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CLASSROOM PRACTICES ON THE LEARNERS' APPREHENSION AND PERFORMANCE IN MATHEMATICS

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ABSTRACT

The main objective of this study was to determine the effectiveness of teacher`s classroom practices on the learner`s apprehension in mathematics of Grade 11 students of Laguna State polytechnic-Santa. Cruz Campus, School Year 2022-2023. It sought to answer the following questions: (1) What is the level of Classroom Practices in terms of Classroom Management, Teaching Styles, Instruction, and Assessment; (2) What is the level of Learners' Apprehension in Mathematics with regards to Individual Participation; and Group Participation; (3) What is the level of learners' performance relative to general weighted average; (4) Is there a significant effect of Classroom Practices on the Learners' Apprehension in Mathematics; (5) Is there a significant effect of Classroom Practices on the Learners' Performance in Mathematics;

The research design utilized in this study was Descriptive Research Design. This research method is used for frequencies, averages and other statistical calculations. The subject was observed in a completely natural and unchanged natural environment. It is often used as a pre-cursor to quantitative research designs, the general overview giving some valuable pointers as to what variables are worth testing quantitatively. Characteristics of this method can determine if traditional classroom practices affect the apprehension of learners towards mathematics. Information gathered will be used in order to test hypothesis concerning the current status of the study.

Findings revealed that the teacher`s classroom practices evaluated by students was high in terms of classroom management, teaching style and instruction while assessment was very high. Learner`s apprehension by the students was high in terms of individual participation while group participation was moderate. The level of learners' performance relative to general weighted average was equivalent to outstanding. It was found that there was no significant effect of classroom practices on the Learners' Apprehension in Mathematics in terms of group participation while in individual participation there was a significant effect with regards to classroom management. It was also found that there was no significant effect of classroom practices on the Learners' Performance in Mathematics in terms of General weighted average.

Since the classroom management in terms of individual participation was significant therefore the hypothesis stated that there is no significant effect of classroom practices on the learners' apprehension of mathematics was partially accepted. However, the significant effect of classroom practices on the learners' performance in mathematics indicated that the null hypothesis was accepted.

This study suggested that teacher classroom practices do not affect learner apprehension and performance in Mathematics in terms of group participation. It was suggested that exploring other variables that affect apprehension and performance, as classroom management affects individual participation. Teachers should take actions to create a successful learning environment, positively impacting students' achievement of learning requirements and goals.

KEYWORDS: Classroom Management, Teaching Styles, Instruction, Assessment Individual Participation and Group Participation

1. INTRODUCTION

Mathematics was a science that helped people understand the world and create solutions to problems. It needed to be learned at an early stage, with the right materials and teachers.

Teachers in the classroom had to ensure that their curriculum and practices were effective in order to effectively convey mathematical concepts to students. Mathematics was an important subject due to its foundation in education, making it possible for individuals to acquire skills in other academic fields. Learning mathematics in school was one of the most important skills students could have to prepare for their future.

Math was a subject that many students had difficulty with. These difficulties led to apprehension. It seemed to be more difficult than other subjects because it required students to think abstractly, which could be challenging for some students. Individuals experienced some degree of apprehension before doing certain actions. Because worrying was a natural emotion that everybody might have felt. However, for others, those emotions continued to act as a roadblock, preventing them from pursuing their passions and achieving their full potential. Such was the case with students who feared mathematics because they had difficulty grasping its principles and concepts.

The public's view of mathematics as difficult could contribute to apprehension about the process of learning mathematics. Moreover, the home environment was also crucial to a child's success in this area, as it served as the child's first learning field or school, with the mother serving as the child's first teacher. One of the aspects that could also impact a student's studying habits and performance was the family's socioeconomic

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position. These things existed in the real world and had nothing to do with the classroom.

The researcher, drawing on first-hand knowledge and experience, had set out to investigate the factors inherent in and often used within traditional classroom settings that could influence students' levels of anxiety when confronted with mathematics. Certain activities were evident and could not be ignored since they were a regular part of the students' "teaching-learning-process." This research was conducted with the intention of shedding light on the ways in which common classroom practices and routines contributed to students developing apprehensions about mathematics. Understanding the roots of math anxiety and using that information to guide the design of effective pedagogical interventions and strategies had been the goal of this research.

The purpose of this study was to determine the effect of classroom practices on the learners' apprehension and performance in mathematics.

1.1 Statement of the Problem

Specifically, it sought to answer the following questions:

1. What is the level of Classroom Practices in terms of:

1.1. Classroom Management;

1.2. Teaching Styles;

1.3. Instruction; and

1.4. Assessment?

2. What is the level of Learners' Apprehension in Mathematics with regards to:

2.1. Individual Participation; and

2.2. Group Participation?

3. What is the level of learners' performance relative to general weighted average?

4. Is there a significant effect of Classroom Practices on the Learners' Apprehension in Mathematics?

5. Is there a significant effect of Classroom Practices on the Learners' Performance in Mathematics?

2. METHODOLOGY

This study followed the procedures of descriptive research method. The researcher believes that it is the most appropriate design to properly realize the objectives of the investigation. Descriptive research is a method that describes the characteristics of the variables studied.

This study involved a total of 150 students from senior high school at Laguna State Polytechnic University Santa Cruz Main Campus.In gathering the data needed to answer the research questions, a validated survey questionnaire was used. In order to answer each specific research question, the statistical treatment used was mean, standard deviation, frequency, percentage, and linear regression analysis.

3. RESULTS AND DISCUSSION

Table 1. Level of Classroom Practices in terms of Classroom Management

My teacher….	***MEAN***	***SD***	***REMARKS***
…has fair rules for the class and is extremely impartial.	4.22	0.68	Strongly Agree
…makes me feel that he/she cares about me.	4.01	0.74	Agree
…helps us set goals for our learning.	4.21	0.72	Strongly Agree
…gives words of encouragement before starting the class.	3.96	0.81	Agree
…gives instructions clearly?	4.06	0.73	Agree
Weighted Mean	*4.09*		
SD	*0.74*		
Verbal Interpretation	*High*		

Table 1 illustrates the Level of Classroom Practices in terms of Classroom Management, as seen on table 1.

Students *strongly agree* that their implementation of fair rules is fair for the class and is extremely impartial. *(M=4.22, SD=0.68)*. The teacher also helps the students set goals for their learning. *(M=4.21, SD=0.72)*. On the other hand, Students *agree* that their teacher gives words of encouragement before starting the class. *(M=3.96, SD=0.81)*.

The weighted mean of 4.09 indicate that the level of classroom practices in terms of classroom management is high. This means that teacher helps the learners to feel comfortable inside the classroom, see to it that students follow instructions and rules.

Soheili et.al (2018) viewed classroom management as an actions and directions that teachers use to create a successful learning environment; indeed, having a positive impact on students achieving given learning requirements and goals.

Table 2. Level of Classroom Practices in terms of Teaching Style

My teacher….	***MEAN***	***SD***	***REMARKS***
…prepares learners for transitions with a predictable routine.	4.03	0.75	Agree
…gives incentive program to motivate learners.	4.04	0.77	Agree
…gives a clear and positive direction.	4.10	0.76	Agree
…accepts answers positively.	4.31	0.68	Strongly Agree
…supports learners' progress.	4.28	0.67	Strongly Agree

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Weighted Mean	*4.15*
SD	*0.72*
Verbal Interpretation	*High*

Table 2 illustrates the Level of Classroom Practices in terms of Teaching Style.

Students *strongly agree* that the teacher accepts answers positively. *(M=4.31, SD=0.68)* and supports learners' progress. *(M=4.28, SD=0.67)*. On the other hand, students *agree* that teachers prepare learners for transitions with a predictable routine. *(M=4.03, SD=0.75)*.

The weighted mean score of 4.15 indicate that the level of classroom practices in terms teaching style is high. This means that if the teacher gives an accurate and systematic routine, the students will easily learn it.

Table 3. Level of Classroom Practices in terms of Instruction

My teacher….	***MEAN***	***SD***	***REMARKS***
…delivers lessons with mastery.	4.05	0.76	Agree
…defines words and terms accurately.	4.16	0.68	Agree
…provides spot-on word problems.	4.05	0.71	Agree
…explains precisely the processes in order.	4.08	0.72	Agree
…supervise the learner's academic progress.	4.15	0.73	Agree
Weighted Mean	*4.10*		
SD	*0.72*		
Verbal Interpretation	*High*		

Students *agree* that the teacher defines words and terms accurately. *(M=4.16, SD=0.68)*, supervises the learner's academic progress. *(M=4.15, SD=0.73)*. On the other hand, students also *agree* that their teacher delivers lessons with mastery, and my teacher provides spot-on word problems. both received the lowest mean score of responses with *(M=4.05, SD=0.76 and SD=0.71)*.

The weighted mean of 4.10 indicate that the level of classroom practices in terms instruction is high. This means that if the teacher has mastery of the lesson or is ready for an everyday lesson, the learners will gain a lot from it.

Table 4. Level of Classroom Practices in terms of Assessment

My teacher….	***MEAN***	***SD***	***REMARKS***
…follow instructions, work carefully and participate in class discussion.	4.29	0.68	Strongly Agree
…ask challenging questions, and often go above and beyond when completing assignments.	4.23	0.72	Strongly Agree
…are more likely to share their opinions when they know how their students will respond.	4.16	0.71	Agree
…interact positively with their classmates and look alert during your lessons.	4.31	0.66	Strongly Agree
…can answer the teacher's questions during discussion.	4.18	0.71	Agree
Weighted Mean	*4.23*		
SD	*0.70*		
Verbal Interpretation	*Very High*		

Table 4 illustrates the Level of Classroom Practices in terms of Assessment.Students *strongly agree* that teachers should follow instructions, work carefully, and participate in class discussion. *(M=4.29, SD=0.68)*, give challenging questions and often go above and beyond when completing assignments. *(M=4.23, SD=0.72*). On the other hand, students *agree* that teachers are more likely to share their opinions when they know how their students will respond.*(M=4.16, SD=0.71)*.

The weighted mean of 4.23 indicated that level of classroom practices in terms assessment is *Very High*. This means that the teacher should always follow the following practices as stated above to be able to make good decisions about grades, placement, advancement, instructional needs, curriculum, and, in some cases, assessment, which is an integral part of instruction and determines whether or not the goals of education are being met.

Table 5. Level of Learners' Apprehension in Mathematics with regards to Individual Participation

As a student…	***MEAN***	***SD***	***REMARKS***
…i am anxious to give the answer because it can be wrong.	3.87	1.01	Agree
… solving mathematical problems, I lack confidence, particularly in explaining in the second language how I	3.63	0.98	

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came up with the answer.			Agree
...i am afraid that my classmates will tease me if my answer is wrong.	3.25	1.32	Fairly Agree
...i am scared that my teacher will get mad if I give the wrong answer.	3.01	1.32	Fairly Agree
...i feel worried about the consequences of not living up to my parents' expectations.	3.67	1.15	Agree
Weighted Mean	*3.49*		
SD	*1.16*		
Verbal Interpretation	*High*		

Table 5 illustrates the Level of Learners' Apprehension in Mathematics with regards to Individual Participation.

Students *agree* that they are not confident enough to give an answer that could be wrong. *(M=3.87, SD=1.01)* also students feel worried about the consequences of not living up to their parents' expectations. *(M=3.67, SD=1.15)*. On the other hand, students *fairly agree* that they feel scared when teachers get mad if learners give the wrong answer. *(M=3.01, SD=1.32)*.

The weighted mean score of 3.49 indicated that level of learners' apprehension in mathematics with regards to individual participation is *high.* This means that the teachers should focus on the affective domain and appropriate strategies for the learners. Also, the teacher should use positive reinforcement to motivate the learners.

Individual participation is a critical factor in the learning of mathematics. In mathematics, individual participation refers to a student's ability to engage in the subject independently, without relying on the teacher or other students for guidance. Individual participation is essential for students to develop their problem-solving skills, critical thinking abilities, and mathematical reasoning. It is also crucial for students to take ownership of their learning and to develop a sense of confidence and independence in their mathematical abilities. Effective individual participation can enhance a student's understanding of mathematical concepts, promote critical thinking and problem-solving skills, and improve their academic achievement.

Table 6. Level of Learners' Apprehension in Mathematics with regards to Group Participation

As a student…	***MEAN***	***SD***	***REMARKS***
...get apprehensive at the thought that I will be called out to give my opinion during group discussion.	3.57	0.98	Agree
...am bothered in talking in front of my peers due to the feeling of being exposed to the targeted language.	3.33	1.17	Fairly Agree
...feel that other students (group mates) might be better than me.	3.47	1.14	Agree
...am anxious to be involved in group discussions.	3.03	1.16	Fairly Agree
...feel tense when engaging in a group discussion.	3.21	1.16	Fairly Agree
Weighted Mean	*3.32*		
SD	*1.12*		
Verbal Interpretation	*Moderate*		

Table 6 illustrates the Level of Learners' Apprehension in Mathematics with regards to Group Participation.

Students *agree* that when they get apprehensive at the thought that they will be called out to give their opinion during group discussion.*(M=3.57, SD=0.98)* also, students agree that they feel that other students (group mates) might be better than me. *(M=3.47, SD=1.14)*. On the other hand, students *fairly agree* that they are anxious to be involved in group discussions. *(M=3.03, SD=1.16)*.

The weighted mean score of 3.32 indicated that the level of Learners' Apprehension in Mathematics with regards to Group Participation is *Moderate*. This suggests that in order to be effective teachers, we should always facilitate the students' learning.

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Table7. Level of Learners' Performance relative to General Weighted Average

Score	f	%	Descriptive Equivalent
90 - 100	94	62.67	Outstanding
85 – 89	44	29.33	Very Satisfactory
80 – 84	12	8.00	Satisfactory
75 – 79	0	0.00	Fairly Satisfactory
Below 75	0	0.00	Did not meet Expectation
Total	**150**	**100**	
Weighted Mean		***90.15***	
SD		***3.96***	
Verbal Interpretation		***Outstanding***	

Table 7 presents the level of learners' performance relative to general weighted average was treated using frequency and percentage, as seen on table 7.

The grade *"90 to 100*" received the highest frequency of ninety-four (94) or 62.67% of the total population with descriptive equivalent of *Outstanding*. The grade *"85 to 89"* received the frequency of forty-four (44) or 29.33% of the total population with descriptive equivalent of *Very Satisfactory***.** While the grade *"below 75 and 75-79" both* received the lowest frequency of zero or 0.00% of the total population with descriptive equivalent of *Did not meet Expectation* and *Fairly Satisfactory*.

With a *weighted mean of 90.15* it shows that the level of learners' performance relative to general weighted average has a descriptive equivalent of *Outstanding.* This means that the teaching style of the teacher was sufficient to meet the needs of the various learners.

Table 8. Significant Effect of Classroom Practices on the Learner's Apprehension in Mathematics in Terms of Individual and Group Participation

Classroom Practices	Learners Apprehension	Beta Coefficient	t-stat	p-value	Analysis
Classroom Management	*Individual Participation*	0.5933	2.27	0.025	*Significant*
Teaching Styles		-0.2987	-1.09	0.277	*Not Significant*
Instruction		0.0455	0.19	0.850	*Not Significant*
Assessment		-0.2870	-1.14	0.258	*Not Significant*
Classroom Management	*Group Participation*	0.4740	1.85	0.066	*Not Significant*
Teaching Styles		0.0296	0.11	0.912	*Not Significant*
Instruction		-0.0325	-0.14	0.890	*Not Significant*
Assessment		-0.4080	-1.65	0.101	

Table 8 presents the significant effect of Classroom Practices on the learner's Apprehension towards Mathematics in terms of Individual and Group Participation.

In terms of *Individual Participation*, the *Classroom Management* of the classroom practices was observed to have any significant effect on the students' apprehension in terms of Individual Participation. This is based on the computed p-value obtained from the tests which were less than the level of significance at α=0.05.

Soheili et.al (2018) viewed classroom management as an actions and directions that teachers use to create a successful learning environment; indeed, having a positive impact on students achieving given learning requirements and goals.

On the other hand, the *Teaching Styles, Instruction and Assessment* were not observed to have any significant effect on the learner's apprehension in terms of Individual Participation. This is based on the computed p-values obtained from the tests which were more than the level of significance at α=0.05.

In terms of *Group Participation*, the *Classroom Management, Teaching Styles, Instruction and Assessment* were not observed to have any significant effect on the learner's apprehension in terms of Group Participation. This is based on the computed p-values obtained from the tests which were more than the level of significance at α=0.05. This means that classroom management, teaching styles, instruction, and assessment do not affect the group participation of the learners.

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Contrary to the results of the stud, effective classroom management is a prerequisite to an effective learning environment. Children can't learn when they are distracted by inappropriate behavior. A well-managed classroom thus allows meaningful teaching and learning to take place. The descriptor "meaningful" is important in the above statement. It highlights another reason classroom management is so important. It highlights another reason classroom management is so important.

Table 9. Significant Effect of Classroom Practices on the Learner's Performance in Terms of Grade

Classroom Practices	Learner's Performance	Beta Coefficient	t-stat	p-value	Analysis
Classroom Management		0.312	0.26	0.797	*Not Significant*
Teaching Styles		-1.665	-1.32	0.190	*Not Significant*
Instruction	*Grade*	0.781	0.70	0.483	*Not Significant*
Assessment		1.440	1.23	0.220	*Not Significant*

The *Classroom Management, Teaching Styles, Instruction and Assessment* were not observed to have any significant effect on the learner's performance in terms of Grade. This is based on the computed p-values obtained from the tests which were more than the level of significance at α=0.05.

This indicates that the learners' grades were not influenced by the teacher's classroom management, whatever it may have been. Second, regardless of the teacher's preferred method of instruction, it has no bearing on the student's grade. Last but not least, no matter what style of instruction or assessment the teacher employed, it had no effect on the learner's performance in terms of grade.

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study, the following conclusions were drawn:

Since, there was a significant effect of classroom practices on the learners' apprehension in mathematics in terms of classroom management and there is no significant effect of classroom management on the learners' apprehension in mathematics in terms of teaching style, instruction, and assessment therefore the null hypothesis was partially accepted.

However, there is no significant effect of classroom practices on the learners' performance in mathematics with regards to grade therefore the null hypothesis was accepted.

The study shows that there are some other predictors that may affect the learner`s apprehension and performance in mathematics.

In view of the findings and conclusions, the following recommendations may be made.

1. It is evident that classroom practices by the teacher do not affect the learner's apprehension and performance in Mathematics in terms of group participation; therefore, the researcher suggests finding out other variables that will affect the learner's apprehension and performance in Mathematics.
2. Since classroom practices with regards to classroom management has an effect on learner's apprehension in terms of individual participation. Teachers may always take actions and follow directions that they use to create a successful learning environment that has a positive impact on students achieving provided learning requirements and goals.
3. The future researchers may conduct parallel study which includes related variables and use more samples that can affect the learner's apprehension and performance in Mathematics.

REFERENCE

1. *Soheili et. al (2018). Intact Implicit Learning. American Psychological Association, Vol. 22 No. 5*