi. Isa ibn Aban was also famous as a judge. Because Hilal Ibn Yahya said about his judgeship, "Since the arrival of Islam in Basra, there has not been a more jurist judge than Isa Ibn Aban." Also, Bakkor Ibn Qutayba had 2 judges, which we have no comparison with. They are Ismail Ibn Hammad Ibn Abu Hanifa and Isa Ibn Aban.

The incident that caused Isa Ibn Aban to study fiqh under Imam Muhammad shows how much the scholar memorized Hadiths and had extensive knowledge. In addition, it testifies to the high level of knowledge of hadith, nasikh and mansukh sciences of Imam Muhammad Ibn Hasan Shaybani, a mujtahid and lexicographer. Hafiz Soyrami and Khatibs narrate from Muhammad Ibn Samoa: Isa Ibn Aban was a beautiful person and prayed with us. One day I invited him to Imam Muhammad's classes. He replied that you are people who contradict the hadith. Then one day he prayed the morning prayer with us. That day was the day when Imam Muhammad was teaching. I begged him and persuaded him to stay for the lesson. Then, when Imam Muhammad finished the lesson, I brought Ibn Aban to him and told him, this is your brother, the son of the scribe Aban Ibn Sadaqah, very intelligent and knowledgeable in hadith. he said you will. Then Imam Muhammad turned to him and said nicely, "O my son, where did you see that we contradicted the hadith? Do not testify against us until you hear from us". Then Isa Ibn Aban asked about this by narrating 25 different hadiths. Imam Muhammad answered each of them and explained that they were abrogated hadith. He then cited hadiths and evidence to support these rulings. When Isa ibn Aban turned to me after we left Imam Muhammad, I did not know that there was a veil between me and a light, but now it has lifted from me. He said, "I don't know who is like this person in the property of Allah". And he held fast to Imam Muhammad until the end of his life. As a result, they became scholars of jurisprudence¹.

¹ Abdulmajid at-Turkmaniy. Dirosatu fi usulil hadis ala manhajil hanafiyyati. – Beirut: Daar bin Kasir, 2015.



As it is said that a stone is thrown at a fruit tree, in all times there are those who envy scientists because they cannot see or criticize them because of their lack of knowledge. Our Imams of the Hanafi school have been responding to such questions and resolving disputes until now. Let's take an example from the life of Isa ibn Aban.

A man named Isa Ibn Harun brought a collection of hadiths to the Abbasid caliph Ma'mun and complained that these are the hadiths that I heard from the sheikhs that your father Harun al-Rashid had chosen for you. contradict the hadiths. If the people of this team are right, Harun al-Rashid is wrong in his chosen work.

If al-Rashid is going to be right, you should expel these wrongdoers. Ma'mun thought about it and said, "Maybe they have evidence too, let me ask". Then he showed the book to 3 people one by one. They could not give a satisfactory answer. Then this news reached Isa Ibn Aban. He had not even entered Khalifa's side before that. The scientist wrote the book "Al-Hujjatus Soghira". In the book, he wrote everything about hadiths, how they are transmitted, how they are accepted and how they are not accepted, and what to do if we hear contradictions. Then he divided those hadiths into chapters. In each chapter, Abu Hanifa, may Allah have mercy on him, cited his documents, his sect, and the hadiths that he used as evidence. After doing enough research, he worked on the book. Finally, this book reached the hands of Khalifa Ma'mun. After reading it, Ma'mun thought that this was a true and worthy answer and immediately composed a poem: They were jealous of a young man who could not reach his level. Humans are his enemies and enemies.

just like a beautiful woman's friends call her ugly out of envy.
he answered².

From the above, we can conclude that scholars of the Hanafi school are proficient in hadith sciences as well as other sciences. Moreover, we can understand that the rulings in our jurisprudence books are based on Shariah evidence and have reached us in perfect condition after passing through so many trials and tribulations for so many centuries. May Allah Ta'ala accept all our scholars for their hard work and reward them with paradise.

Famous teachers of Isa ibn Aban:

1. Abu Ishaq Ismail ibn Jafar ibn Abu Kasir Al-Ansari
2. Abu Said Yahya ibn Zakariyya ibn Zaida Maimun Al-Kofi Al-Hamadani
3. Abu Abdullah Muhammad ibn Hasan ibn Farqad Ash-Shaybani

Notable students:

1. Abu Hazim Abdulhamid ibn Abdulaziz al-Sukuni
2. Abu Bakr Shuayb ibn Ayyub ibn Raziq As-Suraifini
3. Abu Bakra Bakkar ibn Qutayba ibn Asad ibn Abu Barda'a As-Saqafi Al-Bakravi

Books:

1. Al-Jami
2. Proven comparison
3. Ijtihadur opinion
4. Al-Hujjatus Saghir

In Abdulhai Laknavi's work "al-Fawaid al-bahiyya fi tarajimil hanafiyya" it is narrated from Tahawi I heard from Bakkar bin Qutayba, he said, I heard from Hilal bin Yahya, he said that there was no judge in Islam who was more judicious than Jesus. He had a work called Kitabul Haj.

Judge Abu Khazim Abdulhamid, Imam Tahawi's teacher, studied jurisprudence at this scholar. Qazi Abu Khazim says, I have not seen more hadiths from the people of Baghdad than Isa ibn Aban and Bishr ibn Walid.

Abu Ishaq quotes in Tabaqatul Fuqaha of Ibrahim ibn Ali Shirazi, Abu Musa Isa ibn Aban is one of the ashhab hadiths. Later, Ray won and Muhammad ibn Hasan became a jurist.

² Muhammad Avvoma. Asarul hadisish sharif fi ixtilafi aimmatil fuqaho roziyallohu anhum. – Cairo: Darul bashairil islomiyya, 1997.



Abu Abdullah Shamsuddin Muhammad ibn Ahmad Zahabi's book *Siyaru al'amun nubala* mentions that Isa ibn Aban is an Iraqi jurist, a student of Muhammad ibn Hasan, and a judge of Basra. He narrated hadith from Ismail ibn Ja'far, Hushaym, Yahya ibn Abu Zaidah, Hasan bin Salam Al-Sawaq and others narrated from him. The scientist has many classified books. He was also a very intelligent and generous person. He died in the year two hundred and twenty one. Bakkor ibn Qutayba was also educated by him.

Isa ibn Aban, a student of Imam Muhammad in jurisprudence and *usulb*, a scholar of the Qur'an and Sunnah, who was considered one of the early scholars of the Hanafi school, and one of the founders of the Hanafi rules, wrote a separate book on the rules of obtaining the hadiths of the Prophet, may God bless him and grant him peace. In his book, the scholar explained that hadiths are divided into *mutawatir*, popular, and *ahadith* and the rulings on acceptance and non-acceptance. Ohod explained the conditions for following the messages in detail and extensively and with examples to such an extent that it had never happened before. In each chapter, he cited the documents of the Hanafis. Narrators not known in *Hifz* and *Ijtihad*, narrators whose name is not mentioned and the level of their hadiths, *Mursal* hadith and its ruling, what we should do if the reports contradict each other. He named this book "Al-Hujaj al-Saghir". Imam Jassos (306-370) in his book "Al-fusul fil-ussul", which is one of the pillars of the Hanafi school, quotes a lot of quotes from al-Hujaj al-Saghir. In addition, Isa ibn Aban also used two other books called "al-Hujaj al-kabir" and "ar-Rod a'la Murisi". In the same way, it seems that Imam Jassos filled the Sunnah chapter of the book with the words of Qazi Isa ibn Aban and quoted his hadith collection rules without omitting all of them.

(To give an example, Imam Jassos, quoting from Ibn Aban, says that messages are first divided into three. They

1. Messages that are reliable and correct
2. The ones that are clearly false are similar to Musaylama's reports
3. Messages that are both true and false. This distribution is widely covered. 1. 504-506

Also, in al-Fusul book, Imam Jassos talks about *mutawatir* hadiths, and Isa ibn Aban, may Allah have mercy on him, says that this knowledge created by *mutawatir* is a necessary and obligatory knowledge. Whoever denies this, has denied the words of the Prophet, may God bless him and grant him peace.

The work done by Imam Jassos in the book al-Fusul mentions with examples the rules established by Isa ibn Aban in matters of Sunnah. Then he interprets it and gives additional examples. Considering the original, most of the originals and rules written on the subject of sunnah in the science of *usul al-fiqh* today are the works made by the hand of Isa ibn Aban.

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ADAPTABILITY OF THE PHYSICAL AND MECHANICAL PROPERTIES OF SELF-COMPACTING EXPANDED CLAY CONCRETE FOR USE IN MULTILAYER STRUCTURES

Yunusaliyev E.M.¹, Usmonov S.B.²

¹*Candidate of Technical Sciences, Fergana Polytechnic Institute*

²*Master Student, Group M 1-21, CBS*

ABSTRACT

The article reveals an analysis of the physical and mechanical properties of self-compacting expanded clay concrete and the relevance of its use in multilayer structures (reinforced concrete floors). The ratios of the bending and shear strengths of expanded clay concrete are determined, and on the basis of the analysis, data on the parameters of the “stress and strain” diagram are obtained.

KEY WORDS: *Self-compacting expanded clay concrete, reinforced concrete floor, tensile strength, tension and compression, concrete mixture, deformation*

INTRODUCTION

For the first time, the principles of designing reinforced concrete elements with layers from concretes of different densities were developed in the early thirties of the last century. Such structures are promising due to the combination of a number of necessary functions in them - load-bearing, heat and sound insulating. The most widely used in construction are two- and three-layer structures, which are used as floor and ceiling slabs, wall fencing panels, etc. [1]. In recent years, new types of multilayer structures have been used in construction practice - load-bearing three-layer wall panels of one-story industrial buildings. The use of the latter makes it possible to exclude columns and foundation beams, and to reduce labor costs for installation.

EXPANDED CLAY CONCRETE IN MULTILAYER STRUCTURES

The use of lightweight concrete on porous aggregates makes it possible to create efficient structures, their advantage in relatively low weight opens up wide opportunities in the field of improving the load-bearing and enclosing structures of buildings and structures. The introduction of studies of lightweight concrete is actively used in modern construction [2]. When developing multilayer structures, the use of highly mobile, including self-compacting concrete mixes, is of particular importance, providing high productivity and quality of work by eliminating the need for vibrocompacting machines and mechanisms [3]. In turn, the technology for manufacturing self-compacting lightweight concrete mixtures is more complicated than the technology for manufacturing concrete mixtures on dense aggregates, since there is a special specificity of mass transfer processes in self-compacting concrete mixtures made on porous aggregate.

According to GOST 25820, structural lightweight concretes must have an average density grade not higher than D2000, a compressive strength class not lower than B12.5. Of all lightweight concretes on porous aggregates widely used in construction, expanded clay concrete is the most common. According to GOST 25820, structural expanded clay concrete is divided into strength classes B12.5 - B40 and grades by average density D1100 - D2000.

In SP 63.13330, lightweight concrete of strength classes from B12.5 to B40 and a grade of average density from D1100 to D2000 are characterized by an axial tensile strength class from Bt 1.2 to Bt 3.2, an initial modulus of elasticity E₀ from 10.0 to 23.5 MPa.

Any special conditions for lightweight concretes obtained from self-compacting concrete mixtures are not specified in the standards.

Of particular importance is the relevance of scientific research into the influence of recipe-technological factors on the properties of self-compacting mixtures and concretes made on porous aggregates. Numerous works are devoted to the study of the issues of structure formation and the interdependence of the properties of expanded clay concrete with its composition and structure, in connection with the numerous advantages of expanded clay concrete, research continues at the present time. High-strength lightweight concretes have already been developed with a compressive strength of 40 to 60 MPa at an average density of 1300–1500 kg/m³. Lightweight concretes with a compressive strength class up to B115 have been described. However, there are practically no data on the experience of using lightweight self-compacting concretes, especially on the structural properties of these concretes.



In [5], information is given on the properties of concretes obtained from self-compacting concrete mixtures with a cone flow diameter of 85 to 97 cm, made on natural porous aggregates of Kabardino-Balkaria. The concretes obtained in [5] with a grade of average density D1800 are characterized by a compressive strength from 31 to 57 MPa (B20 - B45), a prism strength coefficient from 0.83 to 0.96, a ratio of tensile strengths from 0.04 to 0, 05 for tensile splitting and compression; ratio of flexural and compressive strengths from 0.09 to 0.11, Poisson's ratio from 0.128 to 0.15, initial modulus of elasticity from 15.7 to 23.4 MPa, shrinkage value up to 0.86 mm/m, creep measure from $9.43 \cdot 10^{-5}$ to $15.23 \cdot 10^{-5}$ MPa⁻¹, adhesion strength of reinforcement of periodic profile A400 with light self-compacting tuff concretes of class B20 - B45 from 10.75 to 11.55 MPa. There are no data on deformation and strength properties of structural self-compacting expanded clay concrete in [5]

Calculations on the dependencies that establish the relationship between the strength and deformation properties of concrete, taking into account their average density [6,8], show that expanded clay concrete of strength classes B12.5 - B25 - B40 grades for average density D1100 - D1600 - D2000 can have the values of the initial modulus of elasticity of concrete are about 8.2 - 18.2 - 30 GPa. It should be noted that in [6,8] it is not specified whether it is possible to apply these dependencies for self-compacting concretes. It should be borne in mind that, according to, self-compacting concretes, due to a higher concentration of the mortar component, have some differences in the values of deformation properties, when compared with traditional vibration-compacted concretes.

In particular, in relation to structural expanded clay concrete, it follows from this that self-compacting expanded clay concrete on dense sand will have elastic modulus values intermediate between fine-grained and expanded clay concretes of vibration compaction. In the case of porous sand, the forecast is complicated by the fact that, due to the lower modulus of elasticity of fine aggregate, a lower value of the modulus of elasticity of concrete is expected. But due to the need to achieve the required class of concrete to provide a higher strength, and, consequently, a higher modulus of elasticity of the cement stone, in this case the resulting effect becomes difficult to predict. The possibility of applying formulas relating the value of the modulus of elasticity of concrete with the concentration and deformation properties of its macrostructure elements is limited due to the lack of reliable information on the quantitative values of the deformation characteristics of structural elements (cement stone, porous filler). The same can be attributed to the possibility of predicting both shrinkage deformations and creep deformations [4] of self-compacting structural expanded clay concrete.

As is known, the adhesion of concrete to reinforcement and the adhesion of concrete to previously laid concrete is determined, among other things, by the tensile strength of concrete by stretching. Expanded clay concrete, in contrast to heavy concrete, with equal compressive strength, has lower values of tensile strength. The peculiarity of the destruction of expanded clay concrete in axial tension is that the destruction occurs due to the rupture of the mortar component and the porous filler, a rupture in the contact zone is usually not observed [4,7]. Heavy concrete of medium classes is characterized by a gap in the solution component and in the contact zone. When analyzing the adhesion of expanded clay concrete with reinforcement or with previously laid concrete, it should be borne in mind that these types of adhesion, especially the adhesion of "old" and "new" concrete, will be determined by the adhesion of cement stone and the tensile strength of cement stone. Cement stone of expanded clay concrete of equal strength with heavy concrete is characterized by a lower value of (W / C) and, consequently, higher strength, incl. to axial tension, in connection with which one can expect high values of the considered parameters.

Due to the urgency of the problem of reducing the mass of buildings, it is obvious that it is expedient to use lightweight concrete or combined structures, for example, in reinforced concrete floors [4], but the use of lightweight concrete due to the reduced value of its initial modulus of elasticity can cause a floor stiffening problem. In multi-layer or combined floor structures containing layers of heavy concrete - providing rigidity and lightweight concrete- providing weight reduction, there may be a problem of adhesion of different-modulus concretes, insufficient in magnitude for the perception of stresses at the contact of the layers.

The nature of the possible destruction of the multilayer structure of the ceiling will be determined by the ratio of the ultimate strength of concrete for shear and bending.

The shear strength of concrete is determined by the well-known Mersch formula

$$R_{cut} = 0.5 * \sqrt{R * R_t} \quad (1.1)$$

where R , R_t are the compressive and axial tensile strengths of concrete, respectively, MPa,

The ultimate strength of concrete for axial tension and compression are related by the following relationship

$$R_t = \alpha * R^{0.6} \quad (1.2)$$

in which the coefficient α for heavy concrete and light concrete on porous aggregates is 0.29 and 0.27, respectively.



The tensile strength of concrete in bending and the compressive strength are related by the following relationship

$$R_f = 0.29 * R^{0.74} \quad (1.3)$$

Determining the ratio of bending and shear strengths depending on the class and type of concrete is an urgent task today. Based on the performed analysis, it is necessary to obtain data on the parameters of the “stress-strain” diagram during short-term central axial compression of structural expanded clay concrete obtained from self-compacting concrete mixtures and to investigate the adhesion of this concrete to heavy concrete of various ages.

CONCLUSION

One of the promising types of concrete for the middle layer of three-layer floors is self-compacting expanded clay concrete, which, when laid over a layer of heavy concrete, does not violate its structure formed during the manufacturing process.

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LIFE AND SCIENTIFIC HERITAGE OF ASHRAF ALI TAHANAWI

Yusupov Qobil Xakimboyevich

*Namangan Regional Branch of Training Center at the International Islamic Academy of Uzbekistan,
Teacher of the Social and Specialty Sciences Department.*

ABSTRACT

A main purpose of the article is aimed to describe the life and scientific heritage of a scientist and mutasavvif who grew up in India Ashraf Alee Atahanawi 1280/1863, and to describe his works about different subjects. Furthermore, looking through his lived time period it gives information about the cultural and political process that ruled in the country. Moreover, it includes positive opinions of scientists all over the world about Ashraf Ali Tahanawi.

KEY WORDS: *muhaddis, fakikh, hadith, work, musnad, khafiz, hanafiy.*

MAIN PART

Ashraf Ali Tahanawi was born in rabi al-avval of 1280/1863 in the town Tahana Muzaffarnaghor in India¹. His father was Abdulkhaq Umri and was famous with the name of "hakim al umma"².

If we look to the period that he lived, we may see India was colonized from England. Colonizing of Indian peninsula caused subordination of Muslims there. Eventually, the process got affected to cultural and religious life of Muslims³.

In 1857 liberation movements stood up in India. Perhaps it ended with the loosing of independent wrestler. In 1858 the English Queen Victoria announced the rule of India. After that, increased threats toward Muslims and began abolishing politics their lives⁴.

Christians which took the Indian peninsula began to make Muslims and Hindus enemies. So, they added some modifications to Islamic law to transfer them to their own religion. They said that everyone is able to choose their own religion and legislated their law even if they are apostate. Especially, apostates were observed in the places where there were strong cultural traditions and where there were not religious performances. Muslims removed from their own due to the accepting of the Eastern lifestyle and by following the Eastern educational system. With disappearing the unity the Muslims remained between old and new supporters⁵.

The collapse of the Ottoman Empire and the abolition of the Caliphate as a result of the First World War further shook the Indian Muslims. As these disturbances increased rapidly, Muslim scholars began to act in order to correct the religious life and protect the Islamic identity. Through education, the ideas of reforming the Muslim community and various forms and schools of these ideas were formed. In particular, madrasahs were among the most supportive of da'wah and tabligh.

Ashraf Ali Tahanawi also worked for the reform of the ummah, correct understanding of religion, and raising a generation of good preachers. He was one of the leaders in the fields of classification, education, research and teaching. Due to his knowledge of news, he was accepted as "soni' at-tag'yir" - "master of news" in Indian geography. He was also awarded the title of "Hakimu al-umma wa mujaddid al-milla vider al-Hindiyya"⁶.

It can be observed that Ashraf Ali Tahanawi and his contemporary scientists fought for the negativity of English to Muslims.

Ashraf Ali Tahanawi got his first education in his birthplace, in Sabah he learned Qur'anic science. The rest of his study he continued in "Madrasat al-'aliyya" in Diyoband⁷.

He studied in some scientists which can be counted:

- Muhammad Yaqub an-annutiviyy – hadith and tafsir
- Makhmud Khasan ad-Diyubandi – logics, philosophy, fiqh and usul al-fikh

¹ Muhammad Taqi Osmani. Maqolatun va buhusun. – Damascus: Dor al-kalam, 2021. – V. 2. – P. 227.

² Khalid Zaferullah Davudi, Ahmet Yıldırım. Eşref Ali Tânevi Hadislerle Tasavvuf. – İstanbul, 1995. – V. 17.

³ Khalid Zaferullah Davudi, Ahmet Yıldırım. Eşref Ali Tânevi Hadislerle Tasavvuf. – İstanbul, 1995. – V. 17.

⁴ Hakkı Dursun Yıldız. Doğuştan Günümüze Büyük İslam Tarihi. – İstanbul, 1988. – V. 9. – P. 520.

⁵ Baraniy, Dr. Abdurrahman. Ulamau Devband va xodamatuhum fi ilm al-hadis. -Devband: Dor al-Ulum, 2011. – V. 95.

⁶ Şâh Muinuddîn el-Hâşimî, Cüneyd Ahmed el-Hâşimî. Eşref Ali (Tehânevi) Tânevi'nin Reformist Düşüncesinde Tasavvuf (trc. Yakup Yüksel ve Muhammet Ali Tekin) / Namık Kemal Üniversitesi İlahiyat Fakültesi Dergisi, 2017. – V. 3. – P. 334.

⁷ Muhammad Taqi Osmani, Maqolatun va buhusun. – Damascus: Dor al-kalam, 2021. – V. 2. – P. 228.



- c) Sayyid Akhmad ad –Dekhlavi – riyaziyya and faraid
- d) Mavalano Mkhmud so many fikh and usul al-fikh books and some hadith books
- e) Fath Muhammad at-Tanavi he read persian and book “Muhtasarot”⁸.

He worked as a teacher during 14 years in madrasah Fayzi Omon in Kanivar after ending his education⁹. He went to Makkah for hajj and there met with Imodulloh Tahanawi and joined to tariqa Cheshtiya. Then he joined to other sophistic tariqas too. They are Naqshbandiya, Chishtiya, Qadiriya and Suhrawardiyya¹⁰.

After some time, he returned to his country and worked as a teacher at Jame' al-Ulum madrasa in Kanpur¹¹. As Ashraf Ali Tahanawi's Sufi sentiments became difficult, he left his teaching job and traveled to different regions of India. Tahanawi lived in a time when strong politics prevailed and scientific activities were on the agenda. The wide scope of the field of science of that time was reflected in Tahanawi's education and writings¹².

There is information that the number of works attributed to Ashraf Ali Tahanawi, together with pamphlets, is about eight hundred. Counting the works published after his death, their number is about a thousand. Most of his works on jurisprudence, tafsir, mysticism, kalam, recitation and ethics are in Urdu, and some are in Arabic¹³.

One of his works on Tafsir and Qur'anic science is "Bayan al-Qur'an". It is an Urdu translation and commentary of the Qur'an, published in twelve. In addition, he is the author of "Tajvid al-Qur'an", "Adab al-Qur'an", "Mutashabihat al-Qur'an", "Tanshit at-tab fi ijra al-qiraat as-sab".

His work on hadith is Jame' al-asor. This is a work that classified the hadiths used by Hanafis after the disappearance of Ihya al-Sunan. Tobe' al-asor is attached to the work. The work includes prayer issues. It was published in Diyoband.

“Hifh arbain ” this is the book of 40 hadises were chosen from Sahih Muslim.

“Al misk az-Zaki ” is gathered Ashraf Ali Tahonaviy's pupils and consists of lesson repitances of Sunan Termizi¹⁴.

“ikhya as sunan” is the work that keeps hadiths which were used as the hanafi fikh proofs. It is said that loosen.

"As-Sab' as-Sayyora" is a treatise that collects the Sanads of Tahanawi up to Kutub al-Sitta and Imam Malik's Muwatta.

His works on fiqh are Al-Bawadir wan-nawadir, a collection of works on various topics (Delhi 1947).

The work "Huquqi Faraiz" (published in Molton in 1960) and the work "Zakat al-farz fi nabat al-arz" are distinguished from other works by their specific aspects.

The book "Behishti Zivar" is a ten-volume scientific work intended for female students, which has been published many times in India and Pakistan. The work was translated into English by Rahim Ali under the title "Reguisites of Islam"¹⁵.

One of his works on Aqeed is "Muakhharat az-znun an muqaddimati Ibn Khaldun", in which Ibn Khaldun's introduction contains answers to the words of some people who denied the coming of the Mahdi.

The work "Jaza al-a'mal" was translated into Turkish by Hayri Demirchi under the title "Reward of deeds of the world and the hereafter"¹⁶.

His works on Sufism are "At-Tasharruf bi marifati ahadis al-Tasawuf", which includes hadiths from books of Suf

"Haqiqat at-Tariqa min as-Sunnati al-Aniqa" in the fifth volume of "At-Takashshuf an Muhimmat-t-Tasawwuf" work, "Ashraf Ali Tahanawi: Sufism through Hadiths" by Khalid Zafarullah Davoudi and Ahmad Yildirim translated into Turkish under the title¹⁷.

"Al-Qawl al-fasil bayn al-haqqi wal-batil", "At-Tajal al-azim fi ahsani al-qalani", "At-Takashshuf an muhimmat al-tasawuf", "Anwar al-wujud fi atwar ash-shuhud", "Tahzir al-ikhwan an tazvir ash-shaitan", "Tarbiyat as-salik wa tanjiyat al-khalik", "Furu' al-iman", "Hifz al-iman", "Tazyilu Sharhi Aqeed", "Masail al- Aqliyya", "Teaching ad-din", "Hayat al-muslimin", "Masail al-suluk min malik al-muluk" these are his works include different themes¹⁸.

⁸ A.S.Bazmee Ansari. Eşref Ali / Türkiye Diyanet Vakfı İslam Ansiklopedisi. – İstanbul, 1995. – V. 11. – P. 472; Halid Zaferullah Davudî, Ahmet Yıldırım. Eşref Ali Tânevi Hadislerle Tasavvuf. – P. 17.

⁹ Muhammad Taqi Osmani. Maqolatun va buhusun. – Damascus: Dor al-kalam, 2021. – V. 2. – P. 231.

¹⁰ Şâh Muînuddîn el-Hâşimî, Cüneyd Ahmed el-Hâşimî. Eşref Ali (Tehânevî) Tânevî'nin Reformist Düşüncesinde Tasavvuf. – S. 335.

¹¹ Muhammad Taqi Osmani. Maqolatun va buhusun. – Damascus: Dor al-kalam, 2021. – V. 2. – P. 231.

¹² Dr. Abdurrahman Baraniy. Ulamau Devband va xodamatuhum fi ilm al-hadis. – Devband: Dor al-Ulum, 2011. – P. 97.

¹³ Dr. Abdurrahman Baraniy. Ulamau Devband va xodamatuhum fi ilm al-hadis. – Devband: Dor al-Ulum, 2011. – P. 97.

¹⁴ Muhammad Taqi Osmani. Maqolatun va buhusun. – Damascus: Dor al-kalam, 2021. – V. 2. – P. 232.

¹⁵ Muhammad Taqi Osmani. Maqolatun va buhusun. – Damascus: Dor al-kalam, 2021. – V. 2. – P. 236.

¹⁶ Tahonavi. E'lo as-sunan. – Karachi, 1997. – V. 1. – P. 7-19; Khalid Zaferullah Davudî, Ahmet Yıldırım. Eşref Ali Tânevi Hadislerle Tasavvuf. -S. 18-20; A.S. Bazmee Ansar. Ashref Ali / DIA. – V. 11. – P. 473; Mehmet Özşenel. Pakistan'da Hadis Çalışmaları (Unpublished Master's Thesis, Marmara University Institute of Social Sciences, 1992). – P. 86-87.; Baraniy, Dr. Abdurrahman. Ulamau Devband va xodamatuhum fi ilm al-hadis. – Devband: Dor al-Ulum, 2011. – P. 96.

¹⁷ Muhammad Taqi Osmani. Maqolatun va buhusun. – Damascus: Dor al-kalam, 2021. – V. 2. – P. 232.

¹⁸ Muhammad Taqi Osmani. Maqolatun va buhusun. – Damascus: Dor al-kalam, 2021. – V. 2. – P. 236.; Tahonavi. E'lo as-sunan. – Karachi, 1997. – V. 1. – P. 7-19; Khalid Zaferullah Davudî, Ahmet Yıldırım. Eşref Ali Tânevi Hadislerle Tasavvuf. – P. 18-20; A.S. Bazmee Ansar. Ashref Ali / DIA. – V. 11. – P. 473; Mehmet Özşenel. Pakistan'da Hadis Çalışmaları (Unpublished Master's Thesis, Marmara University Institute of Social Sciences, 1992). – P. 86-87.; Dr. Abdurrahman Baraniy. Ulamau Devband va xodamatuhum fi ilm al-hadis. – Devband: Dor al-Ulum, 2011. – P. 96.



By Looking for his works it is known that he had some specific authoritis in religious sience. He wrote almost on all necessary themes.

Ashraf Ali Tahanawi was known as "Hakim al-umma" among Indian scientists due to his strong knowledge and high rank in this regard¹⁹. Descriptions of Ashraf Ali Tahanawi by contemporary and later scientists show how important a scientist he is.

Muhaddis Zahid Kawsari highly appreciated the efforts of Indian and Pakistani scientists and paid special attention to their responsibilities in Sunnah sciences. He praised Tahanawi as an incomparable scientist, the only expert, the sheikh of the sheikhs of the Indian country, the blessing of the Indian country²⁰.

Zafar Akhmad Usmani says that Tahanawi mentuioned his own uncle and teacher in his book "Qavaid fi ulum al-hadith": "made true own dreams, lord of knowledge and deals of his period, mujaddid al-millata al-islami, ashrafu al-avliya al-kamili, leader of scientists, muhaddith, mufassir, fakih, hafiz, the appreciated person of all scientists"²¹.

Sayyid Sulaiman Nadvi emphasizes that Ashraf Ali Tahanawi was active in various aspects of religious sciences. As a translator and commentator, he commented on the knowledge and wisdom of the Qur'an, and as a muhaddith on hadiths. As an orator and preacher, he collected sermons and published sermons. As a jurist, he answered thousands of jurisprudential issues, solved many modern problems and carefully related them to fatwas. As a Sufi, he discovered the secrets of Sufism and brought them out of darkness into light. He stopped the ancient disputes between Sharia and Tariqat²².

In addition, Tahanawi Imdodia organized knowledge gatherings every day after noon in the house of dervishes. It was attended by students, leaders and representatives of ordinary people. "Hakim al-umma" preached in these meetings without being limited to certain topics and gave answers to various questions. Some of those who participated in these scientific meetings recorded his useful speeches. In this way, his speeches were collected in sixty-two volumes "Malfuzot". Thirty-two volumes of them have been published. This work includes the most important issues in the fields of science, wisdom, anecdotes, stories, news, advice, examples, reforms, guidance, manners, ethics, criticism and refutation²³.

Abdulfattah Abu Gudda said that Indian sheikh Ashraf Ali Tahanawi wrote more than a thousand works in his eighty-year-old life and that this was a blessing from God. So he added, that in that period of time were the most works written in the world, and specifcly it caused writing the other works due to the previouses²⁴.

Ashraf Ali Tahanawi also answered the questions asked to him by letter. He tried to prevent the negative influence of non-Muslims on the way of life of Muslims and achieved successful results in this regard. He says that science and religion do not contradict each other and calls on non-Muslims to use the achievements in science. In 1897 coming back from Makkah he spent the rest of his life in Tahana. On 6th of rajab in 1362 (1943 july 9) he died and buried in Tahana²⁵.

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A STUDY ON ADVERTISING EFFECTIVENESS OF MOBILE PHONE

Dharani Priya.S¹, Mr.M.Gunasekaran²

¹M.Com(CA)-PG Student, Department of Commerce(CA), Dr. N.G.P. Arts and Science College, Coimbatore

²Assistant Professor in Department of Commerce(CA), Dr. N.G.P. Arts and Science College, Coimbatore

ABSTRACT

Given that the average amount of time a person spends using mobile devices is increasing every day, mobile advertising is one of the most effective types of digital advertising for raising awareness of or encouraging purchases of a good or service. In comparison to other media, mobile advertising is expanding quickly and has a wider reach and penetration. Some mobile advertisers, nevertheless, fall short of reaching a wider audience. It is crucial to understand the advantages and disadvantages of mobile advertising for both advertisers and mobile users. Studies have shown that businesses use mobile devices to generate more income and get a better return on their investments. As technology develops, the market for mobile advertising is booming. In actuality, using a traditional mobile phone or feature phone for mobile advertising is no longer necessary.

KEYWORDS: Mobile advertising, Benefits of Mobile advertising.

INTRODUCTION

The degree to which advertising produces a specific desired impact can be characterised as advertising effectiveness. Given the size of the investment required for advertising, measuring the results is crucial. Although it is impossible to quantify advertising effectiveness globally, we should work to develop and use methods and measures that allow for a partial verification of outcomes.

The success of a company's advertising in achieving its goals is referred to as advertising effectiveness. Small businesses measure the performance of their advertising using a wide range of statistics and indicators. All forms of advertising, including billboard, radio, direct mail, and online advertising, can employ these metrics. A company's advertising effectiveness normally grows over time with multiple messages or exposures. However, some advertising can be realized almost immediately.

REVIEW OF LITERATURE

Shrestha (2019), advertising includes all paid non-personal presentations and promotions of ideas, goods, or services by an identified sponsor through print media (newspapers and magazines), broadcast media (radio and television), network media (telephone, cable, satellite, and wireless), electronic media (audiotape, videotape, web pages), and display media. (bill board, signs, poster).

Mohankumar and Dineshkumar,(2015) has examined Erode consumer purchasing patterns for mobile phones by distributing a structured questionnaire, and the results show that customers favour Nokia above Sony Ericsson, Samsung, HTC, and Micromax. Customers are influenced by brand names to purchase products, and the simple model is more satisfying than the advanced model. Family and advertising have an impact on consumers' shopping decisions.

Moriarty et al.,(2014) The basic goal of advertising is to contact consumers through any communication method in order to produce the numerous effects that marketers or advertisers desired. The general public may believe that advertising may only be expressed through print and broadcast media, such as TV commercials or various printed items (such as flyers and brochures). In fact, it seeks to encourage direct spending on the goods or services.

Niazi and Hunjra (2012) defined that advertising is a means of communication to convince an audience for taking buying decision about a product or service and presenting information to viewers. In this essay, the relationship between the independent variables environmental response and emotional response—i.e., consumer purchasing behaviour—is examined.



OBJECTIVES

- To analysis the usage of mobile phones and the role played by the advertisement on the usage of the brands.

FEATURES OF ADVERTISING

- It is an impersonal, mass communication.
- It's a matter of public record.
- It induces customers to buy the promoted goods.
- It is a mass-produced paid advertisement.
- It is also known as printed salesmanship because information is disseminated by means of written and printed material as well as images so that people may be persuaded to act upon it. The communication methods are diverse, such as print (Newspapers and Magazines).

FUNCTIONS OF ADVERTISING

Advertising dominates the promotional mix for many businesses, especially those that make convenience goods like detergent, over-the-counter medicines, cosmetics, soft beverages, and supermarket items. Automobile, household appliance, and other manufacturers utilize advertising extensively to promote new products and detail their features, benefits, and points of availability.

Advertising can also aid in persuading consumers that a company's goods or services are superior to those of its rivals in terms of manufacture, quality, cost, etc. Even when competitors cut their prices or provide enticing incentives, it can help build brand image and lower the possibility that consumers will transfer brands.

It performance the following functions

- Promotion of sales
- Introduction of new product awareness
- Mass production facilitation
- Carry out research
- Education of people.

TYPES OF ADVERTISING

Broadly speaking, advertising may be classified into two categories

- Product advertising
- Institutional advertising

Product advertising

Such advertising's primary goal is to sell the advertiser's goods and services by educating and energizing the market about them. This kind of advertising typically highlights particular, popular products in order to elevate the brands' appeal. Business, government, and private non-profit organizations utilize it to advertise the features, benefits, and applications of their services and products. The two types of product advertising are direct action and indirect action. Direct action product advertising encourages the consumer to act immediately, often by placing an order for the advertised product.

Institutional advertising

Instead than selling a specific product or service, it is intended to foster a suitable attitude toward the sellers in order to improve business reputation or goodwill. Its goal is to instill positive attitudes and feelings about the advertiser's business. Its goal is to cultivate relationships on behalf of the institution or organization.

BARRIERS TO GREAT ADVERTISING

Advertising testing might offer a trustworthy feedback loop and result in significantly better advertising, but there are several barriers in the way. Self-decision is the first significant obstacle to improved advertising. Most of us firmly feel that we are the best judges of what constitutes effective advertising and that no independent, impartial assessment is necessary. Both agencies and clients frequently believe that they are qualified to design and evaluate effective advertising. In addition, once agencies and clients begin to adore the new creative, they quickly get disinterested in any impartial assessment.

Strangely, even after 40 years of testing advertisements, we still can't tell you whether or not a commercial is good simply by watching it. We all have opinions, but they virtually never turn out to be correct. We have found that both advertising agencies and



their clients are equally bad at evaluating advertising. Based solely on our own judgment, it would appear that none of us are intelligent enough to view advertising through the eyes of the target audience.

The idea that sales results will indicate whether or not advertising is effective is a second obstacle to better advertising. It is nearly impossible to determine the advertising's efficacy using sales data unless the sales response is instantaneous and overwhelmingly positive.

As mentioned, there are so many factors that are out of our control that it is impossible to determine the effects of media advertising alone. Additionally, some advertising produces results in a matter of weeks while other advertising may not provide results for several months, and this delayed response might make it difficult for us to interpret the sales statistics. Additionally, advertising frequently has both short- and long-term (years later) effects, which the majority of us might easily overlook in following sales data. Due to these restrictions, sales data is frequently unclear and unreliable as a measure of the success of advertising.

BENEFITS OF ADVERTISING

The following is a discussion of the ethics of advertising and its functions:

- It results in lower prices. If an advertiser's ways of marketing were more expensive than those of his competitors, he or she would not be able to survive in the fiercely competitive world of modern business.
- It raises demand for commodities, which leads to higher production by making the public aware of the benefits that buyers will receive from the products.
- It guarantees higher product quality for consumers. For an advertising, a good name is their lifeblood.

CONCLUSION

The "Advertising Effectiveness of Mobile Phone" study was carried out primarily to identify the most efficient advertising media. According to the report, the majority of users choose their mobile phone brands after seeing advertisements and talking to their friends. This demonstrates that advertising has a greater impact on boosting mobile phone purchases. The public is aware of advertising.

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TO EVALUATE THE ANALGESIC ACTIVITY OF VITEX NEGUNDO LINN. EXTRACT ON ALBINO MICE (SWISS STRAIN) MICE

Mrs. Vaidehi V. Suryawanshi., Ms. Poonam P. Papule, Mrs. Prapti J. Desai

RMP'S Bhalchandra Institute of Pharmacy, Khanapur Pune.

ABSTRACT

Present study is carried out to evaluate the analgesic activity of given drug *Vitex nigundo* Linn on mice. The fresh leaves of *Vitex nigundo* Linn. have been suggested to possess analgesic activity possibly mediated via prostaglandin (PG) synthesis inhibition. Because it contains alkaloids, glycosides, flavonoids, sterols, resin and tannins as per phytochemical evaluation of extract. The Hot plate test used in this experiment to study the antinociceptive activity of ethanolic leaf extract of *Vitex-negundo* (VN) (500 mg/kg, p.o) on mice. The effect was compared with Diclofenac sodium (25 mg/kg, i.p) in Hot plate test & standard & control respectively. *Vitex nigundo* Linn has a mechanism of central analgesic action. The test drug showed significant analgesic activity in dose dependent manner in the experimental models. Our observations suggest *Vitex nigundo* Linn that possesses both central & peripheral analgesic activities. It may prove to be a useful analgesic drug.

KEY WORDS: Antinociceptive, *Vitex nigundo*, Hot plate method, Diclofenac sodium.

INTRODUCTION

Herbs are different in several respects from the type of purified therapeutic agents we have become accustomed to call drugs in the last half of the twentieth century. In the first place, they are more dilute than the concentrated chemicals that are familiar to us in the form of aspirin tablets or tetracycline capsules. Now a day's peoples are using herbal plant because it does not show any side effect compare to drug. The whole Plant of *Vitex nigundo* Linn has been investigated for its pharmacological activities i.e. Anti-inflammatory(10,11) Anticonvulsant, Antitumor, CNS Activity, Analgesic activities etc. For present study *Vitex nigundo* Linn (Verbenaceae), possess many medicinal properties & Chemical constituent alkaloids, flavonoids, sterols, resin and tannins. Leaves of *Vitex nigundo* Linn has been investigated for its analgesic activity including its mechanism of action (14) The fresh leaves of *Vitex nigundo* Linn have been suggested to possess analgesic activity possibly mediated via prostaglandin (PG) synthesis inhibition, antihistaminic, membrane stabilizing and antioxidant activities. Therefore the following study was performed to evaluate scientifically the analgesic activity of *Vitex nigundo* Linn (VN) by Hot plate method on albino Mice.(10, 11, 14)

PLANT PROFILE

Common name: Huang Ping, Nirgudi, Dabtan, Dangla, Kamalan, Limo-limo, Sagarai, Turagay, Agno-casto.

Biological Source Nirgudi consists of seeds, roots as well as fresh leaves [whole plant] of plant known as *Vitex nigundo* Linn. (**Family:** *Verbenaceae*)

The leaves of nirgundi contain fragrant, volatile oil and resins. The fruits contain resins, astringent organic acids, alkaloids and a pigment. The plant nirgundi also contains alkaloids, glycosides, flavonoids, reducing sugars, sterols, resin and tannins. From seeds-n-triacontane, n-hentriacontane, n-pentatriacontane, n-nonacosane, sitosterol, p-hydrobenzoic acid and 5- oxyisophthalic acid isolated. Also, 3, 4- dihydroxybenzoic acid is isolated from seeds. Vanillic acid, p-hydroxybenzoic acid and luteolin are isolated from bark. From essential oil pinene, limonene





Uses

1. Seed - occasionally used as a condiment, it is a pepper substitute.
2. Leaves of Nirgudi are astringent, febrifuge, sedative, tonic and vermifuge
3. The plant is said to be a malarial preventative and is also used in the treatment of bacterial dysentery - extracts of the leaves have shown bactericidal and antitumor activity.
4. The root is thought to be tonic, febrifuge, and expectorant, and the fruit to be nervine, cephalic, and emmenagogue.

3. MATERIAL AND METHOD

3.1 PLANT MATERIAL

Leaves of *Vitex nigundo* linn. Was collected from wagholi ,(pune) district of Maharashtra in December 2008 and authenticated in BSI(Botanical Survey Of India)

By Botanist Prof.P.G.Diwakar (**Voucher no. - VNNRSP1/2008**).The leaves of plant was clean with water and dried in the shade until a constant weight was obtained Dried leaves were coarsely powdered material passed through 120 mesh to remove fine powder. The coarse powder was used for extraction

PREPARATION OF EXTRACT

The powder obtained was subjected to successive soxhlet extraction with the solvents with increasing order of polarity i.e. Ethanol (95%). Extraction were carry out for 72-80 hrs by standard Soxhlet apparatus method and the extracts were evaporate to determine the percentage yield and Phytochemical screening of plant.

EXTRACTIVE VALUE

Name of the Plant	Parts Used	Method of Extraction	Yield in percentage (ethanol)
<i>Vitex nigundo</i> Linn.	Dried Leaves	Soxhlet Extraction	11.5 %

Table. 1 Extractive value of *Vitex nigundo* Linn.

ANIMAL

Male Albino mice (Swiss strain) weighing 25-30g were be house under standard laboratory condition, in a group of five each. The animals were having free access to food and water at liabdum as per norms ethical committee and CPCSEA norms of the institute approved the protocol of the study.

STANDARD DRUG

Diclofenac sodium.

3.2 ACUTE TOXICITIE STUDY

LD₅

The lethal dose has been found of selected plant extract of *Vitex nigundo* for the selected analgesic activity on animal rat .There is 90% range of dose between 4000-5000 mg/kg body weight.

ED₅₀

As per above LD₅₀ there is selection of effective dose is calculated this both dose 500mg/Kg is LD₅₀&ED₅₀ as per reported respectively.

3.3 METHOD

1. Hot plate method
2. Acetic acid induced writhing in mice
3. Tail flick test in albino mice^(29, 30)

EDDY'S HOT PLATE METHOD

Procedure

- 1) Swiss strain albino mice weighed (25-30 g) Selected for this method &total number of animal taken is 18.
- 2) Divided in to 3 groups each consists of 6 animals.
- 3) **Group -1** considered as Normal control group (Distilled water)
- 4) **Group-2** received standard drug serves as Standard group (Diclofenac sodium dose:25mg/kg)



- 5) **Group-3** received ethanol extract of *Vitex negundo* Linn.as per body weight respectively serve as Test group (*Vitex negundo* Linn extract dose: 500 mg/kg)
- 6) Take the basal reaction time by observing hind paw licking or jump response (whichever appear first)in animals when placed on the hot plate maintained at constant temperature of about 55°c (preferably ,55 ±1°c).
- 7) A normally animal show such response in 6.8 seconds cut off period is of 15 seconds is observed to avoid damage to the paws.
- 8) Injection of analgesic drug given to the animal and note the reaction time of animal on the hot plate at 0, 30, 60, 90,120 minute .
- 9) After the drug administration as the reaction time increases with drug 15 second is taken as maximum analgesia.
- 10) Then animals are removed from the hot plate to avoid injury to the paws.
- 11) Then take average basal reaction time was calculated using one way ANOVA.
- 12) Then this average basal reaction time of test drug is compare with standard drug &find whether test drug show analgesic effect as compare to standard ^(16, 17,18,19,20).

**Fig 1: - Eddy's Hot Plate Method**

4.RESULT

4.1 PLANT

1) Extractive value: 11.5%

2) Phytochemical study of *Vitex negundo* Linn. Leaves contain alkaloids, glycosides, flavonoids sterols, resin and tannins to show analgesic activity.

Sr. no.	Constituents	Tests	Ethanol Extract
1.	β Sterols	Libermann's sterol test	+
		Salkowski's test	+
2.	Alkaloids	Dragendorff Test	+
		Mayer's Test	+
5.	Phenolic Compounds	Extract + FeCl ₃	+
6.	Test for Tannins	Gelatin test	+
		FeCl ₃ test	+
7.	Organic Acids	Test for Fats and oils	+
		Mallic acid test	+
		Citric Acid test	+
		Test for Chloride	+
9.	Glycosides	Baljet test	+
10.	Flavonoids	Shinoda's test	+

Table no. 2 Phytochemical study *Vitex negundo* Linn

4.2 ACUTE TOXICITIE STUDY

The lethal dose (LD₅₀) has been found in the selected extract of plant *vitex negundo* Linn on the selected albino mice. We get the range between 4000-5000 mg/kg body weight.

As per above lethal dose (LD₅₀) lower dose there is a selection of effective dose calculated 500mg/kg orally.

4.3 ANALGESIC ACTIVITY

An ethanolic extract *vitex negundo* Linn leaves showed significant analgesic activity. The result was significant at p< 0.05 for Eddy's Hot Plate Method.



SR. NO	DRUGDOSE (in group of animal)	REACTION TIME (Sec) TIME AFTER DRUG ADMINISTRATION.				
		0 (min)	30 (min)	60 (min)	90 (min)	120 (min)
1	CONTROL	4.8±0.68	6.16±0.59	6.5±0.42	7.16±0.47	7.5±0.57
2	STANDARD	4.83±0.70	9.83±0.56	10.66±0.29	10.86±0.60	11±0.57
3	TEST	4.90±0.55	7.5±0.76	8±0.57	8.83±0.54*	9.83±0.56*

Table no.03 Comparison between standard drug (Diclofenac sodium) and test drug (ethanolic extract of *Vitex negundo* Linn) for analgesic activity.

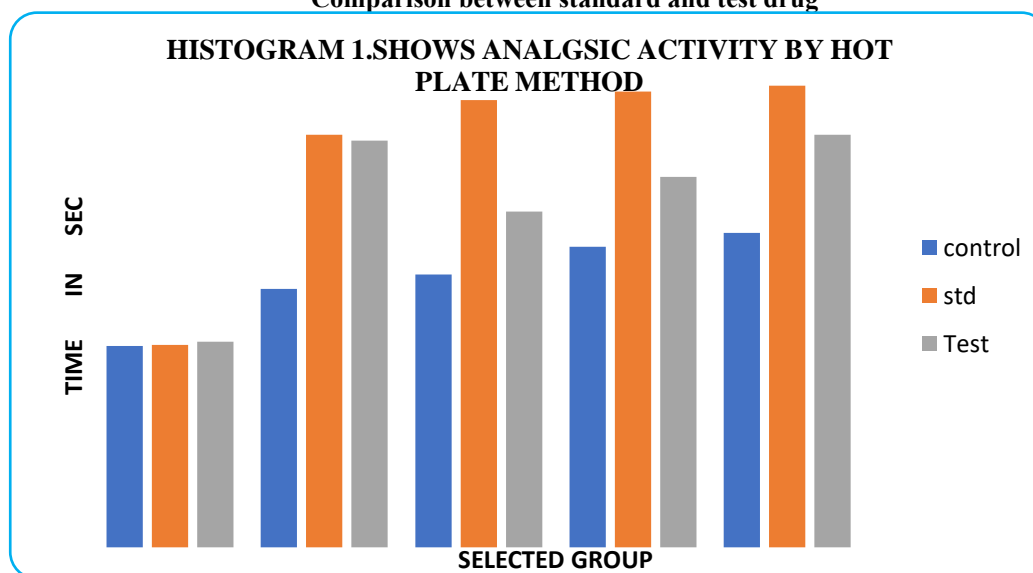
N= 6, value are expressed by Mean ± SEM for 6 animals P value: *p<0.05as compared to respective control. Data was analyzed by one way ANOVA TEST.

CONTROL-Distilled water

STANDARD- Diclofenac sodium (dose:25mg/kg)

TEST- *Vitex negundo* Linn extract dose: (500 mg/kg)

Histogram Shows Analgesic Activity by Eddy's Hot Plate Method. Comparison between standard and test drug



Histogram 1: Effect of Standard Control and Test Drug.

The analgesic activity of an ethanolic extract of bark of *Vitex negundo* Linn is comparable with standard drug Diclofenac. It is computed in Histogram-1 which shows the effectiveness and pharmacological rationale for the use of *Vitex nigundo* Linn as an analgesic drug.

DOSES OF ANIMAL

CONTROL-Distilled water

STANDARD- Diclofenac sodium (dose:25mg/kg)

TEST- *Vitex negundo* Linn extract dose: (500 mg/kg)

5.CONCLUSION

From this study, it can be concluded that ethanolic extract of *Vitex negundo* Linn possesses marked analgesic activity. *Vitex negundo* Linn may have both central and peripheral analgesic action. *Vitex negundo* Linn also possesses the analgesic and anti-inflammatory action of *Vitex negundo* Linn can be attributed to its flavonoid contents, which are known to act through inhibition of prostaglandin biosynthesis. In our study, we are trying to explore the antinociceptive action of *Vitex negundo* Linn. May be



useful in relieving both the visceral and integumental pain. Because of its chemical content like flavonoids, glycosides, alkaloids sterols etc. Require to show analgesic activity. Further study is necessary to evaluate the active principle responsible for the analgesic activity and clear mechanism of action involved.

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A STUDY ON LIQUIDITY AND PROFITABILITY ANALYSIS OF MARUTI SUZUKI INDIA LTD

¹Ms.Dharshana C.S, ²Dr.C.Eahambaram

¹III B.Com CA, Department of Commerce with Computer Applications, Dr.N.G.P. Arts and Science College (Autonomous)Coimbatore, Tamilnadu.

²Associate Professor, Department of Commerce with Computer Applications, Dr.N.G.P. Arts and Science College (Autonomous)Coimbatore, Tamilnadu.

ABSTRACT

The primary goal of the current investigation is to use ratio analysis to assess Maruti Suzuki India Limited's financial performance. The core objectives of this investigation are to understand the company's profitability, liquidity, and financial development. These recommendations would aid the business in making additional advancements. The method comprises calculating and comparing the outcomes with noteworthy business undertaking data, competition, or venture midpoints to determine the overall vigor and performance of the businesses under investigation.

KEYWORDS: Financial performance, Profitability, Liquidity, Trend Analysis

INTRODUCTION

Finance is considered as lifeblood of every business organization. Financial statements are a beneficial tool for assessing the financial performance of any business organization. One of the key factors for stakeholders is the company's financial health. The fundamental goal of measuring financial health is to demonstrate that the business is profitable and not in immediate risk of going out of business. Therefore, evaluating the financial performance of each business organization is essential in the modern world.

According to entrepreneurs, "finance is concerned with cash. It is so, since, every business transaction involves cash directly or indirectly". It is the vast term. Monetary record investigation is the arrangement of examining an organization's budget reports. Financial analysis is the process of assessing the performance and suitability of enterprises, projects, budgets, and other financial-related transactions. Financial analysis is frequently used to determine whether a company is solid, solvent, liquid, or profitable enough to justify a financial investment.

STATEMENT OF PROBLEM

In its contemporary state, the business can still substantially increase its profitability and liquidity without using any further resources; all it needs to do is streamline its existing financial system and financial information system. The fundamental issue that a firm's financial analyst must deal with is how to compromise between the two competing but equally important goals of profitability and liquidity.

A financial scenario known as a liquidity crisis is defined by a simultaneous lack of cash or assets that can be quickly converted into cash at numerous firms or financial institutions. A severe rise in demand and a dramatic drop in availability of cash occur during a liquidity crisis, and the ensuing lack of accessible money can result in widespread defaults and even bankruptcy. The ability to generate a profit is a sign of how effectively an enterprise is running its activities. The level of profit is an indicator of a company's efficiency. The more profit a business makes, the more efficient it is thought to be. Profits are therefore the essence of a firm, without which it would cease to exist.

The process of identifying an organization's operational and financial features from its accounting and financial statements is referred to as fiscal performance analysis. Determining the effectiveness and performance of the firm's management, as shown by the



financial records and reports, is the aim of such an examination. From the aforementioned perspective, the researcher has examined the financial performance of the Maruti Suzuki India Limited Company in order to comprehend how financial management is essential to growth. The financial data from 2013 to 2022 from Maruti Suzuki India Limited was used in this investigation.

OBJECTIVES OF THE STUDY

- To study the liquidity status of Maruti Suzuki India Ltd.
- To analyze the profitability of Maruti Suzuki India Ltd by using profitability ratios.
- To analyze the long-term solvency position of Maruti Suzuki India Ltd.
- To study the growth and development of Maruti Suzuki India Ltd using trend analysis.
- To present summary of the study and to make appropriate suggestion for improvement in the competitive business world.

RESEARCH METHODOLOGY

RESEARCH DESIGN

The crucial financial tool of ratio analysis was utilised to examine the financial performance of MARUTI SUZUKI INDIA LTD. Clear explanations of the analysis are provided using a chart and several diagrams. It is obvious that graphs and diagrams make any difficult topic or discussion seem quite simple to a casual reader of the thesis.

Trend percentages are also used as a measure that is very beneficial when comparing financial statements over a number of years. Here, the analytical design is applied.

DATA COLLECTION

Data was collected through secondary data sources. Secondary data consist of information that already exists somewhere, having been collected for some other purpose. In this study secondary data was collected from audited financial statements periodicals and other records maintained by Maruti Suzuki India limited.

PERIOD OF THE STUDY

The data of ten financial years were taken for the study. The financial data from 2013 to 2022 of Maruti Suzuki India Limited was used in this investigation.

TOOLS FOR FINANCIAL ANALYSIS

The most common tools of financial analysis involve the calculation of ratios from the income statement and balance sheet. The tools listed below can be used by a financial analyst to analyze financial statements. These are also referred to as financial analysis techniques.

1. RATIO ANALYSIS

- Liquidity ratios
- Profitability ratios

2. TREND ANALYSIS

REVIEW OF LITERATURE

Appah Ebimobowei, Onowu Joseph Uche and Tonye Young-Arney (2021) In this study, profitability and liquidity ratios were experimentally investigated in relation to the increase in profit of listed oil and gas companies in Nigeria. Data for the study was taken from the annual reports of sample companies for the years 2014 through 2019 and was gathered using an ex-post facto and correlation design. The study therefore made the following recommendations amongst others that firms should use financial ratios to measure the level of corporate profit growth to comprehend the conditions of firms which may eventually affect the investment decisions.

Abinash Dash, Baisali Das, and Biswajit Rout (2020), The profitability of Maruti Suzuki from 2009 to 2019 is revealed in their report, "A Study on Financial Statement Analysis of Maruti Suzuki India Limited Company." Profitability is assessed using a variety of profitability measures, growth charts, and statistical methods.

Adegbie Folajimi Festus and Adesanmi Timilehin (2020) The study looked into how Nigerian oil and gas companies' corporate sustainability was affected by their use of liquidity management. The ex-post facto research design was examined in the study. The study revealed that corporate sustainability of quoted oil and gas companies in Nigerian was significantly affected by



liquidity management. Results showed that liquidity management had a positive significant effect on profitability and liquidity management exhibited a positive significant impact on economic value added.

Modi Vishakhaben (2020) attempts to assess the liquidity of a number of Indian automotive companies in his research. The data was analyzed using statistical methods such as Mean, Standard Deviation, and Coefficient of Variances, and the study discovered that few car companies have a poor liquidity position, while others have a good liquidity position, and only a few have a very strong liquidity position.

Shaikh Salman Masood and Haitham Nobanee (2020) say that this project is based on the financial position of the company tata motors ltd by ratio analyses and research to analysis the information is taken from google on money control for five years 2017, 2018, 2019, 2020, 2021. This can show that whether changing a major (or) minor and the financial position of tata motors ltd.

Bhagyalakshmi and Saraswathi (2019) conducted a study on financial performance evaluation using DUPONT analysis through profitability ratios like ROE, ROA and ROCE. The study was conducted on 10 Automobile companies listed in the NSE and period of the study was 2013 to 2017. This study was mainly based on secondary data. Data was collected from published annual financial statements. Correlation and regression analysis was adopted to know the relationship among the variable and its impact of ROA and EM on ROE.

DATA ANALYSIS AND INTERPRETATION

RATIO ANALYSIS

Ratio analysis is the study or analysis of the cost estimates included in the company's financial statements. It can be used to evaluate a number of aspects of a business, including profitability, liquidity, solvency, and operational effectiveness. Since financial statements are their principal source of information, external analysts are primarily responsible for performing ratio analysis.

LIQUIDITY RATIO

A company's ability to service its debt by using its present assets can be assessed using liquidity ratios. In times of financial difficulty, the business might use its assets and sell them to raise money for debt repayment. The quick ratio, current ratio, cash ratio, and others are some of the liquidity ratios that are most frequently utilized.

CURRENT RATIO

The current ratio, also known as the working capital ratio, is a metric that aids businesses in assessing their capacity to settle short-term liabilities within a year. It seeks to demonstrate how individuals might make the most of their current assets to pay off their creditors' short-term debts. It is computed by dividing a company's overall current asset value by its current liability value.

Current Ratio = Current Assets/Current Liabilities

TABLE NO 1
TABLE SHOWING CURRENT RATIO OF MARUTI SUZUKI INDIA LTD

YEAR	CURRENT ASSET	CURRENT LIABILITIES	CURRENT RATIO
2013	10,946.00	6,727.50	1.63
2014	14,171.70	8,074.10	1.76
2015	8,197.90	8,823.00	0.93
2016	7,846.00	11,039.20	0.71
2017	8,776.20	13,226.40	0.66
2018	7,921.40	15,442.10	0.51
2019	12,361.60	14,150.30	0.87
2020	8,427.40	11,294.80	0.75
2021	18,526.70	16,106.70	1.15
2022	16,781.20	17,013.70	0.99

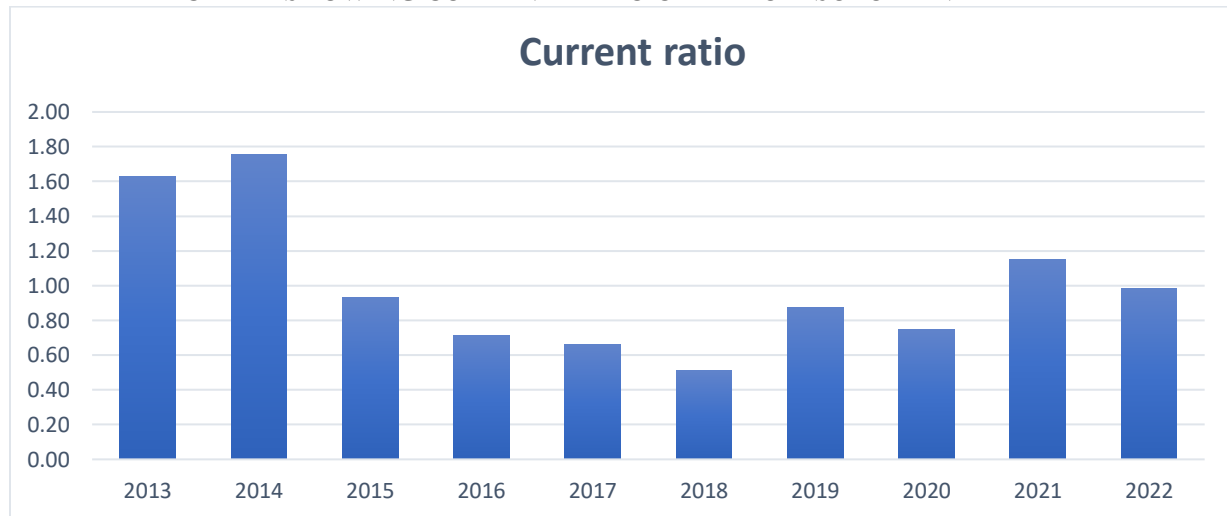
INTERPRETATION

The above table shows current ratio position of Maruti Suzuki India Ltd during the year 2013 to 2022. The study shows the ratio ranges from 1.63 in the year 2013 and gradually falls after the next year which results to 0.99 in the year of 2022.

CHART NO 1



CHART SHOWING CURRENT RATIO OF MARUTI SUZUKI INDIA LTD



QUICK/LIQUID/ACID TEST RATIO

The Quick Ratio (also referred to as the acid test ratio) is a financial ratio formula whose main aim is to help the companies measure their ability to pay off their short-term liability dues within the next 90 days with the help of their near-cash assets. It tries to portray how a firm can maximize its Quick Assets to settle short-term debts towards its creditors.

Liquid ratio = liquid asset/current liabilities.

**TABLE NO 2
TABLE SHOWING LIQUID RATIO OF MARUTI SUZUKI INDIA LTD**

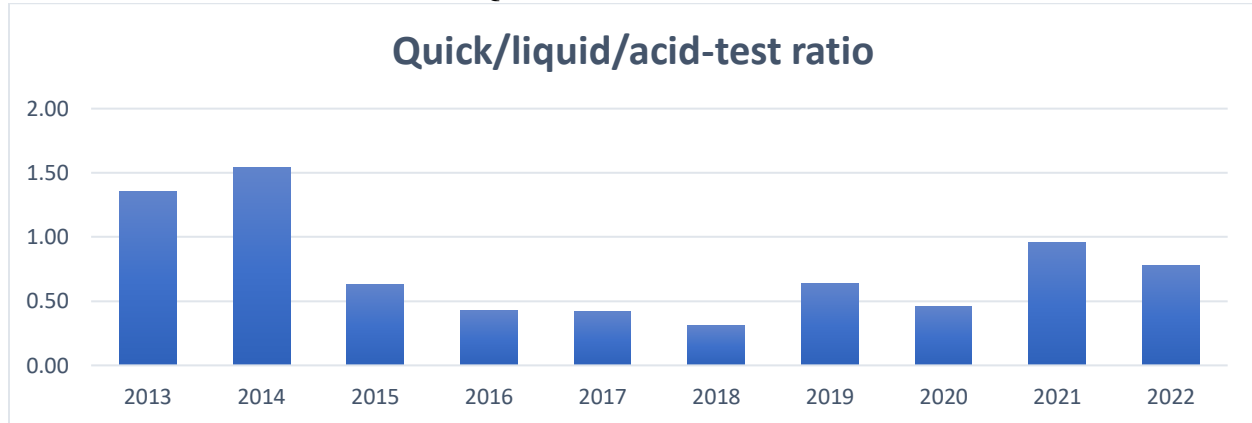
YEAR	LIQUID ASSET	CURRENT LIABILITIES	LIQUID RATIO
2013	9,105.30	6,727.50	1.35
2014	12,465.80	8,074.10	1.54
2015	5,582.90	8,823.00	0.63
2016	4,713.90	11,039.20	0.43
2017	5,514.00	13,226.40	0.42
2018	4,760.60	15,442.10	0.31
2019	9,035.90	14,150.30	0.64
2020	5,212.50	11,294.80	0.46
2021	15,476.70	16,106.70	0.96
2022	13,248.10	17,013.70	0.78

INTERPRETATION

The above table shows liquid ratio position of Maruti Suzuki India Ltd during the year 2013 to 2022. The study shows the ratio ranges from 1.35 in the year 2013 and gradually falls after the next year which results to 0.78 in the year of 2022.



CHART NO 2
CHART SHOWING LIQUID RATIO OF MARUTI SUZUKI INDIA LTD



CASH/ABSOLUTE LIQUID RATIO

The ability of a corporation to pay down obligations entirely using liquid assets is assessed using the cash ratio, a liquidity indicator. It is used by creditors to assess how readily a corporation can pay down short-term liabilities.

Absolute Liquid Ratio = Absolute liquid assets / Current liabilities.

TABLE NO 3
TABLE SHOWING ABSOLUTE LIQUID RATIO OF MARUTI SUZUKI INDIA LTD

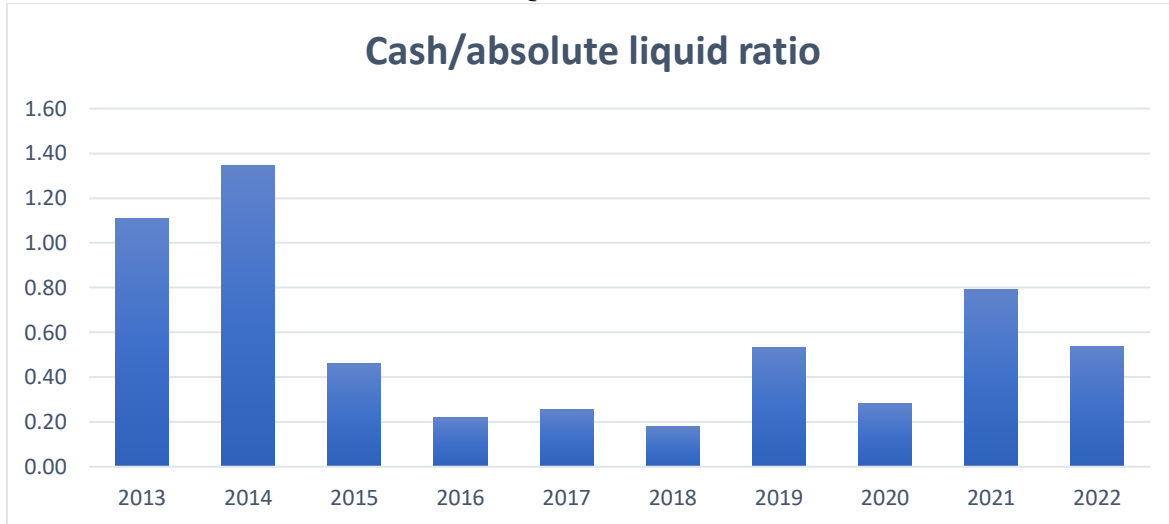
YEAR	ABSOLUTE LIQUID ASSET	CURRENT LIABILITIES	ABSOLUTE LIQUID RATIO
2013	7,449.70	6,727.50	1.11
2014	10,856.50	8,074.10	1.34
2015	4,084.50	8,823.00	0.46
2016	2,421.20	11,039.20	0.22
2017	3,391.80	13,226.40	0.26
2018	2,750.20	15,442.10	0.18
2019	7,534.80	14,150.30	0.53
2020	3,214.80	11,294.80	0.28
2021	12,728.70	16,106.70	0.79
2022	9,166.40	17,013.70	0.54

INTERPRETATION

The above table shows absolute liquid ratio position of Maruti Suzuki India Ltd during the year 2013 to 2022. The study shows the ratio ranges from 1.11 in the year 2013 and gradually falls after the next year which results to 0.54 in the year of 2022.



CHART NO 3
CHART SHOWING ABSOLUTE LIQUID RATIO OF MARUTI SUZUKI INDIA LTD



PROFITABILITY RATIO

Profitability ratios are used to assess a company's capacity to turn a profit in relation to its costs. When a company's profitability ratio is higher than it was during the preceding accounting period, that company is doing well. The profitability ratio can also be used to analyze the performance of competitors by comparing their financial results to those of a similar firm.

GROSS PROFIT RATIO

The link between gross profit and net sales revenue is gauged by the profitability ratio known as the gross profit ratio. It is also referred to as the Gross Profit Margin when it is expressed as a percentage. It is a popular tool to evaluate the operational performance of the business. The ratio thus reflects the margin of profit that a concern is able to earn on its trading and manufacturing activity.

Gross profit ratio = gross profit/sales*100

TABLE NO 4
TABLE SHOWING GROSS PROFIT RATIO OF MARUTI SUZUKI INDIA LTD

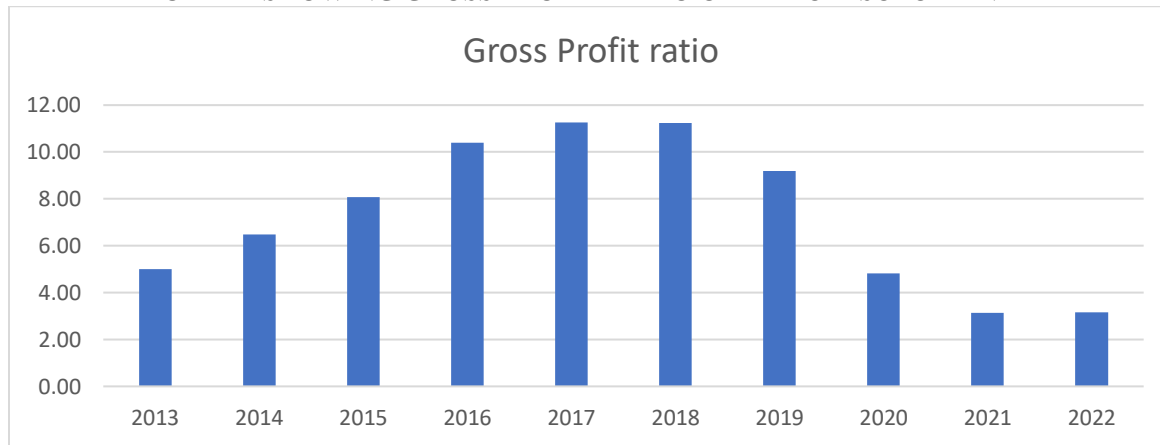
Year	Gross Profit	Sales	Gross Profit ratio
2013	2,178.60	43,587.90	5.00
2014	2,835.60	43,700.60	6.49
2015	4,036.60	49,970.60	8.08
2016	5,982.70	57,538.10	10.40
2017	7,660.20	68,034.80	11.26
2018	8,957.90	79,762.70	11.23
2019	7,904.60	86,020.30	9.19
2020	3,644.00	75,610.60	4.82
2021	2,213.00	70,332.50	3.15
2022	2,788.80	88,295.60	3.16

INTERPRETATION

The above table shows gross profit ratio position of Maruti Suzuki India Ltd during the year 2013 to 2022. The study shows the ratio ranges from 5.00 in the year 2013 and gradually increases to 11.26 in the year 2017 which later falls from the next year which results to 3.16 in the year of 2022.



CHART NO 4
CHART SHOWING GROSS PROFIT RATIO OF MARUTI SUZUKI INDIA LTD



NET PROFIT RATIO

Net profit ratio is an important profitability ratio that shows the relationship between net sales and net profit after tax. When expressed as percentage, it is known as net profit margin. Net profit ratio **helps to find out net profit earned in comparison to revenue earned from operations.** It helps investors in determining whether the company’s management is able to generate profit from the sales and how well the operating costs and costs related to overhead are contained.

Net profit ratio = Net profit/sales*100

TABLE NO 5
TABLE SHOWING NET PROFIT RATIO OF MARUTI SUZUKI INDIA LTD

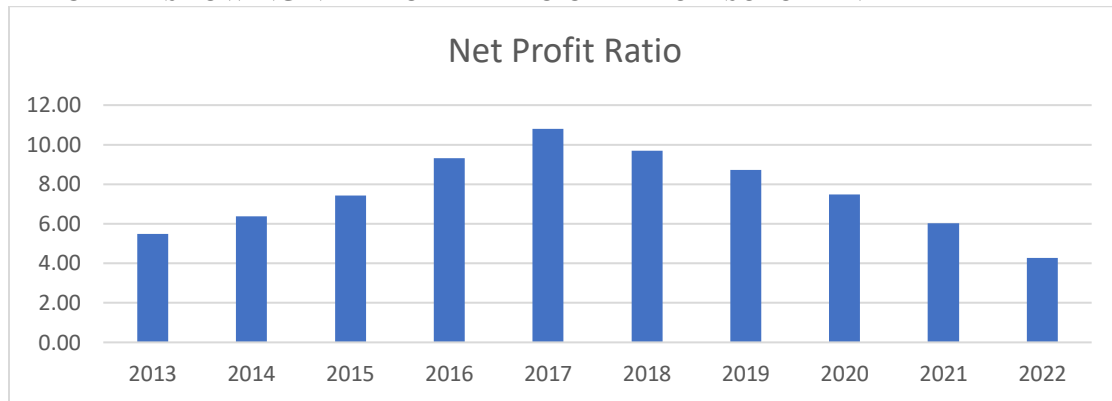
Year	Net Profit	Net Sales	Net Profit Ratio
2013	2,392.10	43,587.90	5.49
2014	2,783.00	43,700.60	6.37
2015	3,711.20	49,970.60	7.43
2016	5,364.30	57,538.10	9.32
2017	7,350.20	68,034.80	10.80
2018	7,721.80	79,762.70	9.68
2019	7,500.60	86,020.30	8.72
2020	5,650.60	75,610.60	7.47
2021	4,229.70	70,332.50	6.01
2022	3,766.30	88,295.60	4.27

INTERPRETATION

The above table shows net profit ratio position of Maruti Suzuki India Ltd during the year 2013 to 2022. The study shows the ratio ranges from 5.49 in the year 2013 and gradually increases to 10.80 in the year 2017 which later falls from the next year which results to 4.27 in the year of 2022.



CHART NO 5
CHART SHOWING NET PROFIT RATIO OF MARUTI SUZUKI INDIA LTD



OPERATING PROFIT RATIO

Operating profit ratio is expressed as a percentage. Operating Profit ratio helps to find out Operating Profit earned in comparison to revenue earned from operations.

Operating profit ratio = Operating profit/sales*100

TABLE NO 6
TABLE SHOWING OPERATING PROFIT RATIO OF MARUTI SUZUKI INDIA LTD

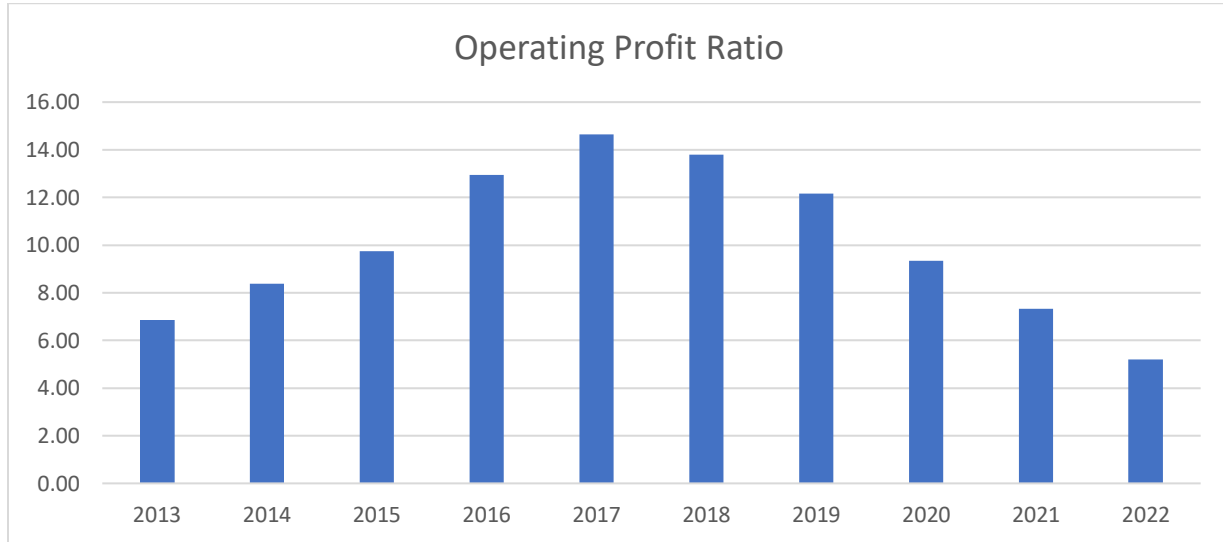
Year	Operating Profit	Net Sales	Operating Profit Ratio
2013	2991	43,587.90	6.86
2014	3658.5	43,700.60	8.37
2015	4868.2	49,970.60	9.74
2016	7443.7	57,538.10	12.94
2017	9960.3	68,034.80	14.64
2018	11003.4	79,762.70	13.80
2019	10465.6	86,020.30	12.17
2020	7064.8	75,610.60	9.34
2021	5159.4	70,332.50	7.34
2022	4582.3	88,295.60	5.19

INTERPRETATION

The above table shows operating profit ratio position of Maruti Suzuki India Ltd during the year 2013 to 2022. The study shows the ratio ranges from 6.86 in the year 2013 and gradually increases to 14.64 in the year 2017 which later falls from the next year which results to 5.19 in the year of 2022.



CHART NO 6
CHART SHOWING OPERATING PROFIT RATIO OF MARUTI SUZUKI INDIA LTD



TREND ANALYSIS

Trend analysis compares the movement in each line item across time periods in order to draw actionable insights. It basically indicates the change either in terms of amount or as a percentage change year over year. In other words, it aids in understanding a particular firm's strength or weakness in relation to other similar firms in the industry.

The analyst can effectively compare two or more companies over time with the aid of trend analysis. It may also be contrasted to the industry standard. In other words, it aids in understanding a particular firm's strength or weakness in relation to other similar firms in the industry.

TABLE NO 7
TABLE SHOWING TREND ANALYSIS OF MARUTI SUZUKI INDIA LTD

YEAR	NET PROFIT	CHANGE IN AMOUNT	PERCENTAGE AMOUNT
2013	2,392.10	0.00	0%
2014	2,783.00	390.90	16%
2015	3,711.20	1,319.10	55%
2016	5,364.30	2,972.20	124%
2017	7,350.20	4,958.10	207%
2018	7,721.80	5,329.70	223%
2019	7,500.60	5,108.50	214%
2020	5,650.60	3,258.50	136%
2021	4,229.70	1,837.60	77%
2022	3,766.30	1,374.20	57%
FORECASTED FUTURE VALUES			
2023	6,346.05	3,953.95	165%
2024	6,582.25	4,190.15	175%
2025	6,818.44	4,426.34	185%
2026	7,054.64	4,662.54	195%
2027	7,290.83	4,898.73	205%

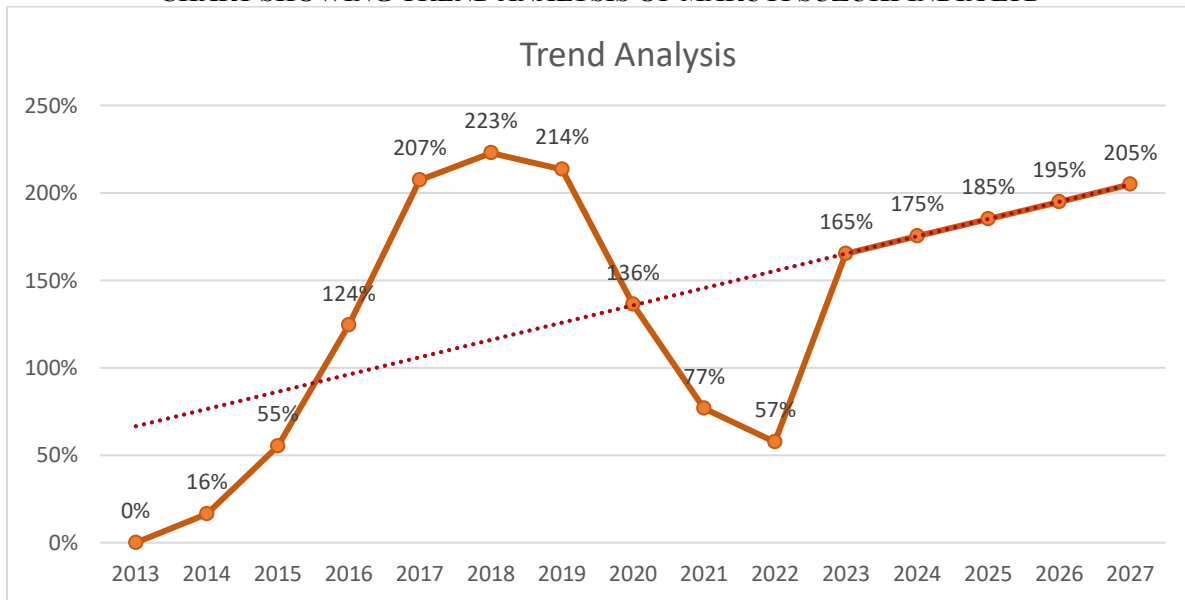
INTERPRETATION

The above table shows the trend value of the net profit for the study period of 2013 to 2022. The analysis also shows the trend rate of the forecasted net profit value for the next five years from 2023 to 2027.



The study states that the growth rate of Maruti Suzuki India Ltd was higher in the year 2018 which may indicate that it has been able to improve its operational efficiency as well as non-operating income. Overall, the company is trending up, which may be sustainable in the near term if the market remains favorable.

CHART NO 7
CHART SHOWING TREND ANALYSIS OF MARUTI SUZUKI INDIA LTD



FINDINGS

- The current ratio of Maruti Suzuki India Ltd was favorable during the year 2014.
- The liquid ratio was highest in the year of 2014 and lowest in the year of 2018.
- Absolute liquid Ratio was highest with a range of 1.34 in the year of 2014.
- Gross profit ratio performance was high in the period of 2017 and it started decreasing.
- Net profit ratio was high in the year of 2017 and it started decreasing.
- Operating profit ratio was high with a value of 14.64 in the year 2017.
- Trend Analysis shows position of upward trend in the year of 2023,2024,2025,2026,2027.

SUGGESTIONS

- The liquidity position could be strengthened by lowering the current liabilities and enhancing the availability of liquid cash.
- The company can increase their profitability position by generating sales with available resources.
- The company should put more of a focus on internal equity in order to strengthen its solvency position.

CONCLUSION

According to the study, the financial performance of MARUTI SUZUKI INDIA LTD during the course of ten years between 2013 to 2022, is generally found to be satisfactory. Financial performance is important for finding the financial strength of the company. To analyze the success of the organization, researchers have employed a diversity of ratios including the liquidity ratio, profitability ratio, solvency ratio and trend analysis. It could be concluded that the company has been performing well and the inner strength of the company is remarkable. The corporation may increase its profitability still further by focusing on internal equity and making the most use of its resources.



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CLINICAL AND LABORATORY INDICATORS IN PREDICTION OF ACUTE GLOMERULONEPHRITIS IN CHILDREN WITH NEPHROTIC SYNDROME

Ibatova Sh.M., Mamatkulova F.Kh.

Samarkand State Medical University, Samarkand, Uzbekistan

ANNOTATION

In the development of chronic renal failure in children, the proportion of glomerulonephritis is still significant. Identification of chronic kidney pathology at the initial stage is important to improve the effectiveness of preventive and therapeutic measures aimed at slowing down the progression of the disease. We examined 76 patients with acute glomerulonephritis with nephrotic syndrome aged 2 to 5 years, including 31 boys and 45 girls. The development of the forecast algorithm was carried out by the method of sequential Wald analysis. A score of 10 was used as a threshold to conclude on the prognosis. The peculiarity of the course of glomerulonephritis in children was that the disease develops against the background of hereditary predisposition.

KEY WORDS: *glomerulonephritis, nephrotic syndrome, patients, course, prognosis.*

INTRODUCTION

Glomerulonephritis is one of the main causes of chronic renal failure (CRF). The prevalence of the disease is growing in many countries of the world, and therefore it becomes extremely necessary to study the clinical course and prognosis of renal diseases [1,2,7,13,16].

In modern nephrology, age-related features of glomerular diseases are considered in two directions: differences between children and adults are studied, as well as features in children and adults depending on their age at the onset of the disease [6,7,9,12,14].

According to epidemiological studies, the structure of glomerular diseases may change. The development of nephrotic syndrome is associated with an increase in the permeability of the glomerular filtration barrier for macromolecules.

It is known that glomerular diseases can lead to a decrease in renal function. For a long time, impaired renal function can occur latently. Identification of chronic renal failure (CRF) in the initial stage is important to improve the effectiveness of preventive and therapeutic measures aimed at slowing down the progression of the disease [3,8,11,15,17]. Therefore, predicting the outcomes of glomerulonephritis in early childhood continues to be an urgent medical and social problem [5,10].

PURPOSE OF THE STUDY

to determine the diagnostic significance of clinical and laboratory parameters in predicting acute glomerulonephritis with nephrotic syndrome in children.

MATERIAL AND RESEARCH METHODS

Patients with acute glomerulonephritis (76) with nephrotic syndrome aged 2 to 5 years were examined, including 30 boys and 44 girls. The patients were divided into 2 groups. The first group consisted of 35 patients who had no recurrence of the disease for two or more years, the second group included 39 patients who did not achieve complete remission and developed a chronic form of the disease (CHN). The development of the forecast algorithm was carried out by the



method of sequential Wald analysis [4]. A score of 10 was used as a threshold to conclude on the prognosis. The conclusion about the high probability of the transition of the disease to chronic glomerulonephritis was determined if the patient had more than 10 points. The development of the Wald sequential analysis algorithm was carried out by determining the frequency of symptoms in each group as a percentage. The evidence of statistical reliability of the difference in the frequency of symptoms is determined by the formula: $t = \frac{P_1 - P_2}{\sqrt{\frac{M_{21} - M_{22}}{n}}}$. The proof of the independence of signs of detection of prognostic symptoms was the determination of the correlation coefficient for qualitative signs, which is calculated by the formula:

$H = \frac{ad - bc}{(a + b)(c + d)(a + c)(b + d)}$, where the letters indicate the signs. Correlation coefficient for quantitative traits, where “x” and “y” are average correlated traits. $T_x - T_y$ standard deviation: $H = \frac{(x - x) \times (y - y)}{n}$ ($T_x - T_y$). The determination of the relative probability and the calculation of the prognostic coefficient were carried out according to the formula: $PC = 10 \lg \frac{P_1}{P_2}$.

Indicators of unfavorable prognosis with a positive sign, because in the numerator, the frequency of symptoms characteristic of the group with developed CGN, and in the denominator, symptoms characteristic of the group with acute glomerulonephritis with long-term clinical and laboratory remission. Taking into account the hypothesis with a normal distribution, the information measure was calculated using the Kullback formula [2]. According to the degree of information content, the following signs were selected, listed in the table, where PC is a prognostic coefficient, J (xi) is information content.

RESEARCH RESULTS

A comparative assessment of hereditary burden revealed that a prognostically unfavorable sign of chronicity was the presence of kidney diseases in relatives in the pedigree, the prognostic coefficient (PC) was 9.9 and significantly informative +1.65. From the anamnestic data, there were frequent sore throats (PC = 15.3) with the highest information content among all other signs (6.12), food and drug allergies, parasitic infestations, PC = 5.2 and 6 with an information value of 1.35 and 6, respectively. 1.02. Thus, if the total score exceeds the threshold unit “10”, the patient has an unfavorable prognosis and belongs to the high-risk group requiring appropriate therapy.

Of the laboratory studies, the most unfavorable prognostic indicator was partial renal dysfunction: hypo- and hyperkalemia, proteinuria more than 3 g/l per day. According to the coagulogram, there was plasma tolerance to heparin (7.6). According to the analysis of excretory urography, unfavorable factors of chronicity were an increase in the size of the kidneys (PC = 17), information content 1.76, an increase in the nephrographic effect (PC = 12) with information content 1.24. In the genesis of damage to renal structures in acute glomerulonephritis, a high information content of malondialdehyde was established with its increase from 6.8-8.4 nmol/mg/lipids in the cell membrane. Despite a slight difference in the indices of phosphatidylcholine, phosphatidylethanolamine, lysophosphatidylcholine in erythrocyte membranes in acute and chronic glomerulonephritis, compared with those in the control group, their information content is high - 96, 88, 21, respectively.

The study of thyroid function in patients with acute glomerulonephritis with long-term remission: the level of thyroxine-bound globulin - 0.52 ± 0.086 nmol / l, triiodothyronine 1.32 ± 0.15 nmol / l, thyroxine - 99.96 ± 7.13 nmol / l, no significant difference was found in patients with AGN and CGN. However, if we take into account that the sum of prognostic coefficients is reliable at a value of 19.5, then a significant difference between patients of both groups is revealed.

The next stage of the study was the analysis of information content, which reflects the degree of approximation of the diagnosis to the correct diagnostic threshold. An informative measure of more than 3 was recognized as highly informative, but not less than 1, because 3 - 4 such signs are sufficient to reach the +10 threshold, i.e. providing no more than 10% errors. Such signs, for example, were a decrease in alpha - globulin, an increase in gamma - globulin, hyperlipidemia, an increase in cholesterol. Signs such as hypercoagulability, a decrease in endogenous creatinine against the background of a hereditary burden of kidney pathology, an increase in malondialdehyde and lysophosphatidylcholine, a decrease in phosphatidylethanolamine and phosphatidylcholine were prognostically



unfavorable indicators. These indicators characterize the high activity of lipid peroxidation, leading to destabilization of cytomembranes and the formation of a prognostically unfavorable course of nephrotic syndrome in patients with glomerulonephritis.

CONCLUSIONS

1. In the development of chronic renal failure in children, the proportion of glomerulonephritis is still significant.
2. The peculiarity of the course of glomerulonephritis in children is that the disease develops against the background of hereditary predisposition.
3. The chronicity of the disease is due to the instability of cytomembranes against the background of increased activity of lipid peroxidation.
4. In connection with the established facts, timely diagnosis of factors leading to chronicity is necessary, as well as prevention of the formation of cytomembrane instability with immunological control of the treatment.

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A STUDY ON LIQUIDITY AND PROFITABILITY ANALYSIS OF SELECTED IT COMPANIES

Mr.Vasheegaran.M¹, Mrs.T.Sreegeetha²

¹III B.Com CA, Department of Commerce with Computer Applications, Dr.N.G.P. Arts and Science College (Autonomous)Coimbatore, Tamilnadu.

²Assistant Professor, Department of Commerce with Computer Applications, Dr.N.G.P. Arts and Science College (Autonomous)Coimbatore, Tamilnadu.

ABSTRACT

Financial performance analysis is the process of determining the operation and financial characteristics of a firm from accounting and financial statements. The goal of such an analysis is to determine the efficiency and performance of the firm's management, as reflected in the financial records and reports. The study focus on overall financial position of selected IT companies during the specific period based on the selected variables, which may interest not only for the respective companies in the industry but also brings a process of development operational aspects of the entire industry. The study is much important to the management from the point of decision-making purpose, to identify the strength, weakness areas of the company and finally helps to maximize the intrinsic value of the company.

KEYWORDS: Financial performance, Profitability, Liquidity, Trend Analysis

INTRODUCTION

Every business organization's lifeblood is considered to be finance. Any business organisation can assess its financial performance through financial statements. The business's financial health is one of the most important considerations for stakeholders. They all want to know if the company will perform better in the future in order to keep their commitment to the business. The primary goal of financial health measurement is to show that the company is profitable and not in imminent danger of going out of business. In the modern world, it is essential to evaluate each business organization's financial performance.

Nowadays, it is impossible to imagine a world without finance. Our economic activity's "essence" has been referred to as finance on sometimes. Since it reduces operating costs and increases profitability, controlling expenses is a major element of effective business management. An asset needs regular maintenance in order to increase its output. A company is required to pay off its debts on schedule. The return on investments, return on assets, value added, etc. of the activity encourages these results.

STATEMENT OF PROBLEM

Every companies primary priority is its profitability. In order to drive the firm in the proper direction, management must have adequate level of profitability. At the same time liquidity is also equally important as it helps to know the financial position. Measuring liquidity helps you to find the right balance, monitoring the financial health of your company and positioning it for strategic growth. Hence it is important to analyse the indicators of liquidity that have an impact on the profitability of a company. Therefore, this research is undertaken to study the impact of liquidity and profitability of selected IT Companies. So, the main aim of the study is to analyse the financial position of the company over a period of time in terms of profitability, liquidity and trend analysis.

OBJECTIVES OF THE STUDY

- To Find the Profitability Position of Selected IT Companies in India.
- To Evaluate Liquidity Position of Selected IT Companies in India.



RESEARCH METHODOLOGY

RESEARCH DESIGN

The study purely depends on the secondary data which are collected mainly from the moneycontrol.com for this study were selected based on purposive sampling method. Accordingly, the study includes top five companies. The period of study is for five years (2018- 2019 to 2021- 2022)

TOOLS-RATIO ANALYSIS

The study or assessment of the cost estimates included in the company's financial statements is known as ratio analysis. It can be applied to evaluate a variety of company characteristics, such as profitability, liquidity, solvency, and operational efficiency. Ratio analysis can provide information into a company's relative financial and future prospects. We can get information on profitability, liquidity, earnings, extended viability, and other subjects. When deciding which companies to invest in, the results of these comparisons might help to make decisions more effectively. In this study various ratios of liquidity and profitability is used.

REVIEW OF LITERATURE

Appah Ebimobowei, Onowu Joseph Uche and Tonye Young-Arney (2021), "A Study on Liquidity and Profitability Ratios on Growth of Profits of Listed Oil and Gas Firms in Nigeria". In this study, Data for the study was taken from 2014 through 2019 and was gathered using an ex-post facto and correlation design. The study made the recommendations amongst others that firms should use financial ratios to measure the level of corporate profit growth.

Dr P.R Brinda Kalyani (2021), "A Study on the Financial Performance of Infosys Limited". From 2016 to 2020 study was conducted. It was observed that the firm's market value was larger than its loans. The business's structure is essentially unchanged, although technology is constantly evolving. The company's growth and financial changes are shown by the 5-year trend value.

Anil Kumar Goyal (2020), "A Study on to Analyse the Financial Performance of India's Bharat Petroleum Corporation's". The profitability, liquidity, and solvency ratios are applied by the author to evaluate the company's financial performance. The research spans the study years of 2004–2005 through 2011–2012. Conclusion: During the research period, the company was unable to even approach the optimal fast ratio, which may pose a threat to its short-term liquidity.

Rathi, Mala; Goyal and Krishnawatar (2020), "A Study on Financial Performance Analysis of Tata Consultancy Services Limited". They sought to assess the financial performance of Tata consultation services in their study paper. The financial performance of the company during the last 5 years was analyzed using a number of ratios and statistical tools. The research shows that the company's revenue, net profit, and earnings are on the upswing. Therefore, it was determined that the business is expanding positively and quickly.

Sugandha Sharma and Abhishek Raizada (2020), "A study on Correlation between Liquidity and Profitability of IT Sector Companies" had made an attempt to study the relationship between liquidity and profitability. 5 leading companies were taken, Infosys ltd, Wipro ltd, IBM, Tech Mahindra and HCL. Research hypothesis were framed and were analyzed based on combined score of the mean value and was concluded that IBM ranked the highest followed by Infosys and HCL (in the same rank), then Wipro and finally Tech Mahindra.

DATA ANALYSIS AND INTERPRETATION

The process of evaluating information and making appropriate conclusions from it using different analytical techniques is known as data interpretation. Researchers can categories, manipulate, and summarize data with the help of data analysis to find answers to major things. Finding patterns and trends in data is the process of conducting data analysis. Giving meaning to the data is the process of data interpretation.

LIQUIDITY RATIOS

The ability of a corporation to satisfy its short-term debts is reflected by its liquidity ratios. Liquidity ratio shows a company's capacity to quickly convert its assets and utilize them to meet its liabilities. The bigger the ratio, the simpler it is to pay off debts and maintain the current payments.

CURRENT RATIO

The current ratio, also known as the working capital ratio, is a metric that aids businesses in assessing their capacity to settle short-term liabilities within a year. It seeks to demonstrate how individuals might make the most of their current assets to pay off their creditors' short-term debts.

Current Ratio = Current Assets/Current Liabilities



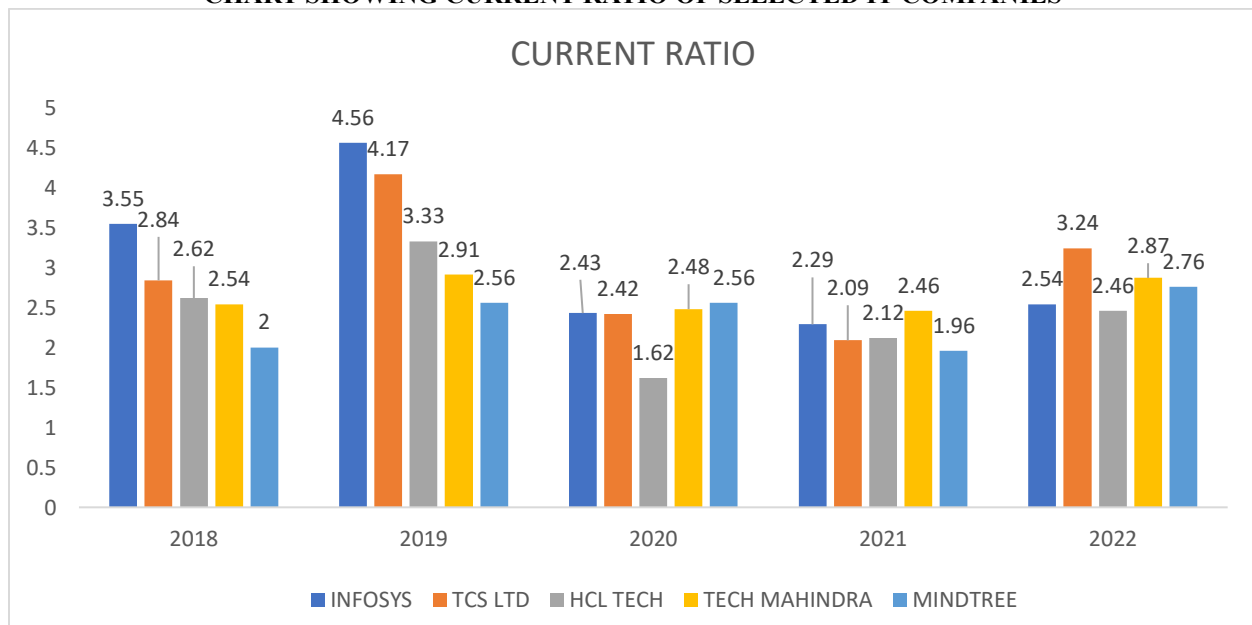
TABLE NO 1
TABLE SHOWING CURRENT RATIO OF SELECTED IT COMPANIES

YEAR	INF	TCS	HCL	TM	MT
2018	3.55	4.56	2.43	2.29	2.54
2019	2.84	4.17	2.42	2.09	3.24
2020	2.62	3.33	1.62	2.12	2.46
2021	2.54	2.91	2.48	2.46	2.87
2022	2.00	2.56	2.56	1.96	2.76

INTERPRETATION

The above table shows current ratio position of selected IT companies during the year 2018-2022. The current ratio of Infosys ranges from 3.55 in the year 2018 and gradually falls which results to 2.00 in the year of 2022. TCS ratio ranges from 4.56 in the year 2018 and gradually falls which results to 2.56 in the year of 2022. The current ratio of HCL ranges from 2.43 in the year 2018 and gradually increases which results to 2.56 in the year of 2022. Tech Mahindra ratio ranges from 2.29 in the year 2018 and gradually falls which results to 1.96 in the year of 2022. The current ratio of Mindtree ranges from 2.54 in the year 2018 and gradually increases which results to 2.76 in the year of 2022.

CHART NO 1
CHART SHOWING CURRENT RATIO OF SELECTED IT COMPANIES



QUICK/LIQUID/ACID TEST RATIO

The Quick Ratio (also referred to as the acid test ratio) is a financial ratio formula whose main aim is to help the companies measure their ability to pay off their short-term liability dues within the next 90 days with the help of their near-cash assets.

Liquid ratio = liquid asset/current liabilities.



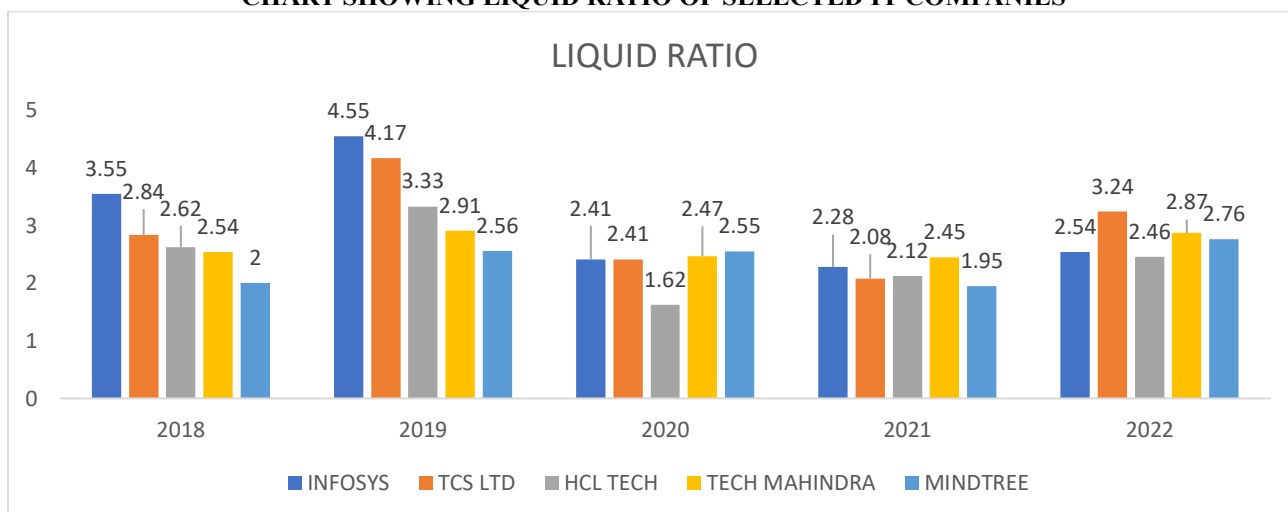
TABLE NO 2
TABLE SHOWING LIQUID RATIO OF SELECTED IT COMPANIES

YEAR	INF	TCS	HCL	TM	MT
2018	3.55	4.55	2.41	2.28	2.54
2019	2.84	4.17	2.41	2.08	3.24
2020	2.62	3.33	1.62	2.12	2.46
2021	2.54	2.91	2.47	2.45	2.87
2022	2.00	2.56	2.55	1.95	2.76

INTERPRETATION

The above table shows liquidity ratio position of selected IT companies during the year 2018-2022. The liquidity ratio of Infosys ranges from 3.55 in the year 2018 and gradually falls which results to 2.00 in the year of 2022. TCS ratio ranges from 4.55 in the year 2018 and gradually falls which results to 2.56 in the year of 2022. The liquidity ratio of HCL ranges from 2.41 in the year 2018 and gradually increases which results to 2.55 in the year of 2022. Tech Mahindra ratio ranges from 2.28 in the year 2018 and gradually falls which results to 1.95 in the year of 2022. The liquidity ratio of Mindtree ranges from 2.54 in the year 2018 and gradually increases which results to 2.76 in the year of 2022.

CHART NO 2
CHART SHOWING LIQUID RATIO OF SELECTED IT COMPANIES



ABSOLUTE LIQUID RATIO

The ability of a corporation to pay down obligations entirely using liquid assets is assessed using the cash ratio, a liquidity indicator (cash and cash equivalents such as marketable securities). It is used by creditors to assess how readily a corporation can pay down short-term liabilities.

Absolute Liquid Ratio = Absolute liquid assets / Current liabilities.

TABLE NO 3
TABLE SHOWING ABSOLUTE LIQUID RATIO OF SELECTED IT COMPANIES

YEAR	INF	TCS	HCL	TM	MT
2018	2.34	1.80	1.35	1.21	1.36
2019	1.85	1.82	1.59	0.90	1.86
2020	1.78	1.49	0.81	0.98	1.53
2021	1.84	1.15	1.30	0.91	1.28
2022	1.20	1.23	1.77	1.27	1.26

INTERPRETATION

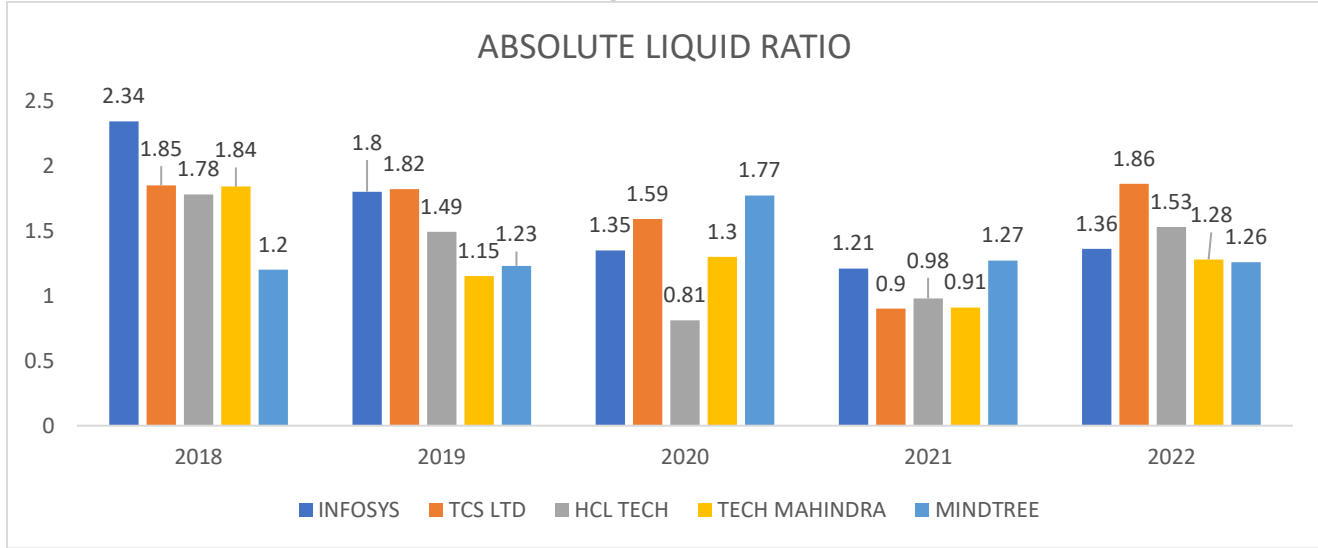
The above table shows absolute liquid ratio position of selected IT companies during the year 2018-2022. The absolute liquid ratio of Infosys ranges from 2.34 in the year 2018 and gradually falls which results to 1.20 in the year of 2022. TCS ratio ranges from 1.80 in the year 2018 and gradually falls which results to 1.23 in the year of 2022. The absolute liquid ratio of HCL ranges from 1.35 in



the year 2018 and gradually increases which results to 1.77 in the year of 2022. Tech Mahindra ratio ranges from 1.21 in the year 2018 and gradually increases which results to 1.27 in the year of 2022. The absolute liquid ratio of Mindtree ranges from 1.36 in the year 2018 and gradually falls which results to 1.26 in the year of 2022.

CHART NO 3

CHART SHOWING ABSOLUTE LIQUID RATIO OF SELECTED IT COMPANIES



PROFITABILITY

GROSS PROFIT RATIO

The gross profit ratio, also known as gross profit margin, is a financial metric that measures the profitability of a company's sales after deducting the cost of goods sold (COGS). The gross profit ratio is expressed as a percentage and is calculated by dividing the gross profit by the total revenue.

$$\text{Gross Profit Ratio} = (\text{Gross Profit} / \text{Total Revenue}) \times 100$$

TABLE NO 4

TABLE SHOWING GROSS PROFIT RATIO OF SELECTED IT COMPANIES

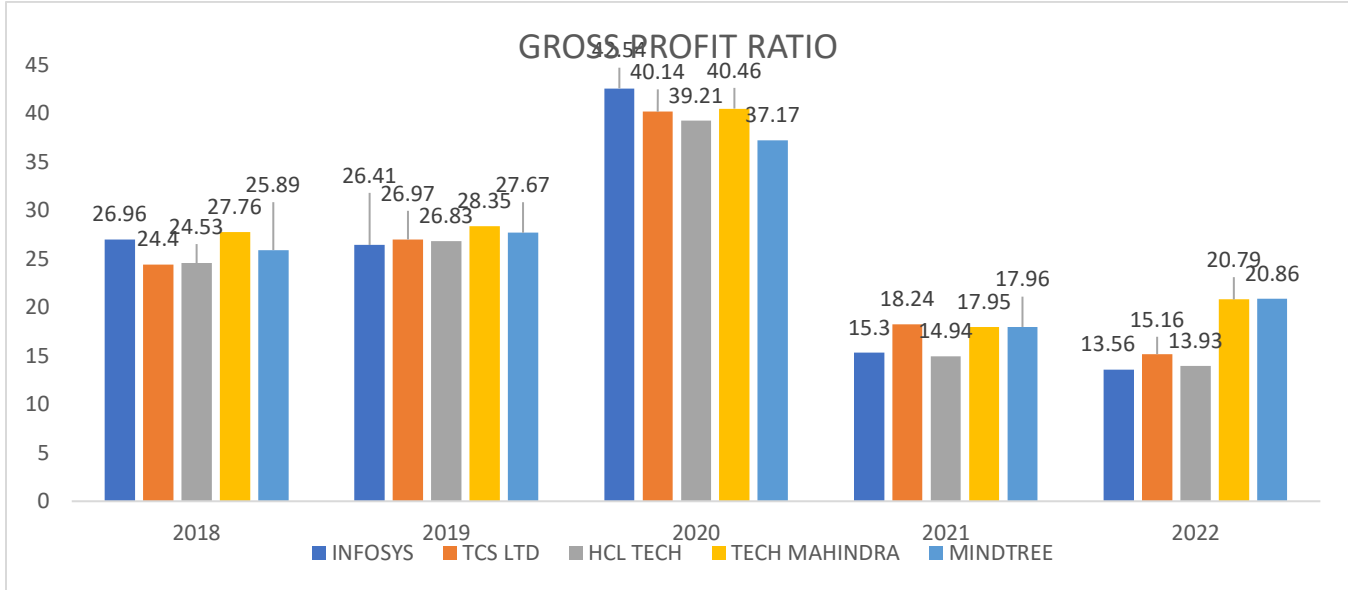
YEAR	INF	TCS	HCL	TM	MT
2018	26.96	26.41	42.54	15.30	13.56
2019	24.40	26.97	40.14	18.24	15.16
2020	24.53	26.83	39.21	14.94	13.93
2021	27.76	28.35	40.46	17.95	20.79
2022	25.89	27.67	37.17	17.96	20.86

INTERPRETATION

The above table shows gross profit ratio position of selected IT companies during the year 2018-2022. The gross profit ratio of Infosys ranges from 26.96 in the year 2018 and gradually falls which results to 25.89 in the year of 2022. TCS ratio ranges from 26.41 in the year 2018 and gradually increases which results to 27.67 in the year of 2022. The gross profit ratio of HCL ranges from 42.54 in the year 2018 and gradually falls which results to 37.17 in the year of 2022. Tech Mahindra ratio ranges from 15.30 in the year 2018 and gradually increases which results to 17.96 in the year of 2022. The gross profit ratio of Mindtree ranges from 13.56 in the year 2018 and gradually increases which results to 20.86 in the year of 2022.



CHART NO 4
CHART SHOWING GROSS PROFIT RATIO OF SELECTED IT COMPANIES



NET PROFIT RATIO

The net profit ratio, also known as net profit margin, is a financial metric that measures a company's profitability after all expenses, including taxes, interest, and depreciation, have been deducted from its revenue.

$$\text{Net Profit Ratio} = (\text{Net Profit} / \text{Total Revenue}) \times 100$$

TABLE NO 5
TABLE SHOWING NET PROFIT RATIO OF SELECTED IT COMPANIES

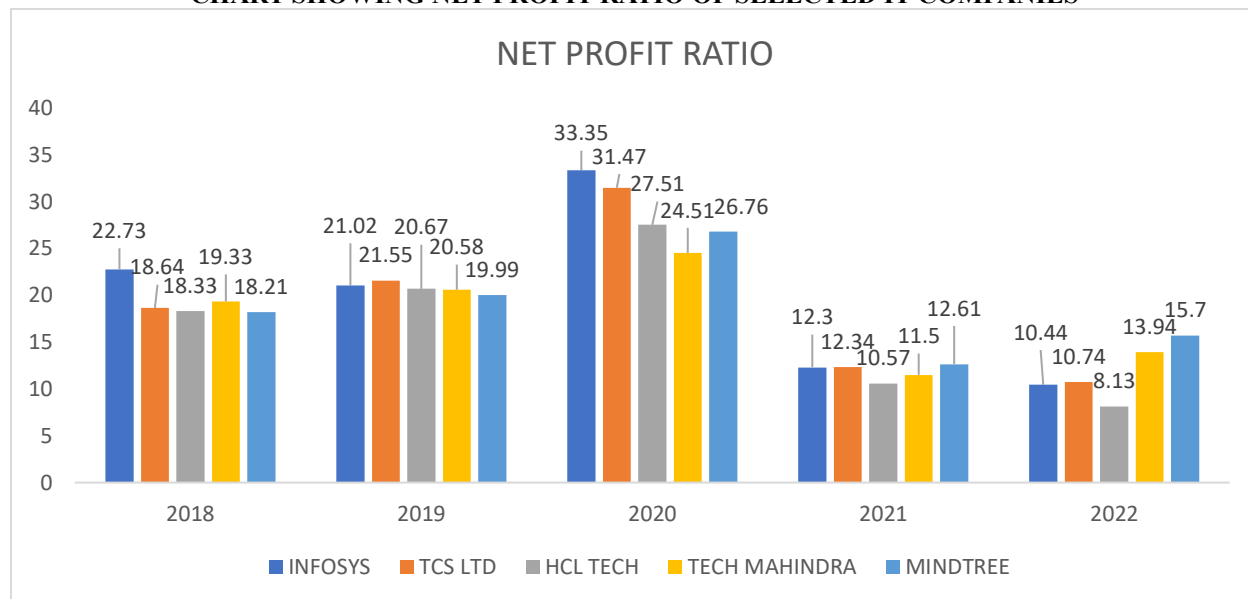
YEAR	INF	TCS	HCL	TM	MT
2018	22.73	21.02	33.35	12.30	10.44
2019	18.64	21.55	31.47	12.34	10.74
2020	18.33	20.67	27.51	10.57	8.13
2021	19.33	20.58	24.51	11.50	13.94
2022	18.21	19.99	26.76	12.61	15.70

INTERPRETATION

The above table shows net profit ratio position of selected IT companies during the year 2018-2022. The net profit ratio of Infosys ranges from 22.73 in the year 2018 and gradually falls which results to 18.21 in the year of 2022. TCS ratio ranges from 21.02 in the year 2018 and gradually falls which results to 19.99 in the year of 2022. The net profit ratio of HCL ranges from 33.35 in the year 2018 and gradually falls which results to 26.76 in the year of 2022. Tech Mahindra ratio ranges from 12.30 in the year 2018 and gradually increases which results to 12.61 in the year of 2022. The net profit ratio of Mindtree ranges from 10.44 in the year 2018 and gradually increases which results to 15.70 in the year of 2022.



CHART NO 5
CHART SHOWING NET PROFIT RATIO OF SELECTED IT COMPANIES



FINDINGS

- The year 2018 had the highest current ratio between Infosys and TCS. With a range of 2.56, HCL will expand consistently with a high rate in 2022. With a range of 3.24, Tech Mahindra reached its peak in 2021 while Mindtree reached its peak in 2019.
- In 2018, Infosys and TCS had the greatest liquid ratio. HCL continues to be measured at 2.41 throughout the early years of the study. Between the years 2018 and 2022, Tech Mahindra's value remained reasonable, whereas Mindtree's value peaked in 2019 with a range of 3.24.
- In 2018, Infosys and TCS had the greatest absolute liquid ratio. HCL shows positive growth, achieving 1.77 in 2022. The greatest range for Tech Mahindra was 1.27 in the year 2022, and the highest range for Mindtree was 1.86 in the year 2019.
- The year 2021 witnessed Infosys and TCS operate with their greatest gross profit ratios. HCL has a rising line that culminates in a value of 37.17 in the year 2022, whereas Mindtree recorded a peak value of 20.86 in that same year. In 2020, Tech Mahindra had the lowest ranking.
- The net profit ratio of Infosys and HCL was high in 2018 and then started to decline. Tech Mahindra and Mindtree performed badly and will reach a high level of performance in 2022. TCS had a range of 21.55 in 2019, which was a high.

SUGGESTIONS

- To strengthen its liquidity position, the company should enhance its absolute liquid assets, such as cash on hand, bank balances, and marketable securities.
- The company will use its resources to improve the performance of the company. The company should keep as much cash on hand as is necessary to pay for every day costs.
- The company will be able to meet its financial demands without depending on future earnings or borrowings if it follows through. The company's resources should be utilized to the utmost extent possible to improve the efficiency of the business's operations.
- They are asked to put some of their immediate resources into activities that will help the company to expand or grow up.

CONCLUSION

In today's competitive business environment, information technology is playing a significant role in India, where there's an ongoing demand to establish trusted financial statements. By using a variety of methods to analyze the financial statement and assess the relationships between different financial statement elements, financial analysis assists in a better understanding of the financial condition and performance of an IT organization. By correctly defining the relationships between the items on the balance sheet and profit and loss account, financial analysis is done to determine the financial strength and weakness of the IT industry. It is evident from



the analysis of the financial performance of a select few IT companies that these companies have greatly improved their performance. The finding is that Mindtree will outperform other companies in the future in terms of financial success.

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A REVIEW OF CHATGPT AI'S BENEFITS AND IMPACT ON E-COMMERCE SECTORS

Dr.P. Suganya¹,K. Pranesh²

¹Head and Associate professor of Commerce (CA), Dr. N.G.P. Arts and Science College, Coimbatore.

²M. Com(CA) Student, Department of Commerce (CA), Dr. N.G.P. Arts and Science College, Coimbatore.

ABSTRACT

The artificial intelligence (AI) tool ChatGPT, created by OpenAI, uses sophisticated natural language processing to produce material and responses that are human-like. The journal article examines the impact of ChatGPT, an advanced language model, on the e-commerce industry. The article provides an overview of ChatGPT's capabilities, including its ability to provide personalized recommendations and address customer queries in real-time, and explores how these capabilities can improve customer engagement and satisfaction. Moreover, the article delves into the latest AI technology that ChatGPT utilizes, highlighting its ability to adapt to the constantly evolving e-commerce landscape. The article also analyzes the potential impact of ChatGPT on businesses, including increased sales and revenue, as well as improved customer retention and loyalty. Additionally, the article highlights how ChatGPT can increase customer engagement and satisfaction, ultimately leading to increased sales and revenue for e-commerce businesses. The article concludes with a discussion of the future of ChatGPT in e-commerce and its potential to transform the industry as we know it. Overall, the journal article presents a comprehensive analysis of the benefits and implications of ChatGPT for e-commerce businesses.

KEYWORDS : ChatGPT, E-commerce, AI technology.

INTRODUCTION

Artificial intelligence-powered ChatGpt is a natural language processing tool that enables you to communicate with the chatbot in a variety of ways that are human-like. The language framework could assist you with activities like writing emails, essays, and programming, as well as provide answers to your questions. When accessing the Chat GPT, it can only offer useful information and won't suggest anything inappropriate or vulnerable. Many of them suggest that the release of Chat GPT eliminates employment opportunities for content writers, digital media marketers, and social media specialists. In future it will come up with the subscription and it calls as Chaptgpt plus version.

FEATURES

Even though ChatGPT's main goal is to simulate human conversationalists, it is adaptable. For instance, it can build computer programmes and debug them, write business proposals in the style of well-known CEOs, write essays for students, compose music and teleplays, write poetry and song lyrics, replicate the Linux operating system, simulate a chat room, play games like tic-tac-toe, and even act as a virtual ATM. It is also capable of writing and debugging computer programmes. Man pages, information on online phenomena, and details on computer languages like Python and bulletin board systems are all included in the ChatGPT training resources.

In one case, ChatGPT recognises the counterfactual character of the topic and frames its answer as a speculative analysis of what may happen if Christopher Columbus arrived in the United States in 2015. This is accomplished by using details about Columbus' explorations and information regarding contemporary events, such as how people now view his actions.

Unusual for chatbots, ChatGPT may recall previous commands provided to it within the same session. This will enable ChatGPT to be used as a personalised therapist, as reported by the media. The OpenAI "Moderation endpoint" API, a unique GPT-based AI, reviews queries and flags potentially objectionable prompts.



PURPOSE OF CHAT GPT

A myriad of options are made possible via ChatGPT. Some of the uses for Chat GPT that aren't just for having fun and asking questions are described in the next few sentences:

- ChatGPT can be used to create well-written, coherent content in a range of writing genres, topic areas, and languages.
- You can summarise recent news, product specifications, or stories using ChatGPT.
- You can use ChaptGPT to analyse the problems and discover remedies or reassurances.
- With GPT, you may develop chatbot responses that are suitable and consistent in a wide range of situations.
- ChatGPT can be used to create interesting posts and messages for posting on social networking sites.
- You can utilise GPT to produce content for productivity tools like reports, emails, and other documents. Last but not least, ChatGPT can be used to analyse big data sets and extract insightful information from them.

IMPACT OF CHATGPT ON THE E-COMMERCE INDUSTRY

Over the once decade as a global ecosystem, we've been seeing dynamic mega changes that are transubstantiating the world 360 stages. Technology has come an universal procurator across diligence and a revolution in AI has passed with ChatGPT. The ever- changing script of technology is being witnessed in the history of creations and system results. The population of the world is figuring out how to redesign the being ecosystem of e-commerce and make new bones

A turning point in invention that's profoundly affecting every sphere of business and the frugality worldwide. negotiating innumerable delicate tasks is putting trouble to establish to produce scalable companies. Numerous corridor and channels of e-commerce are in the process of improvement, and ChatGPT is the ideal device to guide through all of the changes. Online marketing and business are changing significantly. AI- driven perceptivity can help marketers with trend identification, followership targeting, and crusade optimization. While AI- driven analytics can help companies in better gathering their guests and customizing their tries, AI- driven chatbots can deliver substantiated client brace. also, AI can automate time- consuming processes like dispatch marketing, website optimization, and data dissection. Companies may save time and plutocrat while perfecting effectiveness and delicacy with AI- driven robotization. Chatbots that are natural- sounding can bandy and break your cases and inquiries by utilizing ChatGPT instructions. Manmade queries will fluently be understood by the chatbot. The integration of ChatGPT is profitable to give with a client brace individual via a chatbot.

EXAMINE HOW THE CHATGPT IS BEING USED FOR BRAND NAMING

- For instance, I gava a command for create a brand name for new smartphone, Here how they response for the brand name for smartphone;

How about "NovaTech"? It conveys a sense of innovation and cutting-edge technology, while also being easy to remember and pronounce. Additionally, the word "nova" means "new" or "star" in Latin, which ties in nicely with the idea of a brand new smartphone that shines like a star in the market.

- For a description of a smartphone's ChatGpt reaction, I gave a command create a description for smartphone:

Introducing our latest smartphone - the ultimate device for staying connected, entertained, and productive on the go. This sleek and stylish device boasts cutting-edge technology, premium features, and intuitive design, making it the perfect companion for your busy lifestyle.

With a stunning high-resolution display, you can enjoy crystal-clear visuals and vibrant colors, whether you're streaming your favorite shows, browsing the web, or catching up on work. The powerful processor ensures lightning-fast performance, allowing you to switch between apps, run multiple tasks simultaneously, and enjoy smooth, lag-free gaming.

The camera on our smartphone is a true masterpiece, capturing stunning photos and videos with incredible detail and clarity. With advanced features like optical zoom, portrait mode, and automatic image stabilization, you can take your photography to the next level and capture every moment in perfect detail.

But our smartphone is much more than just a camera and display. It also boasts advanced security features like facial recognition and fingerprint scanning, ensuring that your data and personal information are always protected. And with long battery life and fast charging, you can stay connected all day long without worrying about running out of juice.

Whether you're a busy professional, a social butterfly, or a tech enthusiast, our smartphone is the perfect device to help you stay connected, entertained, and productive wherever you go.

MODIFY INTERACTIONS WITH CUSTOMERS

ChatGPT enables customised answers to consumer questions. For instance, if a consumer is considering making a purchase and wants to know if the item is in stock, ChatGPT can provide a response containing information on the product's availability and expected delivery date. Similar to this, ChatGPT can generate an answer to a customer's request about shipment timeframes that includes comprehensive details about the estimated delivery schedule. Overall, by providing timely and accurate responses to a range of queries, ChatGPT may considerably improve the customer experience.



STRUCTURE PRODUCT DESCRIPTIONS

ChatGPT can be used to produce powerful product descriptions that highlight a product's key qualities. For instance, if a fashion retailer is introducing a new line of athleisure apparel, ChatGPT may create descriptions that emphasise the clothing's moisture-wicking, stretchy fabric, comfortable fit, and chic style. These descriptions would provide clients with technical information about the product while also influencing their purchasing decisions with enticing language and storytelling.

IMPROVE PRODUCT SUGGESTIONS

Based on a customer's browsing and purchase history, ChatGPT can provide customised product recommendations for that consumer. For instance, ChatGPT might provide comparable or complimentary products that the consumer would find interesting if they had recently purchased a particular style of clothing. Making relevant and personalised product recommendations may increase sales and customer satisfaction.

CONCLUSION

AI-based chatbot technology, like ChatGPT, has had a revolutionary impact on a number of commercial areas. These bots have been particularly beneficial for e-commerce and digital marketing operations. Based on the information they gather from prospects, they can process customer enquiries swiftly and give tailored solutions. In the long term, this boosts sales conversions while also assisting firms in developing closer ties with their clients. We covered a range of topics related to the e-commerce industry, including the impact of e-commerce on traditional retail stores, the rise of mobile commerce, strategies for optimizing online product pages, the role of social media and influencers, and the ethical considerations surrounding data privacy and security.

E-commerce has revolutionized the way we shop and has given businesses of all sizes access to a global marketplace. However, it also presents challenges such as data privacy and security concerns, cross-border trading complexities, and the need to keep up with rapidly evolving technology.

Despite these challenges, e-commerce continues to grow and evolve, with new technologies and strategies emerging to help businesses succeed in the online marketplace. As we move forward, it will be interesting to see how e-commerce continues to shape the way we shop and how businesses adapt to these changes.

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A STUDY ON FINANCIAL PERFORMANCE OF BHARAT PETROLEUM CORPORATION LTD

Mr.P. Kanagaraj¹, Mr.S. Gokulprasath²

¹Assistant Professor in Department of Commerce with PA, Dr.N.G.P Arts & Science College, Coimbatore

²Student, III BCOM PA, Dr.N.G.P Arts & Science College, Coimbatore

ABSTRACT

Financial performance of Bharat Petroleum Corporation Limited (BPCL) indicates that the company has shown a steady growth in revenue and profitability over the years. In the last fiscal year (2021), BPCL's revenue was INR 2.79 trillion and its net profit was INR 128.83 billion. The company's financial ratios, such as Return on Equity (ROE) and Return on Assets (ROA), have also been consistently above industry averages. BPCL's financial performance can be attributed to its diverse portfolio of products, focus on operational efficiency, and strategic investments in technology and infrastructure. However, the company also faces challenges such as volatile crude oil prices, regulatory changes, and competition in the market. Overall, BPCL's financial performance indicates a strong and stable company with a potential for growth in the future.

INTRODUCTION

Finance is the nerve centre and life line of any economic activity and therefore omnipresent in every sphere of economic and business life. It plays an extremely crucial role in the continuity and growth of a business. Ratio analysis is one of the basic analyses of examining the financial position and performance of the companies. Financial analysis is a process of considering the financial strength and weakness of a firm by forming strategic relationship between the item of profit and loss account, balance sheet and other financial statement. Financial statement analysis is an analysis that highlights the important relationship in the financial statements of the company. Financial statements are prepared primarily for decision making. Ratio analysis is a scientific endeavor which is used to analyze the performance of an industry or sector in identification to its companion. This analysis is used to computation and identification of ratios which are borrowed from the reports of the company's financial statement. In fundamental analysis ratio analysis is the keystone. The aim of this study is the comparative assessment of financial information to promote perceptible financing, attention and organizational resolutions.

STATEMENT OF THE PROBLEM

The strong rebound in economic activity in the year 2021 led to a sharp rise in energy demand which grew by around 5.8%, exceeding the 2019 levels by around 1.3%. The growth was led by renewables which continued its rising trend, driven by strong expansion in solar and wind energy. In comparison to 2019, the growth in primary energy demand was entirely attributed to renewables, while the consumption of fossil fuels remained largely unchanged, with lower oil demand offset by higher coal and natural gas consumption.

OBJECTIVES OF THE STUDY

- To investigate the profitability and overall financial performance of Bharat Petroleum Corporation Limited during the period of study.
- To find out the efficiency of assets utilization in Bharat Petroleum Corporation Limited.
- To study the solvency capacity of the Bharat Petroleum Corporation Limited during the period of study

METHODOLOGY OF THE STUDY

Analytical research design is chosen for the study. This research is conducted to find out facts about given topic from the answers obtained develop new and useful ways during things



REVIEW OF LITERATURE

- **Anis Ali (2022)**, COVID-19 changed the shape and size of the business and industry and lowered the multidimensional performances of the firms, globally. The study analyzes the pre and post-COVID-19 financial performance of Indian oil and gas firms and tries to get the impact of the financial performances. The analysis is based upon the secondary financial data while ratio analysis and statistical measures are applied to get financial performances, mutual absolute and relational variations of financial performances pre- and post- COVID-19. Based on the analysis and interpretations it is that there is absolute growth in the total revenues, total expenses, and profits post COVID-19 pandemic period. To enhance the profitability of larger scale production oil and gas companies need to improve their cost and managerial efficiency.
- **Dhruvi G Jani (2022)**, A business needs profit not only for its existence but also for expansion and diversification. The objective of this paper was to evaluate and analyze financial performance of Coal India Limited after disinvestment during the period from 2011-12 to 2019-20 using three step & five step DuPont model and assets utilization. The various statistical tools were used for analysis. It was found that assets turnover ratio should be in increasing trend in general but in our case, it is showing decreasing trend (0.63 to 0.59). Among all the five factors of DuPont model, Equity Multiplier was the only one which showed upward trend from 2.44 to 4.66 resulting in positive ROE.

ANALYSIS AND INTERPRETATION

Year	Operating Profit	Current Ratio	Quick Ratio	Cash Ratio	ROA	ROE	Net Profit
2022	5.52	0.746	0.239	2.70	4.69	412.72	0.46
2021	9.12	0.913	0.444	13.98	11.83	909.82	0.61
2020	3.15	0.718	0.349	1.93	1.78	136.42	0.47
2019	5.07	0.918	0.487	1.27	5.21	362.61	0.39
2018	6.49	0.886	0.394	2.95	6.63	405.53	0.48

FINDINGS, SUGGESTIONS AND CONCLUSION FINDINGS

- Operating Profit ratio of the bank was highest 9.12 in the year 2021 and lowest 3.15 in the year 2020. It is not growing every year so it's not satisfactory.
- The standard ratio of current ratio is 2:1 and the bank highest current ratio is 0.913 in the year 2021. It is not growing every year but it is satisfactory because there was no huge difference.
- The standard ratio of Quick ratio is 1:1 and the bank has highest 0.487 in the year 2019. It is not growing every year but it is satisfactory because there was no huge difference.
- The Cash ratio of the bank has highest 13.98 in the year 2020-2021 and lowest 1.27 in the year 2018-2019. It is not growing every year so it is not satisfactory.
- Return on asset ratio of the bank was highest 11.83 in the year 2021 and lowest 1.78 in the year 2020. It is not growing every year so it is not satisfactory.
- Return on equity ratio of the bank was highest 909.82 in the year 2021 and lowest 136.42 in the year 2020. It is growing every year so it is satisfactory.
- Net Profit ratio of the bank was highest 0.61 in the year 2021 and lowest 0.39 in the year 2019. It is growing and declining so it is not satisfactory.

SUGGESTIONS

1. The company must continue to focus on improving its operational efficiency, diversifying its revenue streams, and managing its risks to sustain its financial performance in the long run.
2. The Effective utilization of sales should be improved.
3. The bank should review the managerial performance to improve the efficiency of management in the future and increase generating revenue from its assets because it has the lowest Asset turnover ratio.
4. It's important for the bank to mobilize the cash effectively.

CONCLUSION

Overall, the study suggests that BPCL has performed well financially and has the potential to continue its growth trajectory in the future. However, the company must continue to focus on improving its operational efficiency, diversifying its revenue streams, and managing its risks to sustain its financial performance in the long run. The findings of this study can be useful for investors, stakeholders, and policymakers to make informed decisions regarding their investment in BPCL. The study also highlights the importance of financial performance analysis in understanding the strengths and weaknesses of a company, which can help in



formulating effective strategies for sustainable growth.

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INVESTIGATION OF THE BIOREMEDIATION PERFORMANCE OF COW-DUNG AND WIRE-CROTON ON CRUDE OIL POLLUTED SOIL

Ifeanyichukwu Edeh^{1*}, Milicent Mauren Thomas²

^{1,2}Department of Chemical Engineering, University of Port Harcourt, Nigeria

* Corresponding Author

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ABSTRACT

Crude oil exploration is associated with oil spillage causing environmental degradation including loss of soil fertility and biodiversity. Various technologies are available for remediating crude oil polluted soil, but, bioremediation seems to be more environmentally friendly and cost effective. Thus, the current work is on the bioremediation of crude oil polluted soil using cow dung and wire croton leave as the amendments. It was conducted as a batch process and was monitored for 42 days (six weeks). Separate cow dung and wire croton, and different quantities of cow dung and wire croton were blended to remediate the soil. The analysis conducted included the Total Petroleum Hydrocarbon (TPH), Hydrocarbon utilizing Bacterial (HUB) and the Total Organic Carbon (TOC) content of the soil. The result shows that wire croton and cow dung have the potential to be used as bioremediation nutrients. When these nutrients were mixed at different proportions, the combination involving 30 g of cow dung and 30 g of wire croton gave the least performance in terms of HUB, TPH and TOC across the duration of the study, and the maximum was achieved using 200 g of cow dung and 200 g of wire croton as shown by over 650 thousand HUB increment, 95 % hydrocarbon degradation, and 76.3 % total organic carbon obtained. This shows that appropriate combinations of cow dung and wire croton is required to obtain a higher performance using both nutrients for remediating a crude oil polluted soil.

KEYWORDS: Bioremediation; cow dung; wire croton; nutrients; degradation

1.0 INTRODUCTION

The exploration of crude oil usually generates large amount of environmental waste. These activities can cause severe environmental degradation known to affect both terrestrial and aquatic bodies which constitutes majorly as a source of human livelihood and home to several species (Oludele et al, 2021). Crude oil can be harmful to organisms including human and its degradation rate is extremely slow under normal circumstance. It is composed of dangerous chemicals including polycyclic aromatic hydrocarbons (PAH), total petroleum hydrocarbons (TPH) which are known to cause mutation and cancer. The crude oil spill penetrates to a depth of about 10 - 20 cm resulting to the loss of soil fertility and, initiation of environmental degradation (Ofoegbu et al, 2015). The process renders the soil impotent making it to lose its capacity to produce crops compared to the periods prior to the spill. Restoring the fertility of the soil after degradation is usually very difficult and time consuming through natural remediation. The various technologies in use for remediating the soil include evaporation, burying and dispersion (Zadaka-Amir et al., 2013). Most of these technologies are very expensive and thus, bioremediation is considered in this study. This involves the use of organisms (microorganism or plant) or their enzymes to return a polluted environment to its original condition. Bioremediation relies on bacteria, plants and fungi to degrade, breakdown, transform or remove contaminants or impairments of quality from the contaminated soil. When nutrients such as animal dung and croton leave are added, the microorganisms can rapidly degrade the oil, utilizing it as the carbon source. The microorganism produced masticates the excess Petroleum Hydrocarbon content present in the soil. Bioremediation is a promising treatment method for crude oil contaminated sites remediation owing to its cost effectiveness and tendency to achieve complete mineralization of organic contaminants into carbon dioxide, water, and inorganic compounds (Ehirim et al 2020). The Total Petroleum Hydrocarbons (TPHs) are one of the common contaminants in a crude oil polluted soil. They include a broad family of several hydrocarbon compounds that originally come from crude oil which is used to make petroleum products. Most petroleum hydrocarbons encountered in the environment are ultimately degraded or metabolized by indigenous bacteria because of their energetic and carbon needs for growth and reproduction, as well as the requirement to relieve physiological stress caused by the presence of petroleum hydrocarbons in the microbial bulk environment (Hazen et al., 2010; Kleindienst et al., 2015).



2.0 MATERIALS AND METHODS

2.1 Sample Collection and Preparation

Virgin soil was collected from an uncultivated land at the back of the Centre for Nuclear Energy Studies' (CNES) building, University of Port Harcourt, Nigeria between 10 cm and 15 cm deep using a shovel. Cow dung was collected from Nkpogu slaughter market, Port Harcourt using a hand trowel. These materials were stored in polyethene bags separately. Wire-Croton leaves were collected from University of Port Harcourt using a knife and stored in a polyethene bag. The crude oil sample was obtained from Nigeria Agip Oil Company (NAOC). The cow dung and croton leaves were weighed and sun dried for a period of one week. The croton was blended to reduce the particle size. Cow dung and croton leaves were sieved to remove debris. The physiochemical properties of the soil and crude oil analysed after pollution were Total Bacterial count (TBC), Total petroleum hydrocarbon (TPH), Total Organic Carbon (TOC).

2.2 Methods

2.2.1 Assessing the effect of nutrients on the bioremediation of crude oil polluted soil

The experiments were conducted using 1.0 kg of soil and the quantity of materials used are presented in Table 1. The samples were contaminated with 200 mL of crude oil to achieve 16 % pollution of the soil, except in control (1). The contaminated soil was left to stay for one week to settle allowing the microorganisms to acclimatize before adding the amendments. The samples were mixed and observed for six weeks (42 days), and analysis carried out on each sample from day zero and every seven days. The parameters analyzed were total petroleum hydrocarbon, total bacterial count, and total organic carbon.

Table 1. Quantities of materials used for the bioremediation experiments

Batch reactor	Volum of crude Oil (mL)	Cow dung Weight (g)	Croton leaves Weight (g)
Control (1)	-	-	-
Control (2)	200	-	-
3	200	200	-
4	200	30	30
5	200	115	30
6	200	200	30
7	200	30	115
8	200	115	115
9	200	200	115
10	200	30	200
11	200	115	200
12	200	200	200
13	200	-	200

2.2.2 Determining the physiochemical properties of the soil and nutrients used for the polluted soil

(1). pH of the Soil and nutrients

The air dried soil was sieved to obtain a particle size of 2 mm, before 20 g was weighed into a beaker. 50 mL of distilled water was added and stirred with a glass rod thoroughly for about 5 min and kept for 30 min. Within this period, the pH meter was turned on and allowed to warm up for 15 min. The glass electrode was standardized using the standard buffer of pH 7 and calibrated with the buffer pH of 4. The electrodes are dipped in the beakers containing the soil water suspension with constant stirring. As the pH is recorded, the pH meter was switched to pH reading. After 30s, the pH value was recorded to the nearest 0-1 unit. The pH meter was put in standby mode immediate after recording, the electrodes was removed from the soil suspension and cleaned with distilled after. The electrodes were rinsed after each determination and carefully blotted dry with filter paper before subsequent determination. The glass electrodes were standardized after every 10 determinations, and were dipped in distilled water when not in use. This method was repeated using the cow dung and wire croton as the sample.

(2). Determining the electrical conductivity (EC)

The electrical conductivity meter was used to measure EC of the samples. The same procedure stated for pH measurement was used in the determination of EC. However, the EC electrode was thoroughly washed after each reading to avoid cross-contamination and error.

(3). Determining the hydrocarbon utilizing bacterial (HUB)

Microbiological analysis enumeration of heterotrophic bacteria and fungi was carried out by pour plating technique. This was done by inoculating 0-1mL tenfold serialing diluted sample onto nutrients agar (bacterial), acidified streptomycin (1 mg/100 ml) (fungal) and mineral salt agar (MSA) (hydrocarbon degraders). The mineral salt media of Miu et al (1978) as modified by Okpokwasili and Amanchukwu (1988) was used. The inoculated nutrient agar plates was incubated at 37 °C for 24 hr while the potato dextrose Agar plates was incubated at room temperature, counted and expressed as colony forming units per gram (Cfu/mL).

(4). Determining the total organic carbon (TOC)

TOC was determined using a method described by Umeda et al. (2017). Thus, 1.0 g of soil



sample was weighed into 250 mL beaker, while 10 mL of potassium dichromate solution was pipette into the beaker and vortexed gently to completely wet the soil sample. Thereafter, 20 mL of concentrated H₂SO₄ was added using automatic pipette, and gently vortexed for 1 min to obtain a uniform suspension, as well as for effective and more complete oxidation before allowed to settle for about 30 min on asbestos sheet. On settling, 100 mL of distilled water was added followed by 3-4 drops of 0.5 mL diphenylamine indicator. The solution was titrated with 0.5 N ferrous sulphate solution until the colour changes from violet to blue and finally bright green. The process was repeated on distilled water (blank titration), but without soil to standardize the dichromate. The procedure was repeated using cow dung and wire croton. The TOC was calculated using Equation 1.

$$TOC = Blank - \frac{\text{volume of soil sampletitre} \times 0.195}{\text{weight of soil sample}} \times 100\% \quad (1)$$

5). Determining the total petroleum hydrocarbon (TPH)

The TPH was analyzed using Gas Chromatography-Flame Ionization Detector (GC-FID). The soil sample was discharged into a 1 L separation funnels. 50 mL of methylene chloride was added to the sample bottle seal and vortexed for 30 s to raise the inner surface. The solvent was transferred to the separation funnel and extracted by shaking the funnel for 2 min with periodic venting to release excess pressure. The organic layer was allowed to separate from the water phase for a minimum of 10 min. The methylene chloride was extracted in a 250 mL flask. An additional 60 mL of methylene chloride was added to the sample bottle. The separation funnel and the column were rinsed with 25 mL of the solvent into the extract. The extraction procedure was repeated thrice and the output combined with the other extract in an Erlenmeyer flask. The combined extracts was poured through a drying column containing packed cotton wool, anhydrous sodium sulphate and silica. The extract was collected in the vial and concentrated by boiling it down with nitrogen gas to 1.0 mL. The remaining extract was mixed with 1.0 mL of the solvent and 1-0 mL was injected into the flame ionization detector gas chromatograph for the TPH analysis. The residual TPH at any time was calculated using Equation 2.

$$TPH_R (\%) = \frac{TPH_i - TPH_f}{TPH_i} \times 100\% \quad (2)$$

Where: TPH_R is the residual TPH percentage with time, TPH_i is the initial concentration of TPH and TPH_f is the concentration of TPH measured with time.

(6). Determining the Phosphorous Content

Phosphorus content was determined according to APHA method 4500 - PO₄³⁻ (APHA, 1998). 1.0 g of the representative soil sample was weighed into clean extraction flask and 10 mL of Bray P-1 extracting solution (0.025N HCl and 0.03N NH₄F) was added and vigorously agitated for 1 min before being filtered. 5 ml of the filtrate was pipetted into 25 mL volumetric flask and diluted to about 20 mL of distilled water, and then, by 4 mL of ascorbic acid solution (1.056 g ascorbic acid in 200 mL molybdate-tartarate solution), which was diluted. The diluted solution was allowed to settle for at least 30 min. The recording of data was done after a clear colour had been developed.

3.0 RESULTS AND DISCUSSION

3.1 Physiochemical properties of soil and treatments used for the polluted soil

The physiochemical properties of the soil, cow dung and wire croton were done using the experimental procedure described in section 2.2 of the Materials and Methods. The result obtained are presented in Table 2. The table shows that the pH of the soil, cow dung and croton were 5.11, 7.4 and 6.3. This shows that the soil is moderately acidic, cow dung is slightly alkaline and wire croton is slightly acid. The moderate acidic nature of the soil is probably due to the geographical location where the soil was collected. The soil was obtained in Obio-Akpor Local Government Area of Rivers State which is known to have a pH of 6.20 - 7.60 Ngah et al. (2017). As shown in Table 2, the electrical conductivity (EC) of the soil is 89.34µs/cm. This means that the soil can hold on to cations and so will not lose nutrients easily. The total Nitrogen content of the soil was 0.048 %, while that of the cow dung and croton were 21.2 % and 16.1 %. The result agrees with that of the total nitrogen content of soil obtained by Oludele et al (2021) and Ofoegbu et al (2015). The total hydrocarbon utilizing bacterial for the virgin soil was 1.03x10². The total organic carbon for the soil was 6.29 % while that of the cow dung and croton were 14.6 and 2.1 respectively. The result corroborates that obtained by Ofoegbu et al (2015) and Olawale et al. (2020). The total petroleum hydrocarbon obtained for the soil was 310.3 as the soil was not polluted with crude oil.



Table 2. Physiochemical Properties of the parameters used in the bioremediation of the crude oil polluted soil

Parameters	Soil	Cow Dung	Wire croton
pH	5.11	7.4	6.3
EC (µs/cm)	89.34		
HUB (Cfu/mL)	1.03x10 ²		
Total Organic Carbon (%)	6.29	14.6	2.1
TPH	310.3		
Phosphorus (mg/kg)	1.38		

3.2Determination of the total hydrocarbon utilizing bacterial (HUB)

The HUB content of the soil was assessed in order to determine the quantity of bacterial available for the degradation of the crude oil, as the higher the bacterial content, the higher the rate of degradation. The HUB content was determined using the pour plating technique. The experiment was carried out in six weeks using two different nutrients (cow dung and wire croton) and combined in different proportions. The results obtained are presented in Figure 1. The figure shows that in day zero, the soil with the mixture of 200 g cow dung and

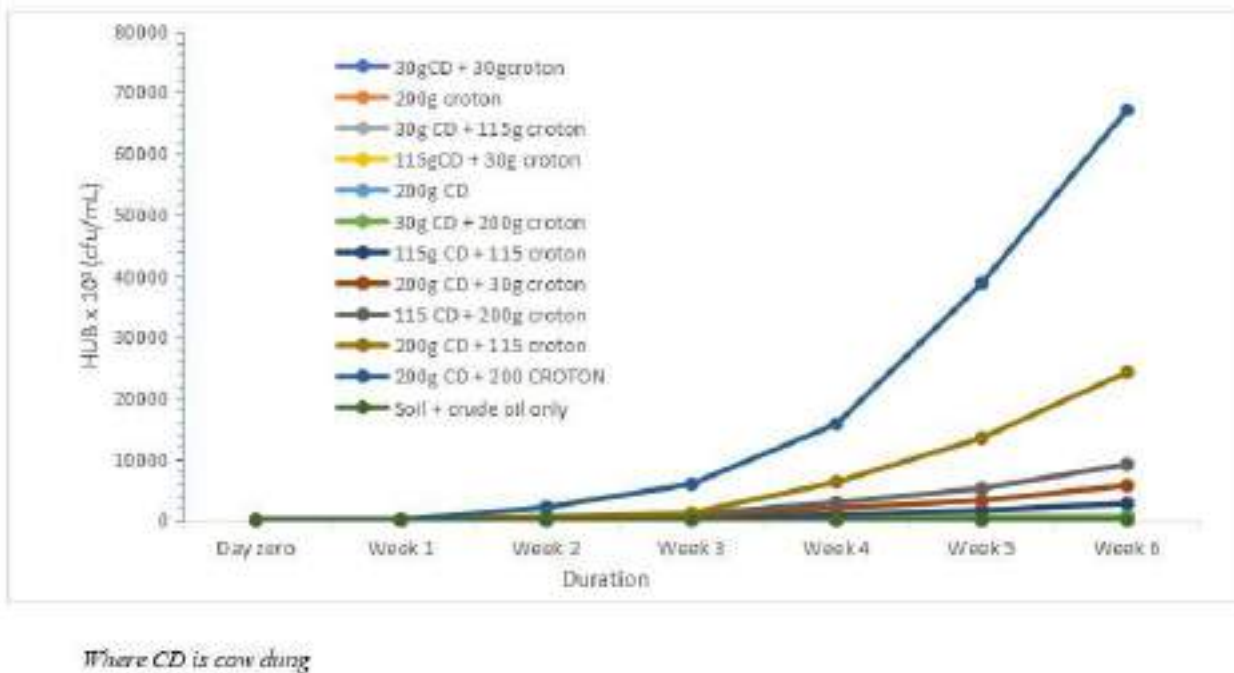


Figure 1. effect of nutrients on the total hydrocarbon bacterial for a period of six weeks using varied proportions of cow dung (CD) and wire croton

The result show that the crude oil polluted soil containing no nutrient remained relatively unchanged throughout the duration of study (six weeks) as indicated by the zero HUB obtained. This is because, a long time is required for soil to remediate itself naturally and six weeks may not have been sufficient to achieve that (Khalilova, 2015). Between day zero and week 1, based on the zero HUB obtained, there was no appreciable change in the crude oil polluted soil as the microorganisms contained in the soil was beginning to acclimatized in their new environment and there was no addition of amendments to facilitate their growth. From week 1, the microorganisms were beginning to degrade the contaminated soil as shown by the increasing HUB values. However, the HUB increased progressively throughout the six weeks irrespective of the type of nutrient and their combination with the highest HUB obtained at the end of the six weeks and the least achieved at week 1. This is because bacterial increases with availability of nutrients and they multiply over time. Also, from Figure 1, the soil containing 200 g of cow dung plus 200 g of wire croton gave the highest HUB of 67100 x 10³ cfu/mL and the soil with 30g of cow dung and 30 g of wire croton gave the least HUB of 9.57 x 10³ cfu/mL. The result shows that the quantity of the nutrient has a direct relationship with HUB. This was evident with the soil containing 200 g of cow dung and 200 g of wire croton with more nutrient compared to the soil with 30 g of cow dung and 30 g of wire croton resulting to the highest HUB. This was expected as Oludele et al. (2019), and Thieman and Palladino (2009) obtained an increase in the HUB upon addition of nutrients as this will increase the amount of the microorganism leading to increase in their growth and then, rise in the biodegradation rate. This may be due to increased population of the microorganism leading to high HUB. Comparatively, the crude oil polluted soil without nutrient had the least amount of Hydrocarbon Utilizing Bacteria of 1.03 x 10³ cfu/ mL. All the soils with nutrients had higher amount of HUB present when compared with the crude oil polluted soil without



nutrient. At the end of the six weeks, HUB increase of over 650 thousand was achieved using 200 g of cow dung and 200g of wire croton.

3.3 Determination of the degradation of the Total Petroleum Hydrocarbon (TPH) of the polluted soil

This was done to determine the amount of TPH present in the soil. High amount of TPH in the soil can hinder the growth of crops in the soil. The TPH was analysed using Gas Chromatography-Flame Ionization Detector (GC-FID) and the experiment was carried out in six weeks with analysis done every seven days (weekly). The result obtained is as shown in Figure 2. As shown in Figure 2, the rate of degradation of the crude oil in the soil with

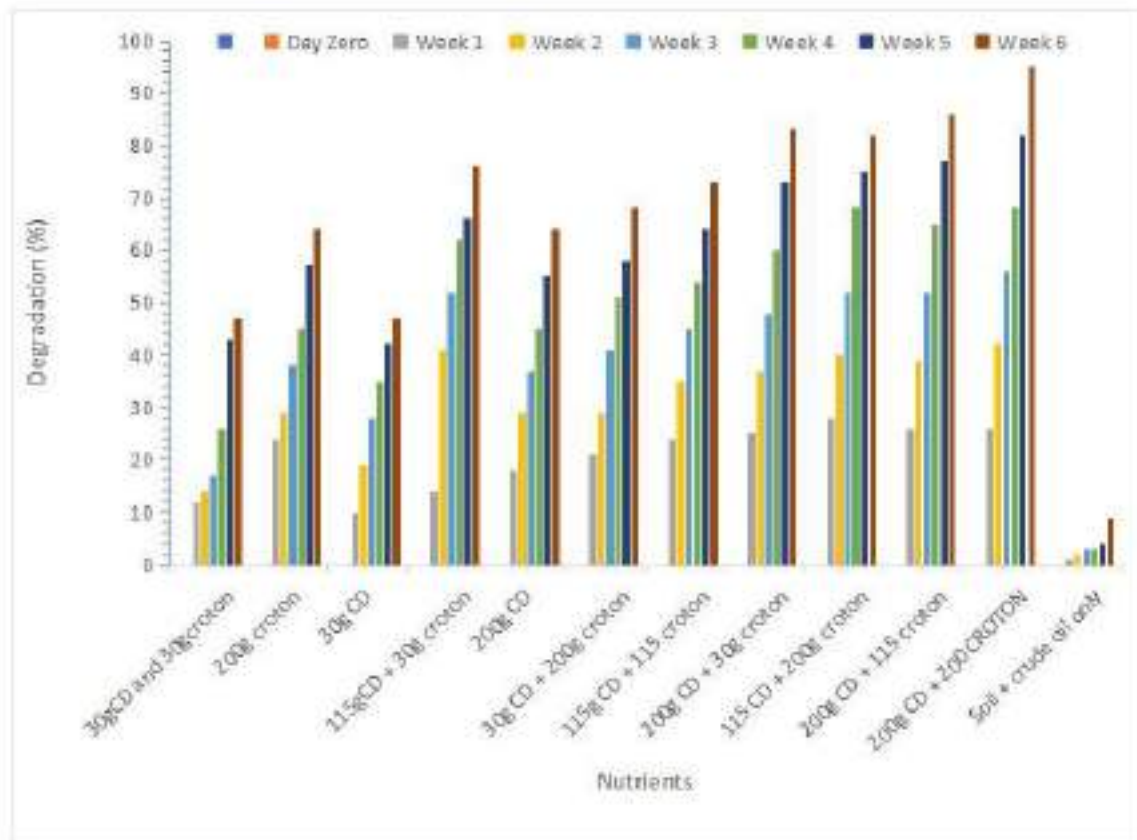


Figure 2. Illustration of TPH degradation in the different soil samples using various proportions of the nutrients within six weeks

was slow with a maximum of 9 % degradation on the week 6, probably as there was no addition of nutrients and the microorganisms were beginning to acclimatize in their new environment. The soils amended with single nutrients having equal quantity (200 g wire croton and 200 g cow dung) showed almost the same rate of degradation compared to the one with lesser quantity like 30 g cow dung. This shows that the degradation of the hydrocarbons component of the crude oil may depend more on the quantity of the nutrient compared to the type. The soils with mixed nutrients showed greater degradation than those with single nutrients. This may be due to the similarities in the composition shared by both cow dung and wire croton (Fulhage, 2000; Izionworu et al., 2020). Among the soils with mixed nutrients, the one with nutrient composition of 30 g plus 30 g croton gave the least degradation of the hydrocarbons of 14-47% between weeks one and six. The highest hydrocarbon degradation of 95 % was achieved with the soil composition having 200 g of cow dung plus 200 g wire croton across the six weeks, probably due to higher amount of nutrients composition which increases the hydrocarbon utilizing bacterial (HUB).

3.5 Determination of the Total Organic Carbon of the soil

The analysis of the Total Organic Carbon content of the soil was done to ascertain the organic content of the soil. The analysis was done for six weeks at a weekly interval using the method prescribed in Sub-section 2.2.2. The result obtained are presented in Figure 3 and it shows that the TOC for the soil increased from 6.29 % to 7.58 % upon the addition of the crude oil (see Table 2). This was expected as crude oil contains hydrocarbon which is a source of carbon and is known to increase the total carbon content of the soil (Schuster et al., 2002).

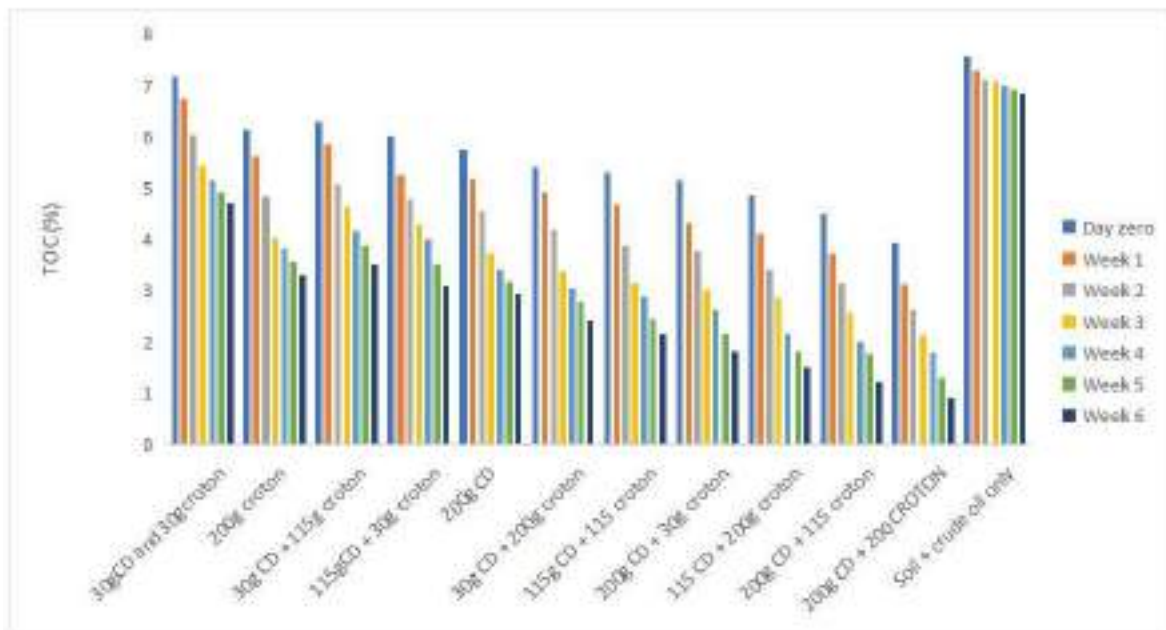


Figure 3. Effect of nutrients on the total organic carbon content of the soil during bioremediation of crude oil polluted soil.

Naturally, throughout the period of study, the carbon content of the soil was degraded by 9.8 % without the use of nutrients. Upon the addition of nutrients, the TOC decreased considerably across the six weeks of study. The single nutrients wire croton and cow dung performed well with the former degrading the carbon content by 46.3 % and the later by 48.6 % at the end of the sixth week using 200 g of each nutrient. This performance was further increased by mixing the nutrients using different ratios with 30 g cow dung plus 30 g croton giving 34.5 % carbon degradation which is the least obtained using nutrients at the end of week six. The highest hydrocarbon degradation was recorded between TOC of 3.92 % on day zero and 0.93 % on week six which is about 76.3 % using 200 g cow dung plus 200 g croton. As presented earlier, this high great performance might be due to high quantity of the nutrients used. The reduction in TOC as obtained in this work using nutrients is corroborated by Ojewumi et al. (2018) in which the researchers were able to achieve TOC decrease of less than 1 % at the end of 45 days using treated crude control sample (TCC).

4.0 CONCLUSION

The current work has demonstrated that nutrients such as cow dung and wire croton have the capability to bioremediate crude oil polluted soil as evidenced by the result of the total hydrocarbon utilizing bacteria, total petroleum hydrocarbon and the total carbon content. But, this capability can be enhanced by mixing the nutrients together as shown by the over 650 thousand HUB increment, 95 % hydrocarbon degradation, and 76.3 % total organic carbon obtained when 200 g of cow dung and 200 g of wire croton were combined. With the appreciable result obtained, the length of the bioremediation can be increased beyond six weeks (42 days) using higher combination of the nutrients in order to optimize and to assess the large scale application of the method developed.

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MODELLING OF THE TOTAL PETROLEUM HYDROCARBON (TPH) DEGRADATION DURING THE BIOREMEDIATION OF CRUDE OIL POLLUTED SOIL USING COW DUNG AND WIRE CROTONS

Ifeanyichukwu Edeh^{1*}, Milicent Mauren Thomas²

^{1,2}Department of Chemical Engineering, University of Port Harcourt, Nigeria

* Corresponding Author

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ABSTRACT

The contamination of soil due to activities involved in crude oil exploration and production, and oil spillage emanating from pipeline vandalization, sabotage, theft, corrosion of pipeline and the enterprises of artisanal refineries pose health and ecological problems. This is especially as crude oil contains chemical compounds which are grouped into the Total Petroleum Hydrocarbons (TPH), and known to be toxic, mutagenic, and carcinogenic. Bioremediation is currently being explored as a cost effective and environmentally friendly methods of remediating the soil from this contaminant. Thus, the current work is aimed at developing a mathematical model for the bioremediation process. This was carried out while assuming that the process of degradation is a first order reaction, and the principle of the law of conservation of mass was applied. A linear model ($\ln C_{TPH(t)} = \ln C_{TPH(o)} - k_d t$) was developed relating the instantaneous concentration of TPH, initial concentration of TPH and time duration of the bioremediation. The model fitted well to the experimental data as shown by the result of the statistical analysis where the Analysis of Variance (ANOVA) showed a p-value of 0.004 suggesting that the model is statistically significant. The p-values of the model variables such as time duration of the bioremediation was 0.004, this suggested that the variable is significant. The model can be used as a supporting tool in the management of the biodegradation of TPH to predict the degradation concentration of TPH during the bioremediation process at ambient condition of temperature and pressure using cow dung, wire croton and their combination as a carbon source.

KEYWORDS: Bioremediation; cow dung; wire croton; degradation; Mathematical modelling

1.0 INTRODUCTION

In Nigeria, the Niger Delta region in the South has been largely affected by oil wastes generated during exploration and production, and spillage since crude oil was discovered in commercial quantity in 1958 at Oloibiri Bayelsa State, Nigeria. Crude oil exploration and production whether onshore or offshore generate high volume of oil wastes, and spillages from pipelines occurring as a result of sabotage, theft, corrosion of pipeline and the activities of artisanal refineries (ISS, 2022). Among other components, crude oil contains chemical compounds which are broadly referred to as Total Petroleum Hydrocarbon (TPH) (Gustafson, 2007). Such chemicals include hexane, naphthalene, fluorine, other products of petroleum origin, and gasoline constituents (Alinnor and Nwachukwu, 2013). According to ATSDR (1999), due to the complexity in determining the constituent chemicals in crude oil, the total petroleum hydrocarbon is used instead. The impact of the petroleum hydrocarbons in the soil is dependent on its solubility in water, organic carbon affinity in soil, and the properties of the soil including particle size, porosity, organic matter composition, permeability and surface area (Koshlaf and Ball, 2017; Ali et al., 2020). Excess quantity of TPH in the soil reduces the respiration rate of the soil, growth of plants and the activity of the microorganisms. Most petroleum hydrocarbons encountered in the environment are ultimately degraded or metabolized by indigenous bacteria because of their energetic and carbon needs for growth and reproduction, as well as the requirement to relieve physiological stress caused by the presence of petroleum hydrocarbons in the microbial bulk environment (Hazen et al., 2010; Kleindienst et al., 2015). The contamination of soils by petroleum hydrocarbon causes health and ecological problems, especially as these hydrocarbons are toxic, mutagenic, carcinogenic, and have a low flowrate in the soil (Koshlaf and Ball, 2017; Hentati et al., 2013). Crude oil can be harmful to organisms including human and its degradation rate is extremely slow under normal circumstance. The crude oil spill penetrates to a depth of about 10-20 cm which has a major role to play in agricultural activities, resulting in the loss of soil fertility and, initiates environmental degradation (Ofoegbu et al., 2015). This singular process renders the soil impotent, i.e., the soil cannot produce crops as well as it could before the spill. Once the soil has been degraded, it is usually difficult to restore its original state. The majority of the available technologies used for remediating soil are quite expensive and not environmentally friendly compared to bioremediation. Bioremediation is a method that utilizes organisms in the soil such as decayed plants, bacteria and fungi for cleaning up the soil with less environmental impact



(Pilon-Smits, 2005). The method depends on bacteria, plants and fungi to degrade, breakdown, transform or remove contaminants or impairments of quality from the contaminated soil. These organisms require some amounts of nutrients such as nitrogen and phosphorus to carry out their biodegradation function (Margesin and Schinner, 1997; Choi et al., 2002). These nutrients are contained in animal dung and croton leave and the microorganisms utilize them as a carbon source. The microorganisms produced eat up the excess Petroleum Hydrocarbon content present in the soil. Bioremediation is a promising treatment method for crude oil contaminated sites and has a tendency to achieve complete mineralization of organic contaminants into carbon dioxide, water, and inorganic compounds (Ehirim et al 2020).

There is a paucity of knowledge on the hydrocarbon biodegradation in the soil, and prediction of the bioremediation outcome is often complex (Martin et al., 2022). The current work is focused on developing a simple mathematical model to predict the biodegradation of Total Petroleum Hydrocarbon in the crude oil polluted soil using cow dung, wire croton and their combinations as the nutrients for the bioremediation process.

2.0 MATERIALS AND METHODS

2.1 Materials

The soil, cow dung and wire croton were obtained from Obio-Akpor Local Government Area, Rivers State, Nigeria, and the crude oil was collected from Nigeria Agip Oil Company. After washing the wire croton, it was sun dried with the cow dung for one week before grinding into smaller particles, and sieving to obtain homogeneity and remove the unwanted materials.

2.2 Methods

2.2.1 Evaluating the impact of cow dung and wire croton on the bioremediation of crude oil contaminated soil.

This was carried out using the amount of materials shown in Table 1 and 1 kg of soil in each reactor. The experiment was conducted for 42 days (six weeks) and samples taken for analysis every week during this period. The total petroleum hydrocarbon (TPH) was analyzed using gas chromatography equipped with flame ionization detector. Samples were taken from each of the reactor and TPH was extracted using 50 mL of methylene chloride in a 1 L separating funnel. After vortexing for about 20 min and allowing for complete separation, the organic layer was separated from the aqueous layer. Further extractions were carried out from the aqueous layer using 25 mL of methylene chloride. The extract was dried by passing it through a drying column embedded with cotton wool, anhydrous sodium sulphate and silica. The extract was further dried by passing it through streams of nitrogen to a volume of 1.0 mL, and injected into the GC-FID for the TPH analysis.

The TPH at any time was obtained using Equation 1.

$$TPH_R (\%) = \frac{TPH_i - TPH_f}{TPH_i} \times 100\% \tag{1}$$

Table 1. Quantities of materials used for the bioremediation experiments

Batch reactor	Volum of crude Oil (mL)	Cow dung Weight (g)	Croton leaves Weight (g)
Control (1)	-	-	-
Control (2)	200	-	-
3	200	200	-
4	200	30	30
5	200	115	30
6	200	200	30
7	200	30	115
8	200	115	115
9	200	200	115
10	200	30	200
11	200	115	200
12	200	200	200
13	200	-	200

2.2.2 Model Development

This was necessary to predict the quantity of TPH at any interval of time during the bioremediation of crude oil polluted soil using cow dung and wire croton. The following assumptions were made:

- (i) The process is considered a batch process i.e., there is no flow of materials in and out of the reactor during the process.
- (ii) The only components of the reactor are soil sample, crude oil and the nutrients added. Thus, the microorganisms produced from the cow dung and croton consume the crude oil in the contaminated soil.
- (iii) The crude oil and soil samples were well mixed to completely simulate homogeneous mixture.
- (iv) Cow dung and wire croton are assumed to have the same effect on TPH and are regarded as one nutrient



- (v) Temperature is constant throughout the period of the experiment
- (vi) The effect of pH was neglected throughout the reaction
- (vii) The volume of the reactor was constant throughout the period of the experiment
- (viii) The degradation reaction is first order

Materials balance is used to develop the model as shown in Equation 2

$$\left\{ \begin{array}{l} \text{Inflow of} \\ \text{mass into} \\ \text{system} \end{array} \right\} = \left\{ \begin{array}{l} \text{Outflow of} \\ \text{mass from} \\ \text{system} \end{array} \right\} + \left\{ \begin{array}{l} \text{Rate of} \\ \text{degradation} \\ \text{due to} \\ \text{reaction} \end{array} \right\} + \left\{ \begin{array}{l} \text{Rate of} \\ \text{accumulation} \\ \text{of mass} \\ \text{within system} \end{array} \right\} \quad (2)$$

Where;

$$\text{Inflow of mass into system} = Q_o C_{TPH(o)} \quad (3)$$

$$\text{Outflow of mass from system} = QC_{TPH} \quad (4)$$

$$\text{Rate of TPH degradation} = -r_{TPH} V \quad (5)$$

$$\text{Rate of accumulation} = \frac{d(C_{TPH}V)}{dt} \quad (6)$$

And;

Q_o = Inlet volumetric flow rate (kg/day); Q = Outlet volumetric flow rate (kg/day); $C_{TPH(o)}$ = Initial concentration of pollutant (TPH) (mg/kg)

C_{TPH} = Instantaneous concentration of pollutant (TPH) (mg/kg); V = Volume of reactor (m^3); r_{TPH} = Rate of TPH degradation (mg/kg. day); k_d = TPH degradation rate constant (day^{-1}); t = Time of TPH degradation (day)

Now, substituting Equations (3) through (6) into Equation (2) gives

$$Q_o C_{TPH(o)} = QC_{TPH} - r_{TPH} V + \frac{d(C_{TPH}V)}{dt} \quad (7)$$

$$\text{For a batch process; } Q_o C_{TPH(o)} = QC_{TPH} = 0 \quad (8)$$

Since, the volume is constant;

$$\frac{d(C_{TPH}V)}{dt} = V \frac{dC_{TPH}}{dt} \quad (9)$$

Accumulation term becomes

Therefore, equation (7) reduces to

$$-r_{TPH} V = -V \frac{dC_{TPH}}{dt}$$

$$\text{Or } -r_{TPH} = -\frac{dC_{TPH}}{dt} \quad (10)$$

Assuming first order reaction, the rate of degradation;

$$-r_{TPH} = k_d C_{TPH}$$

$$-r_{TPH} = -\frac{dC_{TPH}}{dt} = k_d C_{TPH} \quad (11)$$

And Equation (10) becomes

By integrating Equation (11) using the separation of variable method, we obtain;

$$\int_{C_{TPH(o)}}^{C_{TPH(t)}} \frac{dC_{TPH}}{C_{TPH}} = -k_d \int_0^t dt \quad (12)$$

$$\ln \left(\frac{C_{TPH(t)}}{C_{TPH(o)}} \right) = -k_d t \quad (13)$$

$$\ln C_{TPH(t)} - \ln C_{TPH(o)} = -k_d t$$



$$\ln C_{TPH(t)} = \ln C_{TPH(0)} - k_d t \tag{14}$$

Equation (14) is likened to the equation of a straight line where $-k_d$ is the slope and $\ln C_{TPH(0)}$ is the intercept.

2.2.2 Model validation

The model developed was validated using the result of the TPH degradation obtained during the bioremediation of crude oil polluted soil using cow dung and wire croton. The model was fitted to the data presented in Table 2 to develop models that would be used to determine the concentration of TPH at any given bioremediation duration. Statistical analysis involving the residual plot and ANOVA were carried out to determine the validity of the model developed using the nutrients with 30 g of cow dung and 30 g of wire croton as an example.

3.0 RESULTS AND DISCUSSIONS

3.1 Evaluating the impact of cow dung and wire croton on the bioremediation of crude oil contaminated soil.

This was carried out to obtain the required data for the validation of the model developed for the prediction of the quantity of TPH degraded at any point in time during the bioremediation of crude oil polluted soil using cow dung and wire croton. The method used was described in Section 2 and the results obtained are presented in Table 2

Table 2. Effect of nutrients on the degradation of the total petroleum hydrocarbon during a six weeks (42 days) of bioremediation

Sample	Day zero (mg/kg)	Week 1 (mg/kg)	Week 2 (mg/kg)	Week 3 (mg/kg)	Week 4 (mg/kg)	Week 5 (mg/kg)	Week 6 (mg/kg)
30gCD and 30g croton	55422.3	49026.0	47510.6	46244.0	40941.7	31754.1	29454.4
200g croton	44345.0	33715.8	31568.6	27499.5	24542.7	19127.4	16145.6
30g CD + 115g croton	47560.8	42705.8	38563.5	34276.5	30984.7	27612.3	25370.9
115gCD + 30g croton	45156.6	39028.8	26541.2	21898.1	17297.0	15452.5	10993.8
200g CD	43745.8	35775.9	30871.5	27350.9	23872.1	19486.0	15900.0
30g CD + 200g croton	41372.9	32555.3	29325.6	24552.7	20154.4	17254.5	13076.0
115g CD + 115 croton	39207.3	29959.8	25514.4	21723.2	17868.0	13997.9	13997.9
200g CD + 30g croton	36993.3	27717.4	23413.3	19210.3	14667.9	10093.1	6319.5
115 CD + 200g croton	34730.1	25056.8	20890.2	16781.4	11134.6	8790.9	6319.5
200g CD + 115 croton	30808.6	22778.2	18790.5	14888.3	10878.7	7098.4	7098.4
200g CD + 200 croton	27593.1	20490.2	16105.9	12145.5	8891.0	4900.9	1506.3
Soil + crude oil only	64947.8	64135.6	63834.0	63145.7	62845.9	62054.8	59194.1

Where CD is cow dung

3.2 Model Development

Assuming first order degradation reaction and using material balance, a linear model was developed relating the concentration of TPH at time 0 and time t, and time (t) of TPH degradation as shown in Equation 14. This model is in agreement with that obtained by Ere and Ayodeji (2018) using mushroom as the nutrient in a ten week bioremediation process.

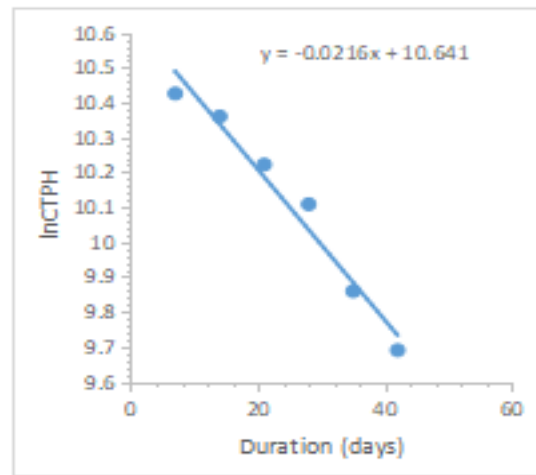
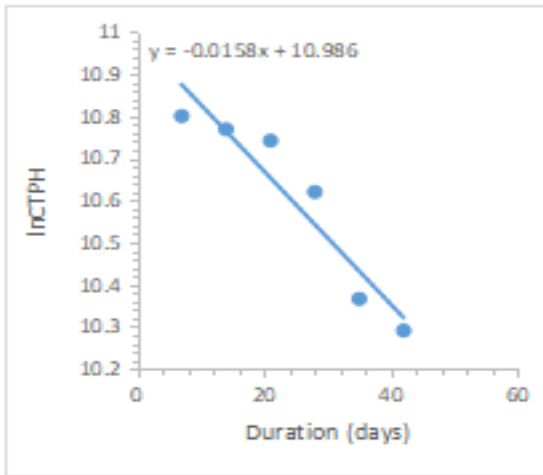
$$\ln C_{TPH(t)} = \ln C_{TPH(0)} - k_d t \tag{14}$$

The experimental data obtained by using cow dung, wire croton and their various combinations are presented in Table 2. The model developed was fitted into the experimental data and the results presented in Figure 1 were obtained. From the figure, $y = \ln C_{TPH(t)}$ and $x = \text{duration (t)}$. The figure shows that the instantaneous concentration of TPH (concentration at any time during the bioremediation) can be determined if the bioremediation duration (time) is known. For instance, when the model (Equation 14) was fitted to the experimental data obtained from the bioremediation of the crude oil polluted soil using 30 g cow dung plus 30 g wire croton as shown in Figure 1(a), the following model was obtained.

$$\ln(C_{TPH(t)}) = -0.0158x + 10.986 \tag{15}$$

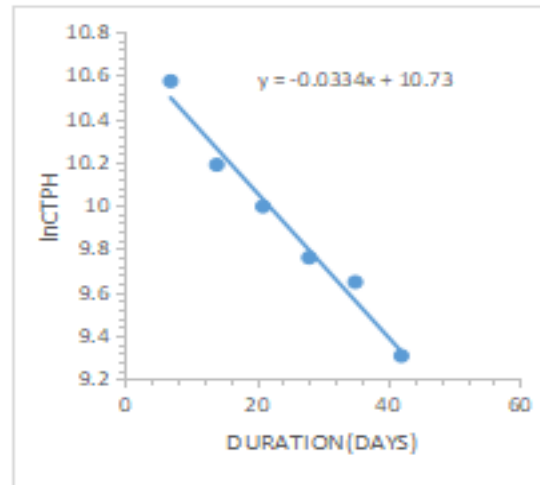
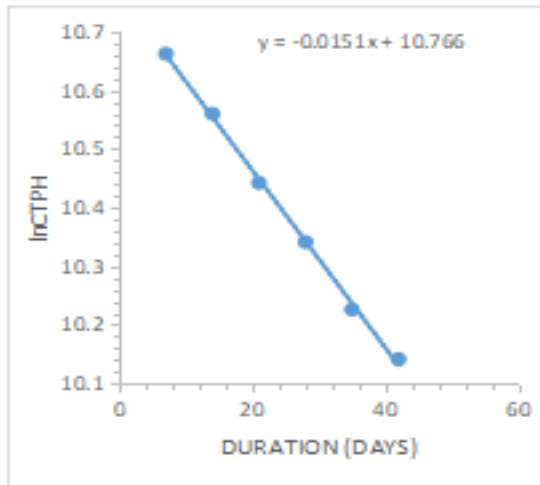


Or $\ln(C_{TPH(t)}) = -0.0158t + 10.986$



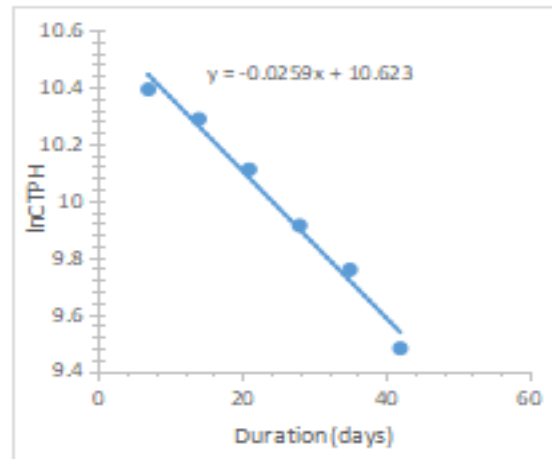
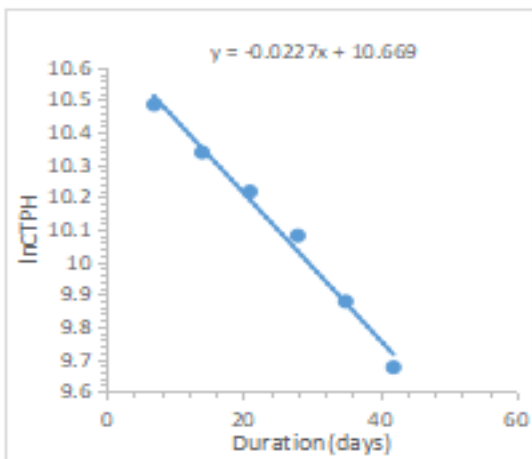
b. 30 g cow dung plus 30 g

a. 200 g croton only croton



c. 30g cow dung plus 115g croton

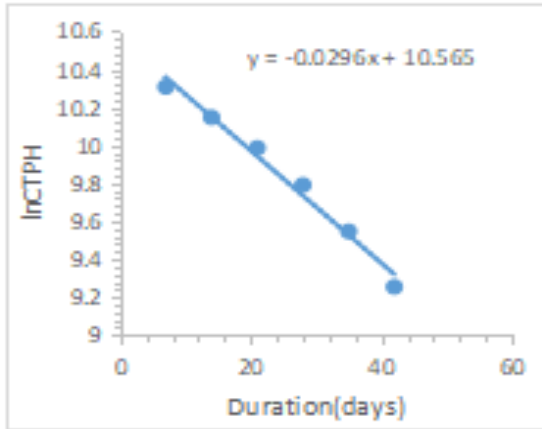
d. 115g cow dung plus 30g croton



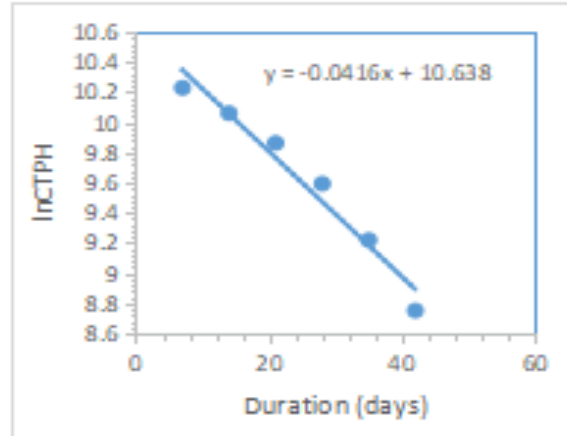
e. 200 g cow dung only

f. 30 g cow dung plus 200 g croton

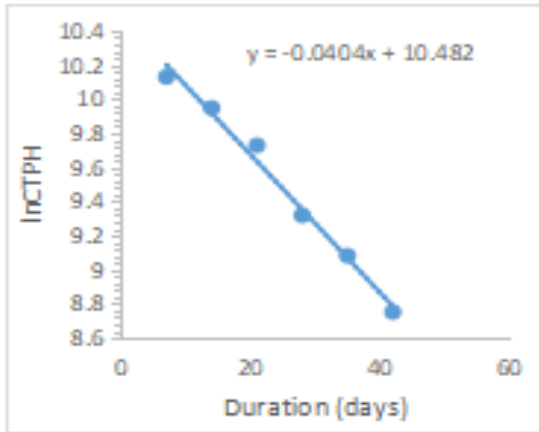
Figure 1. Determining the initial concentration of TPH and degradation rate constant



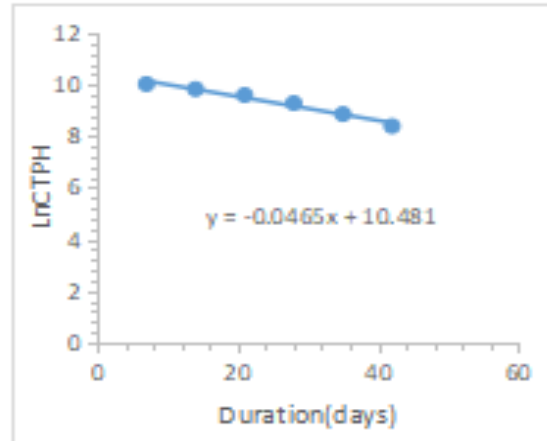
g. 115g cow dung plus 115g croton



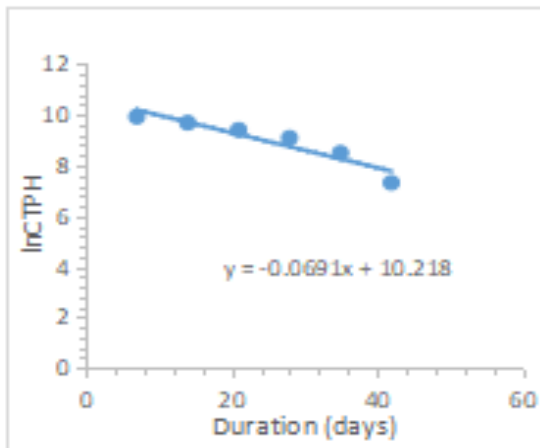
h. 200g cow dung plus 30g croton



i. 115 g cow dung plus 200 g croton



j. 200 g cow dung plus 115 g croton



k. 200 g cow dung plus 200 g croton

Figure 1. Determining the initial concentration of TPH and degradation rate constant (contd).



The model developed for the prediction of the concentration of TPH at any given time during the bioremediation of crude oil polluted soil using 30 g of cow dung plus 30 g of wire croton (Equation 15) was used to predict the $C_{TPH(t)}$ at different duration (7, 14, 21, 28, 35 and days, respectively) and the results obtained were compared with the actual experimental data. This was used to determine the residual of the TPH concentration which was plotted against the TPH concentration at day zero giving rise to the result presented in Figure 2. The figure shows that the points are scattered fairly randomly around the residual equal zero line indicating that linear model is suitable for describing the experimental data.

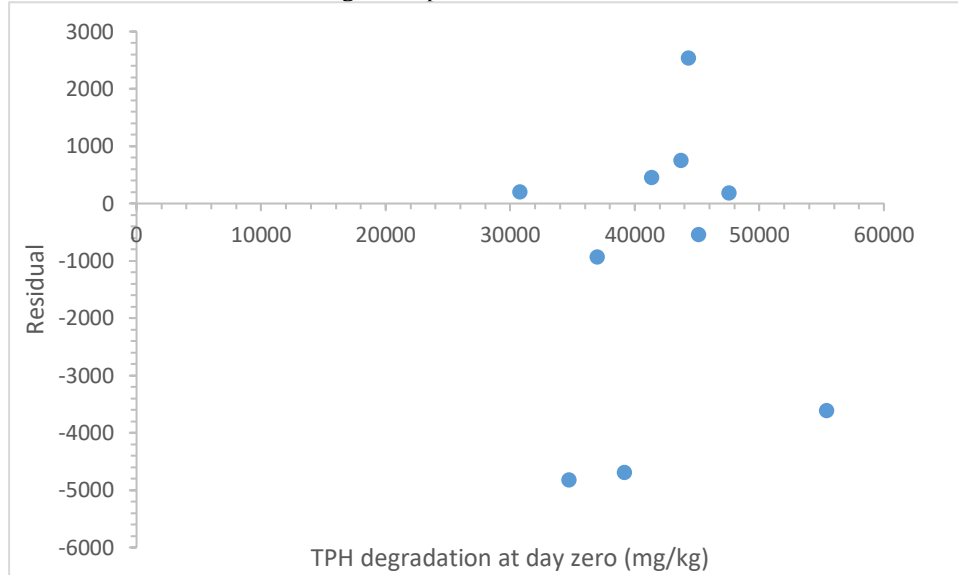


Figure 2. A residual plot

The R square value in Table 3 shows that 89.7 % of the variation in the instantaneous concentration of TPH ($C_{TPH(t)}$) can be explained by the initial concentration of TPH and duration of the bioremediation. The standard error value of 0.079 is appreciable (see Table 3). The result of the Analysis of Variance (ANOVA) shows that the significance F or p-value is 0.004 and this means that the model fitted well to the experimental data as this value is less than 0.05 which is within the required range of p-value (≤ 0.05) needed for a model to be statistically significant. The p-values of the intercept ($\ln C_{TPH(0)}$) and x (duration (t)) are 1.18E-08 and 0.004, respectively are less than a p-value of 0.05 which means that these variables are statistically significant.

Table 3. Linear regression statistics of the model developed using a nutrient with 30 g Cow dung and 30 g Croton composition as an example

Regression Statistics								
Multiple R	0.9470773							
R Square	0.8969553							
Adjusted R Square	0.8711942							
Standard Error	0.0785538							
Observations	6							
ANOVA		Df	SS	MS	F	Significance F		
Regression		1	0.214852	0.214852	34.81812	0.004127		
Residual		4	0.024683	0.006171				
Total		5	0.239535					
	Coefficient	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	10.985607	0.07313	150.221	1.18E-08	10.78257	11.18865	10.78257	11.18865
X Variable 1	-0.015829	0.002683	-5.90069	0.004127	-0.02328	-0.00838	-0.02328	-0.00838



4.0 CONCLUSION

It has been demonstrated that Total Petroleum Hydrocarbon in crude oil contaminated soil can be degraded through bioremediation using cow dung, wire croton and their combination as nutrients within a duration of 42 days. The model developed is significant and predicted the bioremediation of TPH appreciably well. Based on this, it can be used as a complementary tool, to support the management of crude oil polluted sites.

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THE STRUCTURE OF COMPOUND WORDS IN PHRASEOLOGICAL UNITS

Amirkulova Nargiza Turakulovna

Senior Lecturer, University of Economics and Pedagogy, Karshi city, Republic of Uzbekistan

ABSTRACT. BACKGROUND

The article is devoted to the analysis of the compound words and their specific features. Problems of compounds are learnt by some scientists, however, the distinctive features of compounds from the word combinations are not stated as stable. A word that has a special place in a dictionary is the easiest way to simply comprehend the concepts of the subject and try to isolate the main characters from the object. Another feature associated with compound words is its idiomatic feature. The **object** of the article is the phraseological units contain their general meaning concrete, correct meanings of the components do not directly indicate.

The **aim** of the article is to define the phraseologisms having the same form and meaning as words, because just as words are composed of sounds, phrasemes are also composed of words.

Methods: descriptive method and method of analyses were used to prove the informativeness of the topic relied on the studies of well-known pedagogues.

Results (Findings): The analysis of the examples presented in the article shows that the phraseologisms are in the form of a compound or predicative compound consisting of a unit of words, but in the process of speech they do not occur as a compound or predicative compound, but is chosen as such for speech, existing as a ready-made lexical unit in the language. Because they are not a speech unit, but a language unit.

Conclusion. Summing up the results, it can be concluded that the phraseologisms, which make up the lexical wealth of our language, have always been the focus of linguists. Phraseologisms as a complex linguistic phenomenon consist of two or more components. In this sense, their practical and scientific study requires a unique approach, a unique method and method.

KEYWORDS: phraseologism, word, sound, phraseme, figurative meaning, syntactic part, sentence.

INTRODUCTION

Phraseologisms have the same form and meaning as words, because just as words are composed of sounds, phrasemes are also composed of words like: *sad - compassionate, head up to the sky - happy*. But the words in the phrases do not have their meaning independence. The general meaning comes from the figurative meaning of the set of words in the phrase. That is why several words in the compound act as one syntactic part in the sentence as a whole.

LITERATURE REVIEW

The phraseological meaning is figurative and catchy, so it has a simple lexical meaning which differs from the words: *secret - in the sleeve, happy - as from the ear to the mouth*. Such meanings vary:

- 1) through one of the words in the phrase like: *a bitter sentence, the salt of a sentence*;
- 2) based on the general meaning of the components: *mouth in ear, tongue caught*;
- 3) regardless of the meanings of the components in it like: *it hits the star without the ladder, it doesn't hurt the heart*, etc.

Many phraseological units contain their general meaning concrete, correct meanings of the components do not directly indicate. It's different occurs due to:

- 1) when the phraseological unit is transferred from the area in which it was created to another area: the phrase "*to bite the wax*" was originally a phrase specific to professions, and later its meaning expanded and began to be used in the sense of "*not speaking*";
- 2) exaggeration on the basis of phraseological units, when it is figurative: *himself bites the forty pot's ear* (from a live colloquialism);
- 3) when phraseological units express different mental states, abstract concepts like: *falling snow from the forehead, climbing the sky*.



Fixed phrases with figurative meaning, the meaning of which is not derived from the meanings of the words contained in it, and there is no potential connection between them, are called phraseological conjunctions: *to wear one's coat backwards, to wash one's hands as in to hit one's arm, to stroke one's lungs.*

Such phrases are much more meaningful than phraseological units will have progressed. In phraseology, the meaning of the phrase and the meaning of the words in the phrase may be far from each other, or even opposite to it. Compound words are words formed by joining two or more root morphemes and forming a single structural-semantic unit. Words that form the basis of compound words partially or completely lose their original meaning: together they give a completely new lexical meaning. The meaning relationship between the parts of compound words is different. They are similes, comparisons, characteristic, intended for something, belonging to a place, to a sign. It means ratio, relation to quantity and other meanings.

MATERIALS AND METHODS

The structure of compound words reminds the existing syntactic relations, in other words, compound words are in the possessive-participle relationship, adaptation, formed on the basis of the word combinations in the communication relations. Compound words are distributed in the group of nouns, adjectives, adverbs, and partially verbs. Their components may belong to the same word group or to different word groups. For example, compound nouns noun-noun (shovel), adjective + noun (swan), number + noun (octopus), verb + noun (break-stone), noun + verb (bald), verb + verb (selling development). Compound words related to other word groups are also made on the basis of specific patterns.

In Uzbek linguistics, A.Khojiyev, B.Madaliyev, N.Mamatov and others have conducted a lot of research on compound words. Although words are widely studied in all lexical, semantic, and grammatical areas of the language, we cannot say that phraseologisms are studied comprehensively at these levels. The meaning structure, development of meaning, ways of formation, linguo-cultural and cognitive interpretation of phraseologisms require their own researchers. In Uzbek linguistics, there are a number of works on the semantic, grammatical, methodological research of phraseologisms. But the approach to the study of phraseology based on Uzbek national culture, national color, lifestyle, their linguo-cultural and cognitive interpretation is one of the current problems of linguistics, and with this aspect, the topic becomes relevant. Phraseologisms, which make up the lexical wealth of our language, have always been the focus of linguists. Phraseologisms as a complex linguistic phenomenon consist of two or more components. In this sense, their practical and scientific study requires a unique approach, a unique method and method.

In Uzbek linguistics, expressions are studied in grammatical, semantic, and methodological directions. The founder of phraseology in Uzbek linguistics is doctor of philological sciences, professor Sh.Rakhmatullayev. In his scientific researches, he studied the similar and different characteristics and grammatical nature of expressions and linguistic phenomena, and compiled the first explanatory dictionary of Uzbek phrases. This dictionary explains the meaning of the expressions. He published several articles, manuals and monographs devoted to the grammatical-lexical and semantic features of phraseological units in the Uzbek language. For example, "About the main semantic types of phraseological units in the Uzbek language" (1956), "Working on phraseological units in syntactic analysis" (1956), "About the assimilated phraseological units in the modern Uzbek language" (1957), "About the change in the grammatical construction of phraseological units in modern Uzbek language" (1963), "Adaptation of verb phraseological units" (1964), "Some issues of Uzbek phraseology", "Let's see our speech" (1970), Shavkat Rakhmatullayev's research has rightly elevated him to the founder of the study of Uzbek phraseology in our country. Sh.Almatova also conducted scientific research on "Component analysis of Uzbek language phrasemes". In this thesis, the component analysis of idioms, in particular, the role of components in the formation of idioms in terms of expression and content, the original and paradigmatic form of idioms, the composition and variation of idioms, is the main goal of the research.

Various features of phraseological expressions can be determined by classification according to external form. In this classification, more attention is paid to the number of words in phraseological expressions. As a result of the classification, it is possible to determine how many words are made up of phrases according to their nature.

Many linguists are of the opinion that phraseological expressions are only more than two words. But observations show that phraseological expressions consist of two, three or more words. But some linguists think that there are also one-word phrases. In particular, according to Professor A.Jafarov, one-word expressions are formed at the highest stage of development of idiomatic expressions.

RESULTS

Expressions of this type are expressed by a compound word or a single word, they differ from compound words in that they cannot express a direct idea. An idiomatic meaning can also be understood through a single word. But it is difficult to call such words a phrase. Because a phrase must consist of a combination of words. V.V.Vinogradov, A.Abakumov, A.Shakhmatov's opinions about this are valuable.



One of the important features of phraseological units is that they at the heart of it lies the imagination of a certain image, concrete event, action or object. For example, in the expression "*his mouth reached his ears*", which means "*to rejoice*" behind laughing and being satisfied, there is an image of the mouth reaching to the ears.

This image at the root of the phrase serves to express the meaning of "rejoice". Interpreting such an image at the root of the phrase from another point of view, it has a different interpretation which is universal in a newly created phraseological neologism in the language an image belonging to the phrase or a feature of this image is stored. In this way, A.Kakhkhor used universal phraseology to create new expressions, also uses metaphorical proverbs.

DISCUSSIONS

Phraseologisms have the same form and meaning as words, because just as words are composed of sounds, phrasemes are also composed of words like: *sad - compassionate*, *head up to the sky - happy*. But the words in the phrasemes do not have their meaning independence. The general meaning comes from the figurative meaning of the set of words in the phrase. That's why several words in the compound act as a syntactic part in the sentence as a whole: *In the blink of an eye - he came in the blink of an eye*.

Words in phraseological units are similar to words in other simple combinations may be similar in appearance: *Mirzakarimboy has a long hand, he does these things will manage. The basketball player had long arms*.

In such cases, the phraseological meaning is determined depending on the context.

When it comes to the grammatical nature of Uzbek phraseologisms, it will be necessary to analyze their internal syntactic structure, paradigmatic forms, syntactic environment of phrases and the occurrences of variation in them.

Looking at phraseological expressions from a grammatical point of view, such expressions have the same meaning as one word. Other types are equivalent to a phrase, some are equivalent to a sentence and express a relative complete idea. Depending on these characteristics, phraseological expressions can be divided into three grammatically:

1. Phraseological expressions equivalent to the word such as: *his hand is open* (generous), *his hand is firm* (greedy), *hard hand* (demanding), *eyes on your way* (expectation), *eyes fell* (saw), *black of the eyes* (child).
2. Phraseological expressions equivalent to the word combination; *he opened his heart* (told his secret), *called himself the old man* (begged), *his eyes aphid* (satisfied with success).
3. Phraseological expressions that are equivalent to the sentence; *the council wedding does not spread* (each the work it's better if it's with advice), *it will snow for the rest of the work* (every work is on time it should be correct), *you can't cover the moon with a skirt* (blame - hiding defects anybody will not).

CONCLUSIONS

It is morphologically similar to similar phraseological expressions of Verbs, adjectives, nouns, and adverbs are derived from expressions can be equal to their offspring. Accordingly, the word equal to the phraseological phrases can be divided into 4 morphologically.

1. Verb phraseological expressions; *his eyes reached* (he knows, he understands), *he was heartbroken* (he was sad), *he put his heart* (liked, loved).
2. Adjective phraseological expressions: *thick-skinned* (unruly, careless), *white-hearted* (conscientious), *if the world is flooded, it will not rise to the ankles* (careless).
3. Noun phraseological expressions: *blackness of the eye* (child), *spring of life* (youth), *lamp of mind* (science), *eye make-up* (cheating).
4. Colloquial phraseological expressions: *together sticking out of one side* (friendly, together), *rolled up his sleeves* (diligently), *without raising his head* (relentlessly).

Phraseological expressions are any part of a sentence:

- a) a phraseological phrase that has the function of subject
- b) a phraseological phrase used as a predicate
- c) a phraseological phrase used as an attributive
- d) a phraseological phrase used as an object
- e) a phraseological phrase used as an adverbial modifier

According to their construction the phraseological expressions come in the forms of a combination of words, simple and compound sentences:

1. Phraseological phrase in the form of a word combination
2. A phraseological phrase in the form of a simple sentence
3. Phraseological phrase in the form of a compound sentence.



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THE STEAM EDUCATIONAL SYSTEM AND ITS EFFECT ON EDUCATIONAL EFFICIENCY IN PRIMARY SCHOOL CLASSES

Jurayeva Gulandon Murodullo kizi

Lecturer of University of Economics and Pedagogy, Karshi city, Republic of Uzbekistan

ABSTRACT. BACKGROUND

*This article provides information on what the STEAM educational system is and its functions, effectiveness, and in which educational fields it can be used. A brief overview of possible outcomes is provided. Modern education requires the search for new methodological ways of making students interested in learning and imparting knowledge. STEAM education is one of the types of education that is very necessary for education today. It is also a way of thinking. The STEAM approach changes the way students think about teaching and learning. By focusing on practical skills, students develop their ability, creativity, flexibility and learn to cooperate with others. The **object** of the article is the STEAM education which is based on the application of a practical approach and the integration of all five fields into a single educational system.*

*The **aim** of the article is to define the reason is that the steam approach is based on the integration of five areas into a single educational system.*

***Methods:** descriptive method and method of analyses were used to prove the informativeness of the topic relied on the studies of well-known pedagogues.*

***Results (Findings):** The analysis presented in the article shows that in the STEAM educational process, theoretical knowledge and practical knowledge are put on an equal level. That is, children acquire knowledge and learn to use it immediately.*

***Conclusion.** Summing up the results, it can be concluded that the compared to traditional teaching methods, the STEAM approach in elementary grades allows children to conduct experiments, build models, independently create music and films, and turn their ideas into reality and drives the creation of the final product. This educational approach allows children to effectively combine theoretical and practical skills and facilitates university entrance and further studies.*

KEY WORDS: STEAM educational system, teaching, approach, technology, pedagogue, motivation.

INTRODUCTION

What is the STEAM educational system? If we expand this acronym, we get the following: STEAM is S - science, T - technology, E - engineering, A - art and M - math. Do not forget that these directions are becoming the most popular in the modern world. Therefore, today the STEAM system is developing as one of the main trends. It will be no exaggeration if we say that this education is one of the most popular educational areas in the world today. According to the US Department of Education, only 16 percent of high school students are interested in learning more about math. About 28 percent of elementary school students are interested in a particular subject within STEAM. Unfortunately, in 57% of them, after finishing school, this interest fades and disappears. If we analyze on a large scale, the deterioration of the skills of pedagogues, the motivation of students and the quality of education is increasingly becoming a global problem.

LITERATURE REVIEW

In many countries, STEAM education is a priority for the following reasons: - in the near future, the world will have a significant shortage of IT specialists, programmers, engineers, high-tech production workers. In the distant future, it is difficult to imagine professions that will be related to natural sciences and high-tech production. The demand for specialists in bio and nanotechnologies will increase. Future specialists require comprehensive knowledge of various educational fields of natural sciences, engineering and technology. At the moment, many countries such as Australia, China, Great Britain, Israel, South Korea, Singapore, USA are consistently implementing state programs on STEAM education. In particular, in Russia, this issue is in the center of attention - the issue of attracting young people to engineering and robot creation is being partially resolved through the Technical Education Support Center. Reforms in this regard have been implemented in general education schools in Kazakhstan since 2015. This year, a pilot test initiative was launched in Israel. After graduating from school, the student conducts compulsory research work. A teacher of a higher educational institution or a candidate of science (PhD) was appointed as a supervisor for students to carry out this



scientific work. In addition, according to the new national educational program created this year, 70 percent of students study traditionally, and 30 percent are directed to research. In this case, even if the child is not a lawyer or an economist, he follows the path of modern science, discovery, or develops his field with professional skills through programming. Unlike traditional science and math education, STEAM envisions a blended learning environment that shows students how the scientific method can be applied to everyday life. STEAM is one of the directions of implementation of project and educational-research activities in school and outside of school. Everything is new - is it better to forget the old?

MATERIALS AND METHODS

According to the STEAM education program, in addition to physics and mathematics, students learn robotics, programming, and designing their own robots. Special technological laboratory and educational equipment such as 3D printers and visualization equipment are used in the classes. It is worth saying that the form of STEAM education is based on the old traditional approaches of teaching children about professions in the classroom, only the teaching methods and tools change. In this way, knowledge in a new format serves to expand students' thinking horizons. In the lesson, schoolchildren will have the opportunity to strictly develop their natural desires, acquire scientific research skills that will be useful in studying any subject in the future.

How does the STEAM educational system affect the educational process? In this educational process, theoretical knowledge and practical knowledge are put on an equal level. That is, children acquire knowledge and learn to use it immediately. Therefore, when they grow up and face life's problems, whether it is environmental pollution or global climate change, they understand that such complex issues can only be solved by relying on knowledge from different fields and working together. It is not enough to rely only on knowledge of one subject. By focusing on practical skills, students develop their will, creativity, flexibility and learn to cooperate with others. These skills and knowledge constitute the main task of education, that is, what this entire educational system strives for. This new approach to education is the logical result of combining theory and practice. STEAM was developed in America. Some schools took into account the careers of graduates and decided to combine subjects such as science, technology, engineering and mathematics, and this is how the STEM system was formed (Science, Technology, Engineering and Mathematics). Later, Art was added here, and now STEAM was finally formed. Teachers believe that knowledge of these subjects, or more precisely, these subjects, will help students become highly qualified specialists in the future. After all, children want to get good knowledge and apply it immediately.

The world is changing, even if education does not stand still. The changes of the last decades are pleasant, but at the same time they make us nervous. With the invention of these new things, there are many new problems that people have not faced before. New types of work and even entire professional fields appear every day, so modern teachers must think about whether the knowledge and skills they teach meet the requirements of the time. Knowledge helps you find your idea, but real work turns that idea into reality. If we say that the main goal of traditional education is to teach knowledge and use this knowledge to think and create, the STEAM approach teaches us to combine acquired knowledge with real skills. This gives schoolchildren the opportunity not only to have some ideas, but also to apply and implement them in practice. That's it. only knowledge that can be used in reality is truly valuable. The most famous example of the STEAM approach is the Massachusetts Institute of Technology (MIT). The motto of this world university is "*Mens et Manus*" (Mind and Hand). Massachusetts Institute of Technology introduces the concept of STEAM to children developed STEAM courses to provide opportunities for learning and familiarization, and even created STEAM learning centers in some educational institutions.

At the international conference "STEAM forward" held in Jerusalem in 2014, the following statements were made: Involvement of children in STEAM. This education should begin at preschool age, so programs should be included in kindergartens. The language of science is English. If you want to study science and become a scientist, you need to know this language. Steam educational programs for girls are needed. Girls in science can do things that boys can't because of their discipline. Teaching elementary school students based on the STEAM approach will prevent them from getting bored of science and learning all subjects with the same interest. The main approach of the STEAM education system is "science is fun!" It should be interesting and engaging for students. Despite the fact that there are no borders in science, it is important to train qualified specialists who will improve the image of the state's scientific potential. It is necessary to apply STEAM-education for patriotism and love of one's country. - Science should be a holiday that prepares a person for an independent life, it is necessary to be interested in science and strive to fully embrace it. Today, in many private and specialized schools, STEAM technology is used even in elementary grades. In addition to robotics and computer science rooms, the school also has a STEAM room, which is equipped with a modern interactive platform, work tools, sewing and knitting machines, It consists of Arduino platforms and 5 different types of cutting and scoring equipment. The interesting thing is that this equipment can be rebuilt by students to give them a different look and function. World education experts say that STEAM education helps students develop the following skills:

- *engage in meaningful learning activities;*
- *become resilient problem solvers;*
- *embrace and value collaboration;*



– work through the creative process.

RESULTS

It is possible to approach and organize lessons on the basis of STEAM technology to the topics given in the 1st-2nd grade mother tongue and reading literacy, natural sciences, and mathematics textbooks developed on the basis of the national program. Especially in natural sciences, each topic is presented in a theoretical and practical way. In particular, the in the subject of the natural science in the 2nd grade the topic “Planet – Earth” is given. In studying this topic, students will have practical training along with theoretical knowledge. Pupils will make a model of the globe and the sun. By this, they will learn practically how the globe rotates around the sun, and at the same time they will come up with measures to eliminate the global problems of the globe and their creativity can be encouraged. STEAM technology should be used wisely not only in classes, but also in extracurricular activities. If professionals are invited to the organization of classes, they will show practical knowledge of their profession along with theoretical knowledge, it will leave a good impression on the children. They will find their direction when choosing a profession in the future.

DISCUSSIONS

Let's analyze and study a topic based on this approach in elementary grades. Imagine you have 30 students in your class to teach. You have one personal computer in your classroom, and they can use the ICT room once a week. You need to make the students complete a project related to the study of air. For this, we will divide the group of students into 5 groups, and the curriculum will be divided into five areas. Tasks can be divided into groups as follows:

Group 1: Pupils are asked to read a literary work about air, record reflexive results every day, and then create their personal stories.

Group 2: Students conduct various experiments on air pollution, collect data and prepare a laboratory report.

Group 3: They prepare a weather-related wall newspaper.

Group 4: They will make a questionnaire about keeping the air clean and collect information from other classes, and then analyze the results and make a conclusion.

Group 5: They research the causes of air pollution, record the data. Then they write an advertising article for the personal blog of the class.

As you can see, 5th group students need to use computers. Before working on computers, it is very important to teach students how to sort information and evaluate websites. In this process, students learn to share their research on social sites. They also learn how to conduct discussions and monitor the progress of their work through the wiki. It goes without saying that even today's pedagogues need to learn intensive language, ICT and new methods of teaching, mastering the basics of STEAM pedagogy, emerging professions and professions that are in declining demand. it is required to conduct research on classifications and communicate with professional communities in social networks.

CONCLUSIONS

In conclusion, I would like to emphasize that, compared to traditional teaching methods, the STEAM approach in elementary grades allows children to conduct experiments, build models, independently create music and films, and turn their ideas into reality and drives the creation of the final product. This educational approach allows children to effectively combine theoretical and practical skills and facilitates university entrance and further studies.

Currently, the interest of investors and large business circles in science and innovation projects and start-ups is increasing. In order for many positive changes to occur in the future, it is necessary to create STEAM-centers, to integrate robotics into computer science, including the basics of programming in secondary schools, and to develop the existing experience based on the capabilities of teachers. Since education is a process that is renewed and requires renewal, it is very important that our teachers are in constant search and keep pace with the times.

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POLITICAL CULTURE OF SOCIETY AND CONCEPTUAL ISSUES

Yakhshibaev Shavkat Kurambaevich

Independent Researcher of the Academy of Public Administration under the President of the Republic of Uzbekistan

ANNOTATION

The problems of political culture as an important category of political science in recent years has become an urgent topic. There are objective and subjective reasons for this, since it is she who is assessed as an important factor influencing the dynamics of the political life of the state and determining their directions. From the same point of view, interests in political culture and its features are increasing, as well as their research directions are developing. The topic manifests itself as a priority and active direction of political science. The article analyzes its regional (eastern and Western) and civilizational foundations and differences.

KEYWORDS: *political culture, politics, dynamics, political life, transformation, reforms, difference, civilization, political basis, ideology, culture, political behavior, democracy, authoritarianism.*

“ПОЛИТИЧЕСКАЯ КУЛЬТУРА“ ОБЩЕСТВА И КОНЦЕПТУАЛЬНЫЕ ВОПРОСЫ

Яхшибаев Шавкат Курамбаевич

Независимый исследователь Академии государственного управления при Президенте Республики Узбекистан

Аннотация. Проблемы политической культуры как важная категория политических наук в последние годы приобретает актуальную тему. В этом есть свои объективные и субъективные причины, так как именно она оценивается как важный фактор, оказывающий влияние на динамику политической жизни государства и определяющий их направления. С этой же точки зрения повышаются интересы на политическую культуру и на ее особенности, а также развиваются их исследовательские направления. Тема проявляется в качестве приоритетного и активного направления политической науки. В статье анализированы ее региональные (восточные и западные) и цивилизационные основы и различия.

Ключевые слова: политическая культура, политика, динамика, политическая жизнь, трансформация, реформы, различие, цивилизация, политическая основа, идеология, культура, политическое поведение, демократия, авторитаризм.

Как известно, категория политической культуры на сегодняшний день стала важным направлением исследований политической сферы в качестве одного из важных феноменов политической жизни. Прежде, чем исследовать ее содержательные стороны, категориальное значение, своеобразные факторы в различных обществах, ее место в изменяющемся времени, важное значение имеет обращение к научным исследованиям в рамках темы. Наряду с этим, необходимо отдельно подчеркнуть сложные стороны освещения темы, при изучении ее тенденционных изменений возможно столкновение с рядом проблем.

Обычно, говоря о политической культуре, имеют в виду комплекс верований, ценностей и практик, формирующих отношение людей к политике и правительству. Он вбирает в себя такие широкомасштабные



факторы, как роль государства, отношения между гражданами и правительством, методы распределения и осуществления политической власти.

Понятие политической культуры необходимо, чтобы понять как действует политика в различных обществах. Являясь фундаментом политических институтов и практик, она может играть важную роль в формировании направлений политических перемен. В данной статье мы рассмотрим вопросы значения политической культуры, ее влияние на политическую этику и как она меняется в различных обществах.

Необходимо также подчеркнуть, что несмотря на актуальность темы, наличия многочисленной литературы, посвященной этой теме, общепризнанное понятие о феномене политической культуры еще несформировано. Потому что многочисленные подходы к характеристике политической культуры, развитие различных взглядов по ее осознанию, особенно проявление политической культуры по-разному в различных обществах видны в проявлении в различных ситуациях в системе меняющихся политических процессов. Эти ситуации, в первую очередь, различные методы исследований темы политической культуры, своеобразные принципы и свойства различных обществ, проявление в разнообразном виде элементов и структурных частей политической культуры, зависимость от неопределенностей в выполнении определенных функций можно показать в качестве большой методологической проблемы.

Известно, что политическая культура значима сформированностью отношений и веры граждан в свое правительство и политическую систему.[1] Граждане, обладающие сильной политической культурой, активно участвуют в таких политических мероприятиях, как голосование, пропаганда политических изменений и предвыборной кампании. Также они могут привлечь к ответственности своими действиями выбранных ими личностей. Сильная политическая культура помогает обеспечить стабильность и непрерывность политических институтов. Если граждане обладают общими ценностями и верованиями по отношению ответственности правительства и роли государства, то легче установить и поддерживать стабильность политической системы. С другой стороны, слабая или разрозненная политическая культура может привести к нестабильности и политически беспокойному состоянию. В обществах, где существуют различные взгляды на роль правительства и распределение политической власти, может быть трудно установить стабильную политическую систему, выражающую интересы всех граждан.

Как известно, ученые, которые впервые внедрили в научную сферу тему политической культуры (например, американские ученые Г.Алмонд и С.Верба в своем труде "The civic culture: political attitudes and democracy in five countries" («Гражданская культура: политический порядок и демократия в пяти странах»), были удивлены результатами анкетирования по изучению общественного мнения, проведенного в пяти странах, то есть в США, Великобритании, Германии, Италии и Мексике. Со стороны Г.Алмонда были разработаны широкомасштабные характеристики понятия политической культуры в качестве результата или большого достижения в этих странах, а также разработаны принципы, выражающие политическую культуру в различных обществах.[2]

Влияние политической культуры на политическую этику

Политическая культура может оказать ощутимое влияние на действия граждан в политическом процессе. В обществах с сильной политической культурой граждане участвуют в такой политической деятельности, как голосование, общение с выбранными ими чиновниками, участие в политических организациях. Также у них сильное чувство гражданского долга и возможность привлечения к ответственности руководящих личностей за свое поведение. В различных источниках со стороны ученых признано, что в обществах со слабой политической культурой участие граждан в политической деятельности минимально, слабое чувство гражданского долга, это, в свою очередь, приводит к неучастию в политическом процессе и безответственности избранных руководящих лиц.[3]

Разнообразие политической культуры в различных обществах

Политическая культура в различных обществах ощутимо различается в связи с такими факторами, как история, религия и география. Например в такой стране, как США, где общество обладает сильной традицией индивидуализма, могут быть сомнительные отношения граждан к правительству и сильное доверие к личной ответственности. В отличие от этого, в обществах с традицией коллективизма, как в Японии, у граждан сильны ответственность перед обществом и желание подчиняться власти. Именно такие ситуации показывают роль политической культуры в качестве различных ситуаций в различных обществах.[4]



Таким образом можно подчеркнуть, что **политическая культура – это ценности, отношения и верования, формирующие политическую этику личностей и групп в обществе. Она создает основу для понимания со временем развития политических институтов и практик, а также какое влияние оказывают нормы и надежды людей, участвующих в них.**

Структурные части политической культуры

Существуют несколько структурных частей, помогающих формированию и развитию политической культуры. Это следующие:

- **исторический опыт:** всем известно, что исторический опыт общества формирует политическую культуру путем влияния ценностей и верований, переходящих из поколения в поколение. Например, в обществе, пережившим колониализм, могут с подозрением смотреть на влияние зарубежа и больше ценить определение судьбы самим; [5]

- **социализация:** процесс социализации вбирает в себя переход из поколения в поколение культурные нормы и ценности. В контексте политической культуры социализация может проявляться через официальное образование, влияние на СМИ, семейное воспитание. Это может сформировать у личностей отношение к роли правительства, их надежду на политические лидеры и желание участвовать в политической деятельности;

- **религия:** религия может быть важным фактором в формировании политической культуры, потому что она влияет на верования людей о ценностях, роли правительства и распределение политической власти. Например, в обществах, где религия является центральной частью культуры, религиозные ценности могут быть введены в правовые и политические системы. Религия играет также важную роль в формировании политической культуры. Потому что в обществах, где она является частью культуры, например на Ближнем Востоке, религиозные ценности влияют на политические верования и практику. Во многих исламских обществах религиозное право (законы шариата) рассматривается в качестве основы правовой системы. В таких обществах нормы исламской этики, религиозные взгляды, патерналистское мировоззрение выделяются глубоким укоренением в государственное и общественное отношения. Например, необходимо отдельно признать, что стремления США в течение 20 лет развивать Ирак и Афганистан на основе западной демократии и установить здесь западную политическую систему развития потерпели неудачу;

- **география:** география тоже может формировать политическую культуру. Граждане обществ островных государств, ограниченных географически, естественно, желают защищать сильные своеобразные чувства, свою культуру и образ жизни. Это может привести к сомнению от внешних влияний и нежеланию заниматься глобальной политикой. Физическая среда общества тоже формирует политическую культуру. Например, у граждан ограниченных географически обществах могут быть сильные стремления осознать себя, защитить свою культуру и образ жизни. На практике много раз было доказано нежелание заниматься глобальной политикой из-за сомнений во внешнем влиянии; [6]

- **значение политической культуры:** политическая культура с нескольких аспектов имеет важное значение в формировании политической этики. Во-первых, она влияет на уровень политического участия в обществе. В обществах, обладающих сильной политической культурой, граждане активны, они участвуют в таких политических деятельности, как голосование, установление связи с чиновниками, становятся членами политических организаций. Не секрет, что политическая культура является фактором влияния на стабильность политических институтов. Так, если граждане обладают общими ценностями и верованиями по поводу роли правительства и ответственности политических лидеров, то легче установить и поддержать стабильную политическую систему. С другой стороны, в обществах, где граждане имеют различные взгляды на роль правительства, трудно установить стабильную политическую систему, выражающую интересы всех граждан, политическая культура здесь играет важную роль в формировании направлений политических перемен. Граждане, обладающие сильной политической культурой, становятся сторонниками политических перемен, могут призвать к ответственности за свои действия избранных ими должностных личностей. Это приводит к прогрессивным социальным и политическим переменам;

- **политическая культура и демократия:** политическая культура играет решающую роль в развитии и поддержке демократических систем. Демократическим обществам необходимы грамотные, активные, участвующие в политической деятельности граждане. В обществах с сильной политической культурой большинство граждан обладает этими свойствами и поэтому имеется большая возможность поддерживать и защищать демократические институты.



Одной из важных сторон влияния политической культуры на развитие демократии – это понятие гражданского долга. Граждане, считающие, что существует ответственность участия в политических процессах, больше всех участвуют в массовых собраниях, голосовании, связываются с избранными представителями. Также граждане с сильным чувством гражданского долга поддерживают такие демократические институты и ценности, как приоритетность закона, свобода слова, равноправие.

Еще одна сторона политической культуры, влияющая на демократию, – это отношение к конфликту и примирению. В демократических обществах неизбежны распри и несогласованности, важно, чтобы граждане и руководители были готовы к переговорам и примирению, чтобы прийти к единому мнению. Общества с сильной политической культурой, ценящие примирение, возможно больше будут обладать стабильной и эффективной демократической системой; [7]

- **политическая культура и политические партии:** политическая культура также имеет большое значение в формировании и развитии политических партий. Политические партии – важные участники демократических систем, потому что они обеспечивают граждан механизмом конкуренции для выражения своих политических желаний и политической власти. Политическая культура общества оказывает влияние на деятельность политических партий и их взаимоотношениям с другими партиями, об этом говорилось неоднократно. В обществах с сильной политической культурой, ценящих солидарность и сотрудничество, политические партии для достижения своих политических целей могут создавать политическую коалицию и вести переговоры, в обществах, где много противостояний и противоречий, политические партии для захвата власти могут применять агрессивную и разделяющую тактику. Современной наукой доказано, что политическая культура общества на практике может оказать влияние на уровень доверия граждан политическим партиям. В обществах с сильной политической культурой, где ценятся прозрачность, ответственность и нравственное поведение, граждане больше доверяют политическим партиям и видят их в качестве законных представителей своих интересов, в обществах, где широко распространены коррупция и безнравственность, граждане смотрят на партии с недоверием и возможность заниматься политической деятельностью уменьшается;

- **политическая культура и гражданское общество:** гражданское общество – это отрасль организаций и учреждений, существующая вне таких государственных и частных секторов, как негосударственные некоммерческие организации (ННО), общественные группы и профсоюзы. Гражданское общество создает возможность для граждан заниматься политической деятельностью и защищать свои интересы, играет важную роль в развитии демократии и политического участия. Политическая культура общества, оказывая влияние на поведение граждан и отношения на их активность, может влиять на силу и эффективность гражданского общества. [8] В обществах с сильной политической культурой, где ценятся гражданский долг и социальная ответственность, граждане больше участвуют в деятельности гражданского общества и, естественно, поддерживают деятельность ННО и общественных организаций.

Кроме этого, политическая культура общества может также влиять на отношения между организациями гражданского общества и правительством, в обществах с сильной политической культурой, где ценятся прозрачность и отчетность, организации гражданского общества, не боясь репрессий правительства или цензуры, могут еще свободнее и эффективнее осуществлять деятельность. Однако необходимо учитывать возможность столкновения с проблемами со стороны правительства в авторитарных обществах, рассматривающих деятельность гражданского общества с сомнением;

- **влияние глобализации на политическую культуру:** глобализация во многом изменила мир, в том числе оказала влияние на политическую культуру. По мере усиления взаимосвязи в обществах политическая культура не ограничивается национальными границами, она может оказаться под влиянием глобальных событий и тенденций. Ощутимое влияние глобализации на политическую культуру – это возвышение космополитизма. Космополитизм – это мировоззрение, подчеркивающее взаимосвязь национальностей и народностей и выдвигающее идею глобального сообщества. В обществах, принимающих космополитизм, граждане ценят плюрализм, толерантность и сотрудничество и не смотрят на другие нации и народности как на угрозу. [9]

Глобализация также распространяет на весь мир демократические идеи и ценности. Чем больше общества осваивают демократию, тем шире и влиятельнее оказываются ценности и практики, связанные с демократией. Это вклад на развитие глобальной политической культуры, где ценятся права человека, политическое участие и свобода слова.



Усиление мировой взаимосвязи привело к распространению демократических ценностей и институтов, а также стимулировало права человека и социальное развитие. Глобализация также, повысив информированность о глобальных проблемах, привела к развитию транснациональных отраслей и стимулировала глобальное сотрудничество. Глобализация приводит также к исчезновению традиционных ценностей и норм, появлению новых культурных своеобразий и распространению индивидуализма, усилению популизма и шовинизма, потому что личности будут стремиться защитить свои национальные интересы и отвергать глобализм;

- **влияние социальных отраслей на политическую культуру:** в последние годы социальные отрасли тоже оказывают влияние на политическую культуру. Такие социальные медиа платформы, как фейсбук, твиттер и инстаграм, превратились в сильные средства для политического общения, активности и мобилизованности. Одним из влияний социальных сетей на политическую культуру является создание эхо-палат. Эхо-палаты обращены к онлайн сообществам, которые общаются с людьми, признающими только свои верования и мысли. Это приводит к усилению существующих верований и ограничению влияния на противоположные взгляды, что может привести к поляризации и распространению неправильных сведений.

Социальные сети облегчают организацию политической активности и социальные действия граждан. Это приводит к появлению новых политических форм культуры, таких как кампании хаштаг и онлайн активности, направленные на население и большей частью нецентрализованные. Социальные сети тоже приносят в демократические общества проблемы. Ложные сведения, дезинформации и распространение пропаганды в социальных сетях могут ослабить доверие к демократическим институтам и усилить социальные разделения;

- **роль политического лидера в формировании политической культуры:** политические лидеры играют решающую роль в формировании политической культуры. Они, являясь примером своими словами и действиями, обладают силой формирования ценностей и норм общества. Политические лидеры, уважая и пропагандируя такие демократические ценности, как толерантность, плюрализм и права человека, могут также нанести ущерб этим ценностям путем своих авторитарных тенденций. В последние годы в мире увеличивается количество лидеров-популистов, противостоящих традиционным демократическим ценностям и институтам. Эти лидеры в большинстве случаев используют риторику, пропагандирующую отрицание национализма, ксенофобии и глобализма. Они используют страх и тревоги общественности для сохранения своей власти и поддержки за счет таких демократических ценностей, как свобода слова, независимая судебная система и приоритетность закона. С другой стороны, существуют политические лидеры, принявшие демократические ценности и институты, используя свои привилегии ведущего для укрепления и выдвижения этих ценностей. Эти руководители, защищая права человека, равноправие и социальную справедливость, действовали для обеспечения уважения всех граждан и выслушивания их мнений;

- **роль гражданского общества в формировании политической культуры:** гражданское общество играет решающую роль в формировании политической культуры. Говоря о гражданском обществе, имеются в виду личности и сеть организаций, участвующих в социальной и политической деятельности, которые являются независимыми от правительства. В эти сети входят ННО, адвокатские группы, начальные организации, занимающиеся пропагандой социальной справедливости, демократии и прав человека. Гражданское общество может оказать влияние на политическую культуру различными путями. Во-первых, организации гражданского общества могут привлечь к ответственности правительства за свои действия и контролировать их деятельность. Контролируя политику правительства и его деятельность, они могут повысить информированность общественности о каждом нарушении прав человека, социальной справедливости или демократических ценностей.

Во-вторых, гражданское общество может создать фундамент для участия граждан в политических процессах. Гражданское общество, стимулируя образование и активность граждан, может создать возможность для граждан быть активными участниками в своих обществах и оказывать влияние при принятии политических решений.

В-третьих, гражданское общество путем стимулирования плюрализма и социальной инклюзии может развивать социальную солидарность и толерантность. Объединив личности различного происхождения, путем стимулирования уважения и понимания плюрализма гражданское общество вносит свой вклад в развитие еще более инклюзивной и толерантной политической культуры;



- роль СМИ в формировании политической культуры: средства массовой информации играют важную роль в формировании политической культуры через влияние на отношение к политике и правительству общественного мнения. СМИ имеют полномочия освещать формирование повестки дня и вопросы, важные для общества. Они также предоставляют платформы для различных голосов и мнений, это, в свою очередь, может дополнить ярче и шире политическую культуру. СМИ также могут оказать негативное влияние на политическую культуру. Например, средства массовой информации могут раздуть политические темы и события в качестве сенсации, выдвигать поляризацию и экстремальные взгляды. СМИ также могут распространять ложные сведения и дезинформации, это портит общественное мнение и оказывает негативное влияние на достоверность демократических институтов.

Кроме этого, появление социальных медиа платформ изменило метод формирования политической культуры. Социальные медиа предоставляют гражданам платформу для высказывания своего мнения, общения с политическими лидерами и участия в политических обсуждениях. Однако социальные медиа тоже вносят свой вклад в эхо-камеры и пузырь фильтров, здесь люди потребляют сведения соответствующие только их мировоззрению, это, в свою очередь, приводит к распространению поляризации и экстремальных взглядов.

Заключение.

В заключение нужно сказать, что политическая культура считается решающим аспектом любого демократического общества. Это – общее отношение, ценности и верования, формирующие политическое поведение и институты. Сочинение изучило различные факторы, формирующие политическую культуру, в частности, политическое лидерство, гражданское общество, СМИ и глобализацию.

Политические лидеры своим поведением и ценностями являются примером и играют решающую роль в формировании политической культуры. Организации гражданского общества тоже оказывают ощутимое влияние на политическую культуру путем стимулирования гражданской активности, демократических ценностей и социального развития.

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NEW APPROACHES FOR TEACHING THE STUDENTS IN MODERN CONDITIONS

**Khalibekova Amangul Kenjabaevna¹, Jahonova Marjona²,
Doniyorova Guzal³, Eshmurodova Dinora⁴,
Suyunova Sevara⁵,**

¹Teacher, ^{2,3,4,5}Student

^{1,2,3,4,5}Navoi State Pedagogical Institute

ABSTRACT

This research paper investigates the study of various subjects, more and more attention for teaching. This led to the need for teachers to individually study and put into practice various electronic learning services. It also analyzes the importance of development of teaching students in modern conditions. This investigation was conducted by using various electronic distance learning services showed the presence of a large number of existing platforms for different target audiences (Moodle, ISPRING, Google, etc.). The study revealed that the development of them must be more informed and disciplined, learn to assimilate and generalize the information received from various sources independently (video lectures, books, teaching aids, recommendations, various information sites on the subject under the study, etc.)

KEYWORDS. *Generalization, Systematization, Educational environment, Correspondence education, Internet, Video, Experience, Moodle.*

1. INTRODUCTION

In modern conditions of development of new directions in the study of various subjects, more and more attention for teaching in various higher educational institutions is paid to the development of learning foreign languages. However, today an increasing number of teachers are beginning to work with their students remotely. But to conduct classes from home, teachers and students both need other learning skills. Therefore, changes in approaches to learning and the formation of skills for students are needed.

2. AIM

To analyze and summarize the data of the main organizational issues and experience in introducing in practice work with students in new areas in the pedagogical approach in the form of learning language, as a modern direction in the current educational environment.

3. METHODS AND MATERIALS

Analysis, comparison and generalization, systematization the data of the topic.

4. RESULTS

Due to the need for a quick learning in all higher educational institutions, which was caused by strict quarantine measures, there was an urgent need to introduce learning system that was convenient and understandable for both teachers and students. To date, higher education institutions conducted learning, which provided a correspondence education. Therefore, when there was a sharp need for education, in a number of universities there was no experience in organizing such work and no unified system of teacher training, as well as there was no single methodological approach. This led to the need for teachers to individually study and put into practice various electronic learning services.



The analysis of various electronic learning services showed the presence of a large number of existing platforms for different target audiences (Moodle, ISPRING, Google, etc.). Among these platforms for teaching students in our conditions, resources on Google were chosen as sufficiently clear and convenient for quick mastering. These resources would be helpful for educational institution for teachers and students. The choice was based on the prevalence of the system, convenient support for different content, the ability to create the content of “original test items”, user management, reporting system. Another important selection criterion was free of charge, technical readiness and the ability of students to connect to this system and the availability of educational video materials for quick preparation of content by the teachers themselves. The quick development of the Classroom for teachers was facilitated by the simple settings and integration of the Google Classroom with Google Drive, Documents, Forms, and an e-mail, as well as ease of placement, the ability to share information and materials for training on the tasks page. It also became convenient for the teacher that it is possible to test the knowledge of students of the entire group simultaneously and post individual tasks for each student.

The question is what must the instructor know in order to use computer-assisted technologies more effectively particularly in the classroom? Use of the numerous Internet resources presumes sufficient hardware expertise on the part of the instructor to actively participate. Language instructors at any level of education should thoroughly consider the potential of available technology-assisted resources and web-based language materials. In order to do that, the instructor has to relate their chosen teaching methodologies to the various Internet resources and other computer-assisted teaching tools. To proceed in such an endeavor, the instructor should be familiar with the most popular information-search engines on the World Wide Web. They must know methods of information retrieval and must have the skills to explore hyperlinks for the best suited multimedia assistance useful in each specific language learning activity. The questions are then how to integrate these new technologies into our daily teaching of foreign languages, how to build our lessons. Incorporating specific resources in classroom activities, and what online activities would be helpful in each student’s pursuit of their chosen foreign language. This section will first trace the history of language learning methodologies and the role of technology. It will show the relationship between them in terms of theories, choices, and objectives. The history of connecting foreign language acquisition with technology and multimedia tools in the educational process represents a certain duality. On the one hand, after being incorporated into the process of foreign language acquisition, multimedia tools influence how language is taught. On the other hand, learning objectives and goals in the foreign language acquisition process influence how technology, particularly computers and the Internet, will be adapted for the educational process. Many scientists consider these changes not simply as “a polar shift from structural to communicative perspectives,” but as “a more complex overlapping of three theoretical movements structural, cognitive, and socio cognitive”. Lots of experience in the language acquisition process demonstrates that using technology as a tool in the learning process brings a noticeable improvement in students’ foreign language competency. Audio and visual technology has a significant impact by providing foreign language instructors with a support tool that brings higher quality, real-life learning experiences from the world into the classroom. Using video instruction adds visual and auditory stimuli to language learning. Authentic video stories became useful. Video integrated into a course storyline or created for communicative situations extends and enriches the listening process by supporting student perceptions with facial expressions, body language, intonation, and the rhythm of the language. However, there should be some technical difficulties in the preparation of training material among teachers, since the reference materials on creating forms for teachers on Google would not provided in full volume, which led to the loss of part of the prepared data and to the loss of time. Also, during the learning the language, the requirements for the students themselves also increase: they must be more informed and disciplined, learn to assimilate and generalize the information received from various sources independently (video lectures, books, teaching aids, recommendations, various information sites on the subject under the study, etc.). During the summarizing the lessons using the various remote control forms, where there is a solution to practical problems of different difficulty levels: test situational cases,



solving more complex multilevel problems to compare or deny any facts and others, the student reveals his weaknesses in the preparation of theoretical material. And when identifying its weaknesses in knowledge, the student must consciously work on the errors, returning to the repetition and understanding of the theoretical part of the material that he poorly prepared, that not every student understands or is ready to fulfill.

5. CONCLUSION AND DISCUSSION

Thus, will be an experiment mastering learning through the internet among students will show, that students quickly acquire new technical skills in working with computer services, at the same time, the positive thing is that the student can immediately see both his strengths and weaknesses in the preparation of educational material. However, it requires a higher degree of motivation and a conscious aspiration for independent work from the student.

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STATE OF DEVELOPMENT OF YOUTH TOURISM IN UZBEKISTAN AND ITS IMPROVEMENT WAYS

Norboev Allayor Ismoilovich¹, Mansurova Zebuniso Abdurashidova²

¹Researcher, Samarkand State University named after Sharof Rashidov

²2nd year Student, Samarkand State University named after Sharof Rashidov

ANNOTATION

This article discusses the ongoing work in Uzbekistan on the comprehensive development and support of tourism, the existing problems in the tourism of our country, and the possibility of their effective solution. Attention is drawn to the need to attract young people to internal and external tourism to maintain a healthy lifestyle, as well as the state and development of youth tourism.

KEY WORDS. *Tourism, economy, youth tourism, tourists, camping, hotels, national values, and events.*

Nowadays, Uzbekistan is growing economically in all aspects. We can also see this in periodic economic indicators. During the years of independence, our country has gradually and effectively transitioned to a market economy thanks to the wise policy of our head of state. The fact that the economy is superior to politics guarantees our country's economic independence.

Tourism is an industry that requires a high level of direct customer service. The tourism industry is developing every year on the scale of our country. Taking into account that this industry is the most profitable in the world, it can be said that the share of tourism in our economy will increase due to the high potential of tourism in Uzbekistan. In terms of profitability, this industry ranks third in the world after the engineering and oil and gas industries, and its share in the GDP of our country is more than 2%. If this indicator is evaluated based on the existing opportunities in our country, it should be said that this number can be increased even more.

To develop and support tourism in Uzbekistan, many measures are being implemented by the government of our country. In particular, the following issues are specified separately in the decree of President Sh. M. Mirziyoyev dated December 2, 2016 "On measures to ensure rapid development of tourism in the Republic of Uzbekistan" No. PF-4861 [1].

- development of methods for collecting information on tourism and keeping social statistics;
- Comprehensive implementation of tourism development in the territory of the republic, organization of new types of special tourism routes and offering them to tourists;
- Increase of new types of means of placement in Uzbekistan. Examples include camping sites, over-the-road hotels;
- to create additional benefits for the subjects of tourism activities that have started or are about to start their activities in our country, in particular in the field of the hotel business, to support business activities;
- increase the number and quality of additional services for visiting tourists. Mainly, improvement of information presentation system and others.

Based on the above, it can be said that there is an opportunity to achieve high results shortly by effectively solving several existing problems in the tourism of our country, including the following urgent problems: [2]

- creation of new types of tourist infrastructure and improvement of existing ones using world experience;
- development and implementation of effective methods of attracting foreign tourists to our country;
- promotion of touristic ideology and culture among the population of the country;
- training of qualified, competitive personnel for the field of tourism;
- creating additional amenities for individual and unplanned visiting tourists, etc. [3]



It is precisely because of the above-mentioned current problems that the high goals set in tourism cannot be achieved, and there are several obstacles in this. Currently, experts have developed various proposals and recommendations to eliminate these problems, and through their rational application in practice, the initial stages of development can be won. In particular, it is possible to find effective solutions to various problems by introducing youth tourism in our country using the world's leading experiences. Youth tourism is a type of travel where young people have fun with their peers with a common goal and a desire to learn about the world.

As President Sh.M. Mirziyoev noted: "We have now approved only the issues related to the structure dealing with the development of tourism. These measures should be strengthened with specific measures to increase the contribution of tourism to the development of the economy of Uzbekistan, to promote our historical and cultural values, as well as to replenish foreign exchange reserves" [1]

Because the tourism industry, in turn, depends on the development of the tourism industry and is the determining factor of its development. In this regard, scientists say that travel provides knowledge about other peoples and brings distant countries closer together, while the tourism sector, together with the hospitality sector, contributes to changes in the composition of services, gross domestic product, and investments in the world.

Youth tourism, as one of the special types of tourism, is considered an important factor in solving the problems of upbringing, education, spirituality, culture, and physical development of the growing young generation, and it helps to develop the talents and abilities of young people and strengthen national values based on patriotic feelings.

The development of international tourism, in turn, increases the demand for domestic tourism products. Therefore, the need for tour operators to diversify their traditional activities increases. The share of young people in this activity is high, and the main reason for this is the flexibility of young people and their ability to learn new things. [5]

Young people like to have an active vacation, and many tour companies are now organizing special youth tours for active young people, and their activities offer the following types of recreation:

- Mountain tours are vacations in the mountains. The journey will be through mountain streams, foothills, and ridges.
- Water Tourism - travel to seas, lakes, rivers, and reservoirs by boat, ship, and other water transport.
- Bicycle Excursions are trips on bicycles to different roads, ravines, sand, and mountain routes.
- For people who love speleology, they offer trips to natural or artificial caves and labyrinths. They are interested with their different terrains.
- Walking Tours is probably the most popular form of recreation because it does not require any special training or equipment. A simple walking tour can be organized almost anywhere. [5]

In addition, among young people, ski tourism and mountaineering, quad bike trips, and horse riding are very popular.

Youth tourism is a continuous movement. Every day they have to overcome some obstacles, they have to overcome themselves and difficulties, they have to overcome obstacles to hear the magical sounds of our planet and to understand the greatness around the universe, to see the magnificent beauty.

Of course, the development of youth tourism is necessary, and it should be combined with other forms of tourism that are more attractive to young people who are interested in leading a healthy lifestyle.

Tourism is one of the fastest-growing businesses in the world. Thus, at the present stage of tourism, youth tourism is active. Young people today face several difficulties in determining their life destinies.

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RESILIENCE AND INTERPERSONAL TOLERANCE AMONG TEACHING PROFESSIONALS

*K.S.Sneka, **Dr.R.Ramasamy

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ABSTRACT

OBJECTIVE: The goal of the study was to understand resilience and interpersonal tolerance among teaching professionals. **TOOLS:** Bharathiar University Resilience Scale [Cronbach Alpha 8.74, Validity 0.8], Interpersonal tolerance scale (IPTS) [Cronbach's alpha 0.88, 0.90 and cross-cultural validation and a personal information form were used. **SAMPLE:** The study was conducted on teaching professionals in Namakkal District. Among them, 60 were female, and 40 were male. **METHOD:** A survey method was used to collect the data. **ANALYSIS:** Independent Sample t-test, one-way ANOVA, and cross tabs were applied to analyze the data. **RESULT:** The findings revealed that there is a significant difference between resilience and interpersonal tolerance based on demographic data. According to the study, female teaching professionals have more resilience and interpersonal tolerance than male teaching professionals.

KEYWORDS: Resilience, Interpersonal tolerance, teaching professionals.

INTRODUCTION

RESILIENCE: The capacity of individuals to recognized as resilience. The construct of resilience includes various dimensions including time taken to get back to normalcy after a set-back, reaction to negative events, perception of the effect of past negative events, response to risk factors in life, confidence in coping with future, defining problems, being open to experience and being flexible⁽¹⁾ and resilience has been defined by psychology as an account for success over tasks, activities, etc during adversity such as the transition of the educational system.⁽²⁾ The effective regulation of ego control, people will be characterized as tending toward either over control or under control. Resilient persons are relatively well adjusted, whereas under-controlled persons tend toward a variety of externalizing problems and over-controlled persons toward internalizing problems⁽³⁾⁽⁴⁾. However, subsequent applications of resilience, especially to social systems, recognized the complex adaptive nature of systems. This recognition prompted a view of resilience as involving the adaptation and transformation of systems through the emergence of new structures such as policies, processes, and organizational culture that enable organizations to continue to perform their functions in the face of challenges⁽⁵⁾⁽⁶⁾ and the psychological capacity to be productive when dealing with challenges, changes, and adversity in an academic setting. It is vital to measure faculty's resilience during adversities that can be a basis of professional development plans, training, and seminars conducted by the concerned authority, ensuring that not just the knowledge, skills, and pedagogies of teachers are developing but also their psychological capacity like their academic resilience.⁽⁷⁾

INTERPERSONAL TOLERANCE

The word tolerance is derived from the Latin word tolerance, which means to bear or sustain⁽⁸⁾, and at the interpersonal level, tolerance is an ability to accept, understand, recognize, and respect the social, political, and religious views of another person.⁽⁹⁾ Tolerance as the personal value of an individual is determined by the globalization of the economy, quick development of communications, the interaction of cultures and their integration into a single whole social space, large-scale migration of population, and changes in social structures⁽¹⁰⁾. Theory of tolerance, Allport (1954) conceptualized tolerance and broke it down into warm tolerance (being approving of others), cold tolerance (e.g., putting up with things we do not like), and limits of tolerance (being intolerant of intolerance in others). According to Allport, tolerance is a personal value that influences an open and accepting attitude, the ability to empathize with others, self-insight, resistance to ambiguity, and values in individuals. Butrus and Wittenberg (2013) have referred to tolerance as a moral virtue equivalent to respect, equality, and freedom. According to UNESCO, tolerance is to show respect for 'others', that is to say, 'the different ones' right to be themselves and to avoid harming others, knowing that harming 'the others' means harming everyone and also respect the rights of other people who have ideas and values that do not match with a person's ideas and values⁽¹¹⁾ Faculty's interpersonal abilities are vital to organizations. Collaborative work is achievable when professors interact with one another in a spirit of tolerance, openness, and empathy. The ultimate goal of an organization's faculty is the organization's success. Workplace contentment, a sense of belonging to



the organization, and improving organizational performance are all aspects of well-being. And then Well-being refers to work satisfaction, and belongingness to the organization ⁽¹²⁾.

REVIEW OF LITERATURE

Hartley, M. T. (2011) inters and intrapersonal resilience variables were statistically significantly correlated with mental health. Success will be based on a mutually acceptable degree of risk tolerance and support for compensation policies, corporate culture, performance reviews, and early risk management planning [Kwak, Y. H., & LaPlace, K. S. (2005)]. Mallak, L. (1998) established an organizational resilience paradigm in an attempt to give a synthesise of the contradictory literature on resilience. He characterized organizational resilience as perceptual posture, contextual integrity, strategic ability, and strategic action. Organizational resolvability is the product of organizational resilience. Brendel, W., Hankerson, et al., (2016) Participants in the mindfulness practice condition showed a significant increase in promotional regulatory focus and a reduction in trait anxiety and stress, No significant changes were seen for resilience or tolerance for ambiguity. Resilience controls the loss by maximizing the recovery point and minimizing recovery time objectives. Sahebjamia, N., Torabi, et al., (2015) examined to evaluate the applicability of the plans. We also develop a novel interactive augmented ϵ -constraint method to find the final preferred compromise solution. The proposed model and solution method are finally validated through a real case study

OBJECTIVE

- To examine the difference between resilience and interpersonal tolerance based on demographic data.
- To assess the job satisfaction level of the participants.

METHODOLOGY

The purpose of this study was to learn more about teaching professional's resilience and interpersonal tolerance. It was based on teaching professionals' perspectives and experiences. The information was gathered from teaching professionals in Namakkal District. 100 teaching professionals provided the information, out of them 40 were male and 60 were Female.

Tools: Personal data were collected, which includes gender, stream, experience, marital status, birth order, and area of living.

Bharathiar University Resilience Scale: Resilience was defined to construct the scale, as the capacity of people to cope with stress and catastrophe, and also used to indicate a characteristic of resistance to future negative events. All of the items are assessed on five – a point Likert scale, with responses ranging from not at all appropriate to most appropriate. Reliability Co-efficient for Form A - 0.812 and Form B - 0.852 (Guttman Split-Half).

Interpersonal tolerance scale (IPTS): All port (1954) conceptualizes tolerance as a personal value and distinguishes between Warm Tolerance (13), Cold Tolerance (12), and Limits of tolerance (9) items. All of the items are assessed on a seven-point Likert scale, with responses ranging from strongly disagree and strongly agree. [Reliability Cronbach's alpha =.88, .90 and cross-cultural validation (August 2016)]

RESULT AND DISCUSION

Objective 1: To examine the difference between resilience and interpersonal tolerance based on demographic data.



Table 1

Warm tolerance, Cold tolerance, Limits of tolerance and Resilience based on Gender, Stream, Marital Status, Area of living

Personal variables		Mean [SD]	T - value
WARM TOLERANCE	Gender	Male	64.48(20.55)
		Female	65.30(18.50)
	Stream	Arts	62.95(18.47)
		Science	66.90(19.97)
	Marital Status	Married	66.99(16.93)
		Unmarried	60.88(23.01)
	Area of Living	Rural	63.13(20.20)
		Urban	68.70(16.84)
COLD TOLERANCE	Gender	Male	54.85(18.71)
		Female	45.20(18.42)
	Stream	Arts	48.71(19.02)
		Science	49.39(19.26)
	Marital Status	Married	50.03(19.00)
		Unmarried	47.09(19.29)
	Area of Living	Rural	51.03(19.32)
		Urban	45.06(18.11)
LIMITS OF TOLERANCE	Gender	Male	40.75(13.74)
		Female	42.33(12.09)
	Stream	Arts	41.42(12.39)
		Science	41.96(13.16)
	Marital Status	Married	43.34(12.79)
		Unmarried	38.36(12.12)
	Area of Living	Rural	41.59(12.51)
		Urban	41.90(13.35)
RESILIENCE	Gender	Male	103.20(15.307)
		Female	99.86(15.86)
	Stream	Arts	100.55(15.18)
		Science	101.80(16.78)
	Marital Status	Married	100.15(16.78)
		Unmarried	103.30(13.03)
	Area of Living	Rural	101.06(16.72)
		Urban	101.45(13.45)

Note: Male =40, Female=60, Arts=49, Science=51, Married=67, Unmarried=33, Rural =67, Urban=33. *P<0.05, NS=Not significant.



Table 1 shows that there is no significant difference between warm tolerance, limits of tolerance, and resilience among teaching professionals, implying that there is no significant difference between male and female teaching professionals, as well as between stream, marital status, and area of residence among teaching professionals. To compare resilience and interpersonal tolerance among teaching professionals, an independent sample t-test was used. Because the test statistic's absolute value is more than 1.96, the difference in cold tolerance between men (mean=54.85, SD=18.71) and women (mean=45.20, SD=18.42) is significant. As a result, male teaching professionals have a higher tolerance for cold than female teaching professionals.[cold tolerance (e.g., putting up with things we do not like)] Intolerant masculine teachers may dismiss others' views, beliefs, and values if they do not understand them, and they typically judge people based on first impressions. There is no statistically significant difference in resilience and interpersonal tolerance towards teaching professionals.

TABLE: 2 Warm tolerance, Cold tolerance, Limits of tolerance and Resilience based on Experience and order of Birth

	Personal Variables	Category	Mean (SD)	T- Value
WARM TOLERANCE	Experience	1 to 5 Years	65.53(19.5)	.13 ^{NS}
		6 to 10 Years	65.50(18.92)	
		Above 10 Years	63.13(19.84)	
	Order of Birth	First Child	64.26(19.21)	2.59 ^{NS}
		Middle Child	59.32(21.09)	
		Last Child	70.97(16.42)	
COLD TOLERANCE	Experience	1 to 5 Years	50.38(19.19)	1.37 ^{NS}
		6 to 10 Years	44.66(19.16)	
		Above 10 Years	52.61(18.28)	
	Order of Birth	First Child	46.11(18.72)	1.38 ^{NS}
		Middle Child	49.24(17.20)	
		Last Child	53.39(20.74)	
LIMITS OF TOLERANCE	Experience	1 to 5 Years	115.91(30.82)	.46 ^{NS}
		6 to 10 Years	110.16(31.03)	
		Above 10 Years	115.74(33.48)	
	Order of Birth	First Child	110.37(29.57)	.05 ^{NS}
		Middle Child	108.56(31.79)	
		Last Child	124.55(32.10)	
RESILIENCE	Experience	1 to 5 Years	102.04(12.91)	1.55 ^{NS}
		6 to 10 Years	103.50(16.68)	
		Above 10 Years	96.30(18.49)	
	Order of Birth	First Child	98.98(13.99)	.99 ^{NS}
		Middle Child	101.84(18.38)	
		Last Child	104.14(15.63)	

Note: First child=46, Middle child=25, Last child=29, 1to5 years=45, 6to10year =32, Above10 years=33.

The result of the one-way ANOVA between groups of variance was resilience and interpersonal tolerance among teaching professionals. Subjects were divided into three groups according to their experience and birth order. [Experience Group 1=1 to 5 years, Group2=5 to 10 years and Group3 = above 10 years; Birth order Group1= first child, Group2 = middle child and Group3 = last child]. In warm tolerance mean(SD) for Experience, 1to5 years= 65.53(19.5); 6to10 years=65.50(18.92); Above10 years= 63.13(19.84); Order of birth, First child = 64.26(19.21) ; Middle child =59.32(21.09) ; Last child = 59.32(21.09).so, there are no statistically significant differences between group means as determined by one-way ANOVA in table 2. There is no statistically significant difference in resilience and interpersonal tolerance towards teaching professionals based on their experience and order of birth. Both new and veteran teachers receive the same salary; there is no difference in their income, and the incentives offered by private institutions do not satisfy them. The lack of space for one's personal development and pursuit of personal growth all have an impact on male teaching professionals at private institutions.



Objective: 2 To assess the job satisfaction level of the participants

Table 3 Cross tab between Demographic variables and job satisfaction questions

SOME JOB SATISFACTION QUESTIONS	CATEGORY	GENDER		STREAM		EXPERIENCE			BIRTH OF ORDER			AREA OF LIVING		MARITAL STATUS	
		MALE	FEMALE	SCIENCE	ARTS	1 TO 5 YEARS	6 TO 10 YEARS	ABOVE 10 YEARS	FIRST CHILD	MIDDLE CHILD	LAST CHILD	RURAL	URBAN	MARRIED	UNMARRIED
1] There are few rewards for those who work here.	YES	30	41	39	38	36	27	14	39	19	19	51	26	52	25
	NO	10	13	10	13	09	04	09	07	05	11	16	07	14	09
2] Are you satisfied with the permanency of the job?	YES	26	51	39	38	33	27	17	32	22	23	49	25	50	27
	NO	14	09	10	13	12	05	06	14	03	06	18	05	19	06
3] Do you feel positive and motivated within your workplace?	YES	36	55	48	43	38	31	22	43	23	25	62	29	61	30
	NO	04	05	04	05	07	01	02	03	02	04	05	04	06	03
4] Do you have everything within your working place to feel comfortable and relaxed?	YES	32	49	42	39	34	30	17	37	22	22	55	26	54	27
	NO	09	10	08	11	11	02	05	09	02	17	12	06	27	05
5] Do you get enough time to do your job well?	YES	28	44	39	33	29	25	18	31	20	21	49	23	48	24
	NO	13	16	10	18	16	07	05	15	05	08	18	10	19	09
6] Are you regularly stressed with deadlines and the workplace?	YES	16	28	20	24	19	15	10	19	11	14	29	15	33	11
	NO	24	32	29	27	26	17	13	27	14	15	38	18	34	22
7] Do you usually take your work home?	YES	21	32	23	30	23	17	13	27	13	13	36	17	36	17
	NO	19	28	26	21	22	15	10	19	12	16	31	16	31	16

Note: Male =40, Female =60.



Descriptive and Statistical Analysis Levels across the selected Job satisfaction Questions.

The different types of opinions in table 3 (I.e.) are created to calculate degrees of satisfaction in a cross-tabulation. According to the data in this table, 23% of professors say that the incentives at private institutions are not satisfactory. In private institutions, 77% of professors reported being motivated to finish their work. Female teachers at private colleges exert more effort and enthusiasm than their male counterparts in comparison to that group. 25% of faculty members are dissatisfied with the permanence of their jobs based on their marital status.

Male faculty members are less content than female faculty members due to their heavier workloads, lack of completion time, and satisfaction with job security (75% of faculty members agree), which describes their feeling of fulfillment. Because of incentives, 9% of faculty members report feeling depressed and uninspired at work (There is no difference in pay between experienced faculty and new faculty; both receive the same compensation) To accomplish their organizational goals and plan their day, 91% of faculty members feel happy and motivated to work at private institutions. 81% of faculty members work in private institutions where they have access to everything they need to feel comfortable and at ease. 72% of faculty members report having adequate time to do their work properly, while 47% report never bringing work home. Lastly, in comparison to male professors, female professors are more content to work at private institutions since they receive more benefits, feel happier, more driven, at ease, and are less pressured by their workloads and deadlines.

CONCLUSION

This paper develops a survey tool that organizations can use to identify their strengths and evaluate the effectiveness of their resilience strategies and investments. The present study concluded that there was a significant difference between resilience and interpersonal tolerance among college faculty, based on gender. The nature of family and area of living does not influence the resilience and interpersonal tolerance among college faculty. Then in cross tabs more female faculties are more satisfied to work in private institutions than male faculties.

LIMITATION

The research's shortcomings are related to the qualitative methodology that was utilized to gather data for this particular study, which concentrated more on educators than on other professions or administrative personnel. The participant's financial position was also omitted. This study gives us more understanding of the mechanisms underlying the link between interpersonal tolerance and resilience.

SUGGESTIONS

First and foremost, as an exciting potential for the future, it would be worthwhile to conduct more longitudinal studies that would enable us to evaluate the development of the investigated constructs over a longer time frame. Further details and original insights are provided by longitudinal investigations that may not be possible in other contexts. Researchers can examine changes over time using this technique. To better understand issues related to development and longevity, longitudinal approaches are very helpful. Researchers can examine how certain items could change at various stages of life and investigate some of the causes of these developmental adjustments.

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LOVE MARRIAGE AND SEVENTH BHAVA

K. Rama¹, Dr. K. Jothimani²

¹Research Scholar, Dept. of Astrology, Vels Int. of Science, Technology & Advanced Studies, Chennai, India

²Head of the Dept., Dept. of Astrology, Vels Int. of Science, Technology & Advanced Studies, Chennai, India

ABSTRACT

This research on the topic of 'Love Marriage and the Seventh Bhava' is very useful to know whether marriage is an arranged marriage or love marriage, which is a very important event in one's life. The hypothesis of the study is to make and confirm the prediction rules for the study of 'Love Marriage and Seventh Bhava' and to confirm that in love marriages Lagna Lord, Fifth Lord, Seventh Lord, Rahu, Shukran, Mars and Mercury, which are considered as Karaka planets for love marriage, have influence in love marriage horoscopes. Based on these, this study is carried out.

KEYWORDS - Bhava, Lagna, Ragu, Kalatra Sthana, Bhagya Sthana

I. INTRODUCTION

In one's horoscope, the 7th house, which is the Kalatra house, is the place that determines the married life and love. It is important for this place and the lord of this place to get strong and not get weak. One can know one's behaviour, desire, love interest etc., only by this place. If Venus Mars Saturn conjuncts the 7th lord or Venus Mars Saturn aspects the 7th lord then love marriage will take place.

To see whether it is a love marriage or an arranged marriage, one can decide by looking at one's horoscope by looking at the Purva Puniya Sthana called fifth house, the seventh house called Kalatra Sthana and the ninth house called Bhagya Sthana in one's horoscope.

The third house from Lagna in one's horoscope is a place of courage and vigour. A man's valour can also be learned from this place. If there is a Nicha planet in the third house, love will be dull. If Saturn and Mercury are in the third house, love will be a bit slow. Courage is very important for love and loved ones, Mars is the giver of that courage. Saturn is also the founder of love.

If the Ascendant is in the fifth house, or five seven houses are connected in one's horoscope, they will fall in love. Similarly, if Lagna Kalatra Bhavam, or Lagna 5th place is connected with 7th Bhava, love marriage will definitely happen. Love bells ring in college if the planets of love are in conjunction with the fourth lord and in the workplace if they are in conjunction with the ninth and tenth lords.

II. LOVE MARRIAGE AND THE SEVENTH BHAVA

According to the phrase "Vardanee Kulasam Badam, Sanght Purva Punyanam" in the horoscope, the status of the Jataka's clan wealth, i.e. his clan, wife and people, is determined by the positions of the planets according to the bad merit he has already done. Married life refers to the relationship between husband and wife.

7th Bhava in one's horoscope determines the married life of the Jataka. The Jataka's marriage is predicted to be a love marriage or not by predicting the strength of the 2nd house which is the family house, the 5th house which is the love house, the 7th house which is the family house and the strength of the 11th house lords. So the planetary positions in one's horoscope will clearly show one's fate. In that way, the position of the planet standing in the 7th house, the lord of the 7th house and Venus, the lord of the house, will clearly show the prosperity and weakness of his married life.

The 7th house is considered very important in a horoscope. A zodiac wheel has a total of 360. Half of it is 180. That is the beginning of the 7th sin. So the second half of human life begins in the 7th sin. That's why they have fixed this 7th Bhava as Kalatra Sthana to add a partner in our life.

Although there are many reasons for the 7th sin, the one that sticks in everyone's mind is the idea of married life that can be said to be bad. This is a sin that has left a longing and an impact on everyone's life. In addition, this is the place where we inform our relatives and friends who can share with us in our development and in the joys and sorrows that occur in our lives.

So, a person can live a happy life with his wife and people only if he is well placed in this 7th house in the horoscope. The auspicious and inauspicious things that happen in his family will be celebrated by ethnic balls, friends and relatives. Even if they



are in trouble, they will run to help. So 7th is essential to interact with everyone in this society and live happily in a harmonious atmosphere. If such 7 points are spoiled, he is still an orphan even if he is a man. Relatives and friends will not be helpful to him and there will be a crack in the relationship.

Jataka will be isolated due to lack of cooperation. Such people will separate from their spouses and people, leave their family gatherings aside, and go abroad for business. So 7th place will be affected as well for those going abroad.

III. INTERMARRIAGE

If the ninth sin in one's horoscope is afflicted by its lord or the Guru is afflicted, it can result in intermarriage. Rahu Ketu planets indicate people of other religions. These two planets are associated with five and seven lords, conjunct Rahu Ketu with Venus will result in marriage with people of other religions. Division by Snake Planets Similarly, Venus Saturn Mars conjunct in fifth and seventh houses and Venus Rahu conjunct is a horoscope system for love marriage. Even if malefic planets, negative planets, malefic planets, Rahu-Ketu and shadow planets like Rahu-Ketu join and are seen in the seventh house or the seventh lord in the horoscope, the track of love will change. There may be a difference of opinion between the lovers and they may go their separate ways.

The cause of love happiness is the 12th house in one's horoscope, Ayana, Sayana Bhoka Sthanam. This place, the lord of this place needs to get strong. Love and sensual pleasures are available only through this place. Absence of negative, malefic and malefic planets in this place is beneficial. Love will not be good if negative planets and evil planets see this place.

IV. LOVE MARRIAGE AND SEVENTH BHAVA PREDICTION RULES

Rule No.1

Correlation of 1,5,9 with 7th Bhava.

Rule No.2

7th Bhava is associated with Moon, Venus, Mars and Saturn.

Rule No.3

Venus and Saturn conjunct 7th lord.

Rule No.4

Venus and Rahu conjunct 7th lord.

Rule No.5

Moon Rahu, Mercury conjunct in 7th Bhava.

V. HOROSCOPE TABLES

Example Horoscope : 01

Date of Birth	: 11.09.1997	Time of Birth	: 08.30 PM
Place of Birth	: Coimbatore	Lagna	: Aries
Signs	: Saggitarius	Star	: Purva Ashadha - 1
Dasa Bhukthi	: Venus Dasa 18 Years 04 Month 13 Days		

SATURN	LAGNA		
KETU	RASI		
JUPITER			SUN MERCURY RAGU
MOON		MARS VENUS	

	LAGNA	MARS KETU	JUPITER MERCURY
SATURN	NAVAMSA		
			MOON
	SUN VENUS RAGU		

Rules Applied in Horoscope Table:

- As per rule no.4, Venus and Rahu conjunction with 7th lord
- As Rahu is conjunct the 7th lord Venus, this horoscope has a love marriage.
- 7th lord - Mars conjunction



Example Horoscope : 02

Date of Birth : 09.08.1979
 Place of Birth : Chennai
 Signs : Aquarius
 Dasa Bhukthi : Rahu Dasa 06 Years 07 Month 01 Days

Time of Birth : 10.25 PM
 Lagna : Aries
 Star : Shathabhisha - 3

	LAGNA		MARS
MOON KETU	RASI		SUN VENUS MERCURY JUPITER
			SATURN RAGU

	LAGNA		
KETU JUPITER MOON	NAVAMSA		
SUN			RAGU
MARS VENUS			MERCURY SATURN

Rules Applied in Horoscope Table:

- 1,5,9 Correlation with 7th Bhava.
- As per Rule No.1 7th lord Venus is conjoined with 5th lord Sun and 9th lord Guru. Also Lagna lord Mars aspects 5th and 9th house.
- 7th lord - Guru Connection.

Example Horoscope : 03

Date of Birth : 16.07.1998
 Place of Birth : Villupuram
 Signs : Pieces
 Dasa Bhukthi : Mercury Dasa 15 Years 00 Month 16 Days

Time of Birth : 00.40 AM
 Lagna : Aries

Star : Revathi - 1

JUPITER MOON	LAGNA SATURN		SUN VENUS MARS
KETU	RASI		MERCURY
			RAGU

			SUN SATURN RAGU
MERCURY	NAVAMSA		LAGNA
MARS			JUPITER
MOON KETU		VENUS	



Rules Applied in Horoscope Table:

- Rule no.1 - 1,5,9 connection with the 7th lord
- Lagna lord Mars 5th lord Sun and 7th lord Venus aspecting 9th Bhava in love marriage
- Rule No.3 - 7th lord Venus and Saturn conjunct
- As Saturn aspects the 7th lord Venus, the horoscope has a love marriage
- Rule No.4 - 7th lord with Venus & Rahu conjunct
- 7th lord - Mars conjunction

CONCLUSION

7th Bhava in one's horoscope determines the married life of the Jataka. The Jataka's marriage is predicted to be a love marriage or not by predicting the strength of the 2nd house which is the family house, the 5th house which is the love house, the 7th house which is the family house and the strength of the 11th house lords. Marriage is an important turning point in a man's life. There are people who become preachers because the worldly life is hell. Such a proud place is this 7th place.

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