EVALUATION OF FOOD TECHNOLOGY SPECIALIZATION OF BACHELOR OF INDUSTRIAL TECHNOLOGY (BIT) ASSESSING ITS PROGRAM INPUT AND IMPLEMENTATION

Daryll R. Gabutin, MAT

Nueva Ecija University of Science and Technology

ABSTRACT

This evaluative study focuses on the assessment of Food Technology of the Bachelor of Industrial Technology Program as a basis for program enhancement. The program inputs, implementation, and outputs are used to evaluate Food Technology. Students, teachers, graduates, and administrators of the specialization are the respondents of the study. The findings show that for the ten areas of the program under its inputs, Food Technology's: Vision, Mission, Goals, and Objectives (VMGO); Faculty; Curriculum and Instruction; Support to Students; Research; Extension and Community Involvement; and Library are Excellent; while Physical Plant and Facilities; Laboratories; and Administration are Satisfactory. The study also reveals that in terms of Food Technology's implementation: Instruction is Satisfactory; meanwhile Evaluation and Evaluation Tools are Excellent. The study recommends the conduction, base on the results of this study targeting the specific areas which are needed to improve on, toward program improvement.

KEYWORDS: *food technology; assessment; inputs; implementation*

INTRODUCTION

In 2007, the College of Industrial Technology (CIT) of the Nueva Ecija University of Science and Technology (NEUST) implemented the Bachelor of Science in Industrial Technology (BSIT) program.   In 2008, this program was renamed as Bachelor of Industrial Technology (BIT) on a suggestion from the Philippine Association of Colleges and Universities in Industrial Technology (PACUIT).   The assessment conducted by Aloroy in 2016 emphasizes the need to evaluate the efficacy of the BIT Program in attaining its objectives.   There are worries about a mismatch between the knowledge and skills acquired by Food Technology majors and their practical application in the workplace, leading to employment mismatch issues. This is despite the fact that Food Technology offers specialties in numerous areas.   In 2013, the Philippines had a significant education reform through the introduction of the K to 12 Curriculum. This resulted in modifications in higher education to ensure compatibility with outcomes-based education.   The Commission on Higher Education (CHED) and the Department of Education (DepED) cooperate to provide teacher training and ensure the quality of the curriculum.   Aloroy's study highlights the necessity of reevaluating the Food Technology specialization in the BIT Program. This will serve as a foundation for improving the program to meet industry requirements and rectify any discrepancies in the skills of graduates. It is important to note that the curriculum has not been updated since the university's earlier days as Nueva Ecija Trade School (NETS). Putting in consideration all the foregoing premises, the researcher assessed the Food Technology of the BIT Program. Because the curriculum of the program specialization has not yet been revised since its implementation when the university was still named Nueva Ecija Trade School (NETS), this study could serve as a basis for future improvement of the program, to cope up with the changes in the of academe and eliminate the mismatch of the competencies of graduates and the need of the industries.

Objectives of the Study

This study aimed to evaluate the Food Technology of the Bachelor of Industrial Technology (BIT) Program of Nueva Ecija University of Science and Technology (NEUST), as a basis for its its improvement. Specifically, it sought to answer the following questions:

1. To assessed the Food Technology inputs as regards to:
    1.1 vision, mission, goals and objectives;
    1.2 faculty;
    1.3 curriculum and instruction;
    1.4 support to students;
    1.5 research;
    1.6 extension and community involvement;
    1.7 library;
    1.8 physical plant and facilities;
    1.9 laboratories; and
    1.10 administration?

EPRA International Journal of Research and Development (IJRD)

Volume: 9 | Issue: 4 | April 2024   **- Peer Reviewed Journal**

2. To assessed the Food Technology's implementation through:
  2.1 instruction; and
  2.2 evaluation?

Methodology
The study was descriptive-evaluative. According to Wollman (2015), evaluative research assesses policies, programs, and institutional frameworks by outcomes or requirements. This study analyzed the inputs, and implementation, of the Bachelor of Industrial Technology Program's Food Technology concentration to enhance it. Respondents described the program's 10 categories and curricular instruction and evaluation using descriptive-evaluative study design.

RESULTS AND DISCUSSIONS
1. Assessment of Program Inputs with Regards ti its Ten Areas
1.1 Vision, Mission, Goal and Objectives (VMGO) is one of the ten areas of the program assessed in this study.

Table 1
Assessment of Vision, Mission, Goal, and Objectives (VMGO)

Area I: Vision, Mission, Goal, and Objectives (VMGO)	F	S	G	A	A	VD
1. The goals of the Food Technology of BIT Program are consistent with the Mission and Vision of the institution.	3.86	3.35	3.49	4.00	3.67	Excellent
2. The Food Technology of the BIT Program, faculty, personnel, students and other stakeholders participate in the formulation, review and/or revision of the VMGO.	3.57	3.18	3.53	3.00	3.32	Excellent
3. The faculty and staff perform their jobs/functions in consonance with the VGMO.	3.43	3.06	3.40	4.00	3.47	Excellent
4. There is full awareness and acceptance of the VMGO by the administrators, faculty, staff, students and other stakeholders.	3.71	3.17	3.38	3.50	3.44	Excellent
5. The goal and objectives are being achieved.	3.43	2.96	2.96	3.50	3.21	Satisfactory
Average	3.60	3.14	3.35	3.60	3.42	Excellent

Legend: F- Faculty, S- Students, G- Graduates, A-Administrators, A- Average, VD-Verbal Description

Table 1 presents the assessment of Vision, Mission, Goal, and Objectives (VMGO). Faculty, students, graduates, and administrators gave the highest rating, 3.67, interpreted as Excellent, to the consistency of the goal of the Food Technology of BIT Program with the mission and vision of the institution, while they rated achievement of Food Technology's goal and objectives, the lowest, 3.21, equivalent to Satisfactory. This implies that the goal of the program is already consistent with the institution's mission and vision Those just have to be carried out more appropriately in order to achieve them. Allen and Kern (2018) state that vision, mission, and objectives are unspoken contracts between the institution and various stakeholders. A well-written statement can guide decision-making, resource allocations, policy decisions, and how the school operates. By making their purpose clear, schools can put their goal and objective into action.

1.2 Another area belonging to the ten areas of the Bachelor of Industrial Technology (BIT) program is the assessment of Faculty.

Table 2
Assessment of Faculty

Area II: Faculty	F	S	G	A	A	VD
1. The required number of faculty possesses graduate degrees appropriate and relevant/allied to the Food Technology curriculum of the BIT Program.	3.14	3.16	3.28	4.00	3.37	Excellent
2. The faculty demonstrate professional competence and are engaged in any or a combination of: instruction; research; extension; production; consultancy and expert service; and publication, creative and scholarly work.	3.00	3.28	3.04	4.00	3.39	Excellent
3. The institution has qualified and competent faculty.	2.86	2.98	3.10	4.00	3.23	Satisfactory
4. Faculty-student ratio is in accordance with the program requirements and standards: lecture (1:40) and laboratory (1:15).	3.29	3.04	3.04	3.50	3.38	Excellent
5. The faculty are efficient and effective, with sufficient time for instruction, research, extension and other assigned tasks.	2.86	3.04	3.19	4.00	3.27	Excellent
Average	3.03	3.10	3.13	3.90	3.33	Excellent

Legend: F- Faculty, S- Students, G- Graduates, A-Administrators, A- Average, VD-Verbal Description

EPRA International Journal of Research and Development (IJRD)
Volume: 9 | Issue: 4 | April 2024   - Peer Reviewed Journal

Table 2 shows the respondents' assessment of Faculty. They rated the professional competence of faculty in doing other tasks aside from teaching. Such item got the highest, 3.39, equivalent to Excellent, while, the lowest rating, 3.23, interpreted as Satisfactory, was given to the qualification and competence of the faculty. Teachers' qualification and competence cover their educational background and training's/seminars attended. A study conducted by Dial (2008), entitled *"The effect of teacher experience and teacher degree levels on student achievement in mathematics and communication arts"*, which finds out that teacher degree level alone had no effect on student achievement. The results of the study indicated that years of experience, as well as the interaction between years of experience had an effect on student achievement in both communication arts and mathematics. However, based on the study entitled *"The impact of graduate education on teacher effectiveness: Does a master's degree matter?"* conducted by Horn and Jang (2017), the effect of master's degree attainment on student reading and math achievement during high school remains unclear. One study suggests that master's degree attainment will only yield a positive effect on student math achievement if the teacher majors in math during the master's degree program. Regarding science achievement, one study demonstrated that scores were higher among students whose teachers had a master's degree, compared to students whose teachers only had a bachelor's degree. Training wise, one faculty member had already attended nine seminar-workshops to date while the other six had attended an average of three only. According to Felipe (2013), teachers' attendance to trainings and seminars on ICT, new methods and technique in teaching, orientations on the curriculum, values formation seminars, will help create an effective learning environment, improve teaching-learning situations, keep updated on modern instructional devices and inspire them to become better teachers in the modern world. Furthermore, Jaminal (2019) recommends in his study that seminar-workshops should be conducted for teachers on the integration of technology as part of their teaching strategies to enhance students' motivation.

1.3 Assessment of the curriculum and instruction is another area included in the ten areas of Bachelor of Industrial Technology (BIT) program.

Table 3.
Assessment of Curriculum and Instruction

Area III: Curriculum and Instruction	F	S	G	A	A	VD
1. The curriculum provides for the development of the following professional competencies: acquisition of knowledge; application of theories to real problems; and demonstration of skills in the actual work setting.	3.43	3.04	3.02	4.00	3.37	Excellent
2. Opportunities for participation in hands-on activities, such as immersion/practical training and field study are maintained in the curriculum.	2.86	3.22	3.06	4.00	3.28	Excellent
3. Teaching strategies stimulate the development of the students' higher-order thinking skills (HOTS such as critical thinking, analytical thinking, creative thinking and problem-solving.	3.14	3.12	3.09	3.50	3.21	Satisfactory
4. The program of studies has a system of evaluating student performance through a combination of: formative tests such as quizzes, unit tests; summative such as mid-term and final examination; project and term papers; practicum and performance tests; and other course requirements.	3.00	3.08	3.11	4.00	3.29	Excellent
5. At least 60% of the students enrolled in the program are able to graduate within the regular time frame.	3.14	3.02	3.23	4.00	3.34	Excellent
Average	3.11	3.10	3.10	3.90	3.30	Excellent

Legend: F- Faculty, S- Students, G- Graduates, A-Administrators, A- Average, VD-Verbal Description

Table 3 presents the assessment of Curriculum and Instruction. The respondents gave the highest rating, 3.37, interpreted as Excellent, to the provision of the curriculum for the development of its professional competencies, while they gave the way teachers' strategies stimulate and develop students' higher-order thinking skills, the lowest, 3.21, interpreted as Satisfactory. For students, a dynamic time requires a dynamic strategy. Moreover, current students suggest to further enhance curriculum and instruction through conducting additional seminars and trainings for them to gain supplemental knowledge and skills. Panigrahi (2020) asserts that seminars and workshops are essential for students to develop proficiency in verbal communication, acquire knowledge in a particular field, grow networks, gain encouragement and motivation, and experience a different environment than classroom. She adds that the benefits and importance of workshops for students is immense. In higher education, where every aspect of the study is relevant to market and industrial standards, workshops and seminars are more than necessary.

1.4 Assessment of the support to student is another area in the ten areas of the Bachelor of Industrial Technology (BIT) program

Table 4
Assessment of Support to Students

Area IV: Support to Students	F	S	G	A	A	VD
1. The Student Affairs Services (SAS) Unit is composed of student welfare and student development programs and services.	3.43	3.12	3.43	4.00	3.49	Excellent
2. The institution conducts leadership training's.	3.86	3.02	3.51	4.00	3.60	Excellent
3. The institution provides access to scholarship and financial assistance.	3.14	3.31	3.57	4.00	3.50	Excellent
4. The primary health care services are administered to all students by licensed medical, dental and allied professionals	3.14	3.33	3.53	4.00	3.50	Excellent
5. Policies and procedures in the selection of student athletes, performers, writers, etc. are implemented.	3.29	3.24	3.60	4.00	3.51	Excellent
Average	3.37	3.20	3.53	4.00	3.52	Excellent

Legend: F- Faculty, S- Students, G- Graduates, A-Administrators, A- Average, VD-Verbal Description

Table 4 shows the respondents' assessment about Support to Students. They rated the institution's conduction of leadership trainings, the highest, 3.60, equivalent to Excellent, while their lowest rating, although still interpreted as Excellent, 3.49, was given to the student welfare and student development programs and services of the Student Affairs Services (SAS) Unit. For this area, the ratings given by the respondents are all equivalent to Excellent. However, when it comes to Support to students, there is no more reliable assessment from the students themselves. Aside from conducting more seminars and trainings, most of the students said that they should also be supported in terms of financial, like what they do with other courses, especially that Food Technology requires many laboratory activities which sometimes require them a lot of money. In a study entitled" The role of student services in the improvement of student experience in higher education", Ciobanu (2013) mentions that students' support and services contribute to the quality of their learning experience and their academic success. Studies show that the most important factors in education quality assurance are: quality of teaching/ learning and service systems and support for students (Hill, Lomas, & MacGregor, 2003). Therefore, the importance of support activities for students is obvious but also presents the management of services with difficulties due to the increasing number of students and their needs. In addition, another important role of student service is to prepare students for active participation in society. Along with teachers and non-governmental organizations, they contribute to having increased learning opportunities and community involvement by organizing or promoting internships, experiential units or short-term experiences, integrated into the curricula (UNESCO, 2002).

1.5 Assessment of research is another area belonging to ten areas of the Bachelor of Industrial technology (BIT) program.

Table 5
Assessment of Research

Area V: Research	F	S	G	A	A	VD
1. The institution has an approved Research Manual.	3.14	2.92	3.40	4.00	3.37	Excellent
2. Research results are published.	2.86	2.88	3.15	4.00	3.22	Satisfactory
3. The institution has an approved and adequate budget for research.	2.71	3.27	3.11	4.00	3.27	Excellent
4. There is a system of implementation, monitoring, evaluation and utilization of research outputs.	3.14	3.04	2.91	3.50	3.15	Satisfactory
5. The institution provides opportunities for the dissemination of research results in fora, conferences, seminars, and other related means.	3.57	3.10	3.11	3.50	3.32	Excellent
Average	3.08	3.04	3.14	3.80	2.27	Excellent

Legend: F- Faculty, S- Students, G- Graduates, A-Administrators, A- Average, VD-Verbal Description

Table 5 presents the assessment of the area in Research. Having an approved institution's Research Manual this area got the highest rating from the respondents, 3.37, equivalent to Excellent, while the system of implementation, monitoring, evaluation and utilization of research outputs, received the lowest rating, 3.15, interpreted as Satisfactory. At this time, the proper execution of before, during and after Research practices is most essential and beneficial to teachers and students. Such area forces teachers to achieve continuous growth by having further studies and action research. For students researches make the most out of their learning experience and discover learning aside from what is written in their books.

In an online article entitled "Role and need of research in higher education", Gupta (2017) enumerates the important pointers why research must be a part of every higher education institution: 1. Teaching will improve if the staff engages in research (research-based teaching); 2. Students will learn more if they come into contact with research (research-based learning); 3. Professional practice will improve if professional workers in their training learn how to base their work on research-based knowledge (research-

based practice); and 4. Professional programs have an obligation to improve the knowledge basis of professional work through research (research-based knowledge production).

Clemeña and Acosta (2007), in their study entitled "Education institutions: Perspectives of university faculty", aimed at understanding the prevailing research culture in the Philippine HEIs, as viewed by 40 university faculty from 14 universities and colleges in the country. The study found out that faculty did not consider any of the aspects of research culture in their institutions as being strong. The faculty further perceived that factors necessary for improving research productivity include: time, strong belief in research endeavor, faculty involvement, positive group climate, working conditions and organizational communication, decentralized research policy, research funding, and clear institutional policy for research benefits and incentives. Thus, the findings recommend that developing a research culture should take into account the dynamics of the interaction of the quadruple function of HEIs, the researcher's mind, and the body of institutional policy.

For the current Research culture of the Food Technology, the faculty and students ask the institution to: provide more research materials such as books, manuals, and other references; construct research facilities with sufficient tools and equipment; and support financially researchers either teachers or students.

1.6 Assessment of extension and community involvement is another area in the ten areas of the Bachelor of Industrial Technology (BIT) program

Table 6
Assessment of Extension and Community Involvement

Area VI: Extension and Community Involvement	F	S	G	A	A	VD
1. The Food Technology curriculum of the BIT Program has a benchmark survey of the problems, needs priorities and resources of the community.	3.29	3.10	3.04	4.00	3.34	Excellent
2. The extension projects and activities complement the curriculum of the Food Technology among of the BIT Program.	3.57	3.12	3.09	4.00	3.45	Excellent
3. The administration, faculty and students are involved in the implementation and dissemination of extension programs.	3.29	3.20	3.21	4.00	3.42	Excellent
4. There is an approved and adequate budget for extension.	3.14	3.16	3.38	4.00	3.42	Excellent
5. There is a strategy for involving the community, government and private agencies in the Extension Program.	3.29	3.22	3.36	4.00	3.47	Excellent
Average	3.32	3.16	3.22	4.00	3.42	Excellent

Legend: F- Faculty, S- Students, G- Graduates, A-Administrators, A- Average, VD-Verbal Description

Table 6 shows the assessment given to Extension and Community Involvement of Food Technology. The respondents rated the strategy for involving the community, government and private agencies in the Extension Program, having the highest, 3.47, and was interpreted as Excellent, while they gave the lowest rating, 3.34, equivalent to Excellent, to the benchmark survey of the problems, needs priorities and resources of the community. All of the ratings given by the respondents are equivalent to Excellent, nevertheless, most of the students suggested to get them more involved when it comes to this area. Community extension service operates through self-support, self-reliance, self-sustaining, and self-propelling principles. Through the people's participation, well-planned programs should be consciously taking into consideration. This is also an important part of providing quality education to the student when it comes to program accreditation (Laguador, Dotong & De Castro, 2014).

Meanwhile, Fletcher and Major (2009) found out that those students that volunteered or are doing volunteer work because of the activity that would sooner or later be related to their careers. It shows that some students volunteered depending on the course they are taking but it has to be that what they are doing is also related to what they are studying. It might be that case because doing volunteer activities that are related to the course the students are taking could be considered as experiences that would help them in their future undertakings.

Therefore, Extension and Community Involvement serves as an instrument by which the institution instills in the mind of its own community specially its beneficiaries, the concept of social responsibility. Moreover, the area serves as a springboard for a closer linkage between the school and the community (COMEX, 2012).

EPRA International Journal of Research and Development (IJRD)
Volume: 9 | Issue: 4 | April 2024   **- Peer Reviewed Journal**

1.7 Assessment of Library is another area in the ten areas of the Bachelor of Industrial Technology (BIT) program.

Table 7
Assessment of Library

Area VII: Library	F	S	G	A	A	VD
1. The library core collection is adequate, updated and well-balanced.	3.00	3.02	3.09	3.50	3.15	Satisfactory
2. The library is strategically located and accessible to student, faculty and another clientele.	3.00	3.08	3.15	3.50	3.18	Satisfactory
3. IT software and multi-media equipment are utilized.	3.29	3.05	3.17	3.50	3.25	Satisfactory
4. The financial support from fiduciary supplemental and external funds is adequate.	2.86	3.02	3.26	4.00	3.28	Excellent
5. Library resource sharing and linkage are well-established.	3.29	3.14	3.30	4.00	3.43	Excellent
Average	3.09	3.06	3.19	3.70	3.26	Excellent

Legend: F- Faculty, S- Students, G- Graduates, A-Administrators, A- Average, VD-Verbal Description

Table 7 presents the assessment made about Library. The well-established Library with resource sharing and linkage got the highest rating, 3.43, equivalent to Excellent, while the adequacy, being up-to-date, and well-balanced core collection of the library, was rated the lowest, 3.15, interpreted as Satisfactory. The teachers and students, who technically and frequently use the library, only gave Satisfactory ratings. The teachers suggested the addition of more references, such as books, magazines and the like, to the library. Aside from additional references, the students also wished that the library would always be open or accessible for them when they need to.

Chaudhari (2017) in his article entitled *"The role of library in higher education"*, claims that in comparison to primary and secondary education, the role of library in higher education is much more important since library is considered a prime requirement in university education. The entire academic and research process are fully dependent on library network. To facilitate any educational programs successfully, library proves as the essential part.

Furthermore, the National Library of the Philippines (2018) conducted a research, entitled *"Status of Philippine public libraries and librarianship"*, to report on the current situation of the public libraries in the country. The paper asserts that libraries are deemed to be conducive to learning and the primary source of knowledge for readers and researchers. It is of great importance that the library is up to date with materials given the fast-paced environment of today. The fast-paced environment was brought by the current technology that keeps on innovating every day. Thus, there is a need for libraries to acquire the latest collection and install new facilities to accommodate the needs of the readers with respect to the latest innovations in their respective fields. The teachers believe that additional references should be in the library such as books, magazines and the like. Aside from adding more references, students also suggested that the library should be accessible and available to them at all times.

1.8 Assessment of physical plant and facilities is another area included in the ten areas of the Bachelor of Industrial technology BIT program.

Table 8
Assessment of Physical Plant and Facilities

Area VIII: Physical Plant and Facilities	F	S	G	A	A	VD
1. There is a system to ensure that all the following are provided: traffic safety in and outside the campus; waste management program; proper utilization, repair and upkeep of school facilities and equipment; and cleanliness and orderliness of the school campus.	3.29	3.08	2.87	3.50	3.18	Satisfactory
2. The buildings and other facilities are safe, well-maintained, and functional.	2.86	2.84	2.62	3.50	2.96	Satisfactory
3. Classrooms are adequate and conducive to learning.	3.00	2.75	2.74	4.00	3.12	Satisfactory
4. The offices and staff rooms are adequate and conducive to working environment.	3.43	3.00	2.74	4.00	3.29	Excellent
5. Indoor and outdoor facilities are well-equipped and properly maintained.	3.14	2.78	2.70	4.00	3.17	Satisfactory
Average	3.14	2.89	2.73	3.80	3.14	Satisfactory

Legend: F- Faculty, S- Students, G- Graduates, A-Administrators, A- Average, VD-Verbal Description

EPRA International Journal of Research and Development (IJRD)
Volume: 9 | Issue: 4 | April 2024   - Peer Reviewed Journal

Table 8 shows the respondents' assessment of Physical Plant and Facilities. They rated the offices and staff rooms' adequacy and conduciveness to working environment, the highest, 3.29, interpreted as Excellent, while they gave the lowest rating, 2.96, equivalent to Satisfactory, to the safety, maintenance, and functions of the buildings and other facilities. Physical Plant and Facilities were given a rating quite lower than other areas by the respondents who are directly using and who used facilities such as class rooms, gymnasiums, and other indoor and outdoor facilities.

In relation to what Tanner (2015) mentioned, school facilities can have a profound effect on both teacher and student outcomes, the respondents of this study namely teachers, students, and graduates recommended the improvement of basic facilities such as classrooms, laboratories, and offices by providing more space, proper ventilation, updated lay-out, and new materials.

A study entitled *"The impact of school facilities to the teaching-learning environment",* conducted by Jaminal (2019), revealed that the presence of school facilities as rated by the teachers and students had motivated them and made them feel happy and satisfied with the knowledge that they gained through the utilization of the school facilities.

1.9 Assessment of Laboratories is another area belonging to the ten areas of the Bachelor of Industrial Technology (BIT) program.

Table 9
Assessment of Laboratories

Area IX: Laboratories	F	S	G	A	A	VD
1. Safety and precautionary measures are implemented.	2.71	3.04	2.85	4.00	3.15	Satisfactory
2. The laboratories and shops well-equipped, functional and are conducive to learning.	3.00	3.06	2.57	3.00	2.91	Satisfactory
3. The laboratory equipment, supplies and materials are sufficient and wisely utilized.	3.00	2.86	2.40	4.00	3.07	Satisfactory
4. A laboratory technician/assistant is available for the proper upkeep of the laboratory.	2.71	2.82	2.45	4.00	2.99	Satisfactory
5. The institution keeps the laboratories neat and orderly.	2.86	3.02	2.77	4.00	3.16	Satisfactory
Average	2.86	2.96	2.61	3.80	3.06	Satisfactory

Legend: F- Faculty, S- Students, G- Graduates, A-Administrators, A- Average, VD-Verbal Description

Table 9 presents the assessment of Laboratories. The item, "the institution keeps the laboratories neat and orderly", received the highest rating, 3.16, equivalent to Satisfactory, while the item, "the laboratories and shops are well-equipped, functional and are conducive to learning", got the lowest, 3.07, interpreted as Satisfactory. All the ratings given by the respondents for this area are equivalent to Satisfactory, practically lower than all other areas which all have Excellent ratings in some of the items under them.

Having experienced to use the laboratories, the teachers, students, and graduates, gave their lowest ratings for Laboratories. Along with the administrators, they all have major suggestions regarding the laboratories: construction of more laboratories, reconstruction of old laboratories making them bigger, provision of modern tools and equipment specifically for Food Technology, and adopting high-technological practices appropriate to their course.

For a skill-oriented course, an efficient laboratory is essential for students' actual and practical application of the learning they had acquired from class discussions. Abdullaeva (2018) indicates laboratory works and practical exercises are related to the main types of training sessions aimed at the experimental confirmation of theoretical knowledge and the formation of educational and professional practical skills; they constitute an important part of theoretical and professional practical trainings.

1.10 Assessment of Administration is another area evaluated in Bachelor of Industrial Technology (BIT) program.

Table 10
Assessment of Administration

Area X: Administration	F	S	G	A	A	VD
1. The institution has a well-designed and functional organizational structure.	3.00	3.22	3.06	4.00	3.32	Excellent
2. The Food Technology curriculum of the BIT Program area chair has appropriate/relevant educational qualification and experience.	3.00	3.31	3.08	3.50	3.22	Satisfactory
3. The area chair, the faculty and the administration work together for the improvement of the BIT Program.	3.14	3.22	3.19	4.00	3.39	Excellent

EPRA International Journal of Research and Development (IJRD)
Volume: 9 | Issue: 4 | April 2024   - Peer Reviewed Journal

	F	S	G	A		VD
4. The Dean, faculty, staff and students pursue collaborative activities in generating resources and income, and in implementing cost-effective measures.	3.14	3.06	3.10	3.50	3.20	Satisfactory
5. The Dean implements policies and procedures on internal administration and operations of the Food Technology of the BIT Program.	3.14	3.33	3.00	3.50	3.24	Satisfactory
Average	3.08	3.23	3.09	3.70	3.27	Excellent

Legend: F- Faculty, S- Students, G- Graduates, A-Administrators, A- Average, VD-Verbal Description

Table 10 shows the assessment of Administration. The highest rating, 3.39, interpreted as Excellent, was given to the item. "The area chair, the faculty and the administration work together for the improvement of the BIT Program", while the lowest, 3.20, equivalent to Satisfactory, was for the item, "the Dean, faculty, staff and students pursue collaborative activities in generating resources and income, and in implementing cost-effective measures". School administration plays a very important role in student development. While research has not determined a direct relationship between administration and student achievement, administration does strongly influence school environmental conditions affecting such growth (Lucey, 2013).

For the administrators, their only concern about the administration is the improvement of facilities. While some teachers want to resolve minor misunderstanding within the administration and be more united in serving their students. For the students, they would like the administration to be brought closer to them and make them feel more welcome. Badarna and Ashour (2016) conducted a study entitled *"Role of school administration in solving students' problems among Bedouin schools within the Green Line in Palestine",* and aimed to identify the role of the school administration in solving the students' problems and differences according to gender, scientific qualification, years of experience and job title. The study results showed that the school administration in the Bedouin schools within the Green Line plays a moderate role in solving the problems of students. The domain of "the role of school administration in solving academic problems" ranked the first, and the results showed that there are no statistically significant differences due to the variables of gender, scientific qualification, years of experience, and job title in all domains.

2. Assessment of Program Implementation through Instruction and Evaluation
2.1 Instruction of the BIT program was assessed through planning of lessons and preparation of materials, knowledge of content and strategies in teaching, and knowledge and management of students

Table 11
Assessment of Instruction being done by concerned Faculty

Planning of Lessons and Preparation of Materials	F	S	G	A	VD
1. Prepares a syllabus/course outline reflecting the content of the course	3.71	3.47	3.04	3.41	Excellent
2. Seeks for technical assistance from co-instructors teaching the same subjects	3.29	3.27	3.06	3.21	Satisfactory
3. Devices instructional and teaching materials (power points, handouts, modules)	4.00	3.45	3.04	3.50	Excellent
4. Develops instructional materials using differentiated instructions (audio, visual, audio-visual)	3.86	3.22	2.74	3.27	Excellent
5. Constructs own written/oral assessment tools and performance tasks (examinations, quizzes, recitations, laboratory works)	3.43	3.49	3.31	3.41	Excellent
Knowledge of Content and Strategies in Teaching	**F**	**S**	**G**	**A**	**VD**
1. Has mastery of the subject matter	3.57	3.10	3.26	3.31	Excellent
2. Reviews previous lessons and motivates students through activities towards the development of new lessons	3.71	3.35	3.17	3.41	Excellent
3. Gives complete and accurate information through clear and simple presentation of the lessons	3.43	3.23	3.02	3.24	Satisfactory
4. Utilizes differentiated instruction depending on the needs and interests of the students	3.43	3.24	3.02	3.23	Satisfactory
5. Entertains students' questions and provides clarifications	3.71	3.24	3.17	3.37	Excellent
Knowledge and Management of Students	**F**	**S**	**G**	**A**	**VD**
1. Identifies students' socio-demographic, socio-economic, ethnic and educational background	3.57	3.22	3.32	3.37	Excellent
2. Determines students' prior level of knowledge of the subject matter	3.57	3.31	3.26	3.88	Excellent
3. Has an awareness and adapts to students different learning styles	3.29	3.27	3.15	3.24	Satisfactory

4. Adjusts to students' learning phases	3.86	3.22	3.19	3.42	Excellent
5. Learns about the strengths and weaknesses of students	3.43	3.22	3.19	3.28	Excellent

Legend: F- Faculty, S- Students, G- Graduates, A-Administrators, A- Average, VD-Verbal Description

Table 11 presents the assessment of Instruction. For planning of lessons and preparation of materials, devices used by Instructors like instructional and teaching materials (power points, handouts, modules), got the highest rating, 3.50, which was described as Excellent, while the item, seeks for technical assistance from co-instructors teaching the same subjects received the lowest, 3.21, and was interpreted as Satisfactory. Although faculty and students are already in higher education, these are still essential in teaching and learning processes.

Lesson plans affect not only teacher's instructions but classroom management as well. Characteristics of a well-managed classroom are: 1. students are deeply engaged with their work; 2. students know what is expected from them; 3. there is just a little wasted time, confusion; and 4. the climate of such classroom would be work-oriented, but relaxed and pleasant (Wong & Wong, 2009).

Cicek and Tok (2013), in their study entitled *"Effective use of lesson plans to enhance education in U.S. and Turkish Kindergarten thru 12th Grade public school system: A comparative study"*, posit that lesson plans should be ready one week before the beginning of the academic year for the necessary arrangements to be made. The plan should be particular and usable, It must be economical in terms of time being devoted by teacher, and it strengthens the educational program. Depending on the grade level and subject matter, teachers may be required to follow curriculum designated by campus or district administration.

In addition, instructional materials are essential to enrich classroom discussions. Three types of materials can be used in the teaching-learning process such as visual, audio, and audio-visual. The study entitled *"Impact of visual aids in enhancing the learning process case research: District Dera Ghazi Khan"*, conducted by Shabiralyani, Hasan, Hamad, & Iqbal, 2015), explored the teachers' opinions on the use of visual aids such as pictures, animation videos, projectors and films, as a motivational tool in enhancing students' attention. The analysis of the data indicated that the majority of the teachers and students had positive perceptions on the use of visual aids.

Furthermore, Cuban (2001) indicated the psychology of visual aids as 1% of what was learned originated from the sense of taste, 1.5% was from the sense of touch, 3.5% was from the logic of smell, 11% of the knowledge gained was from the logic of hearing and 83% of what had been learned was from the sense of sight. Also, people generally remember 10% of what they have read, 20% of what they have heard, 30% and of what they saw, Everything that the learner saw heard and uttered or had spoken constitute certain percentage of teaching-learning process influence. Hence, there is no doubt that technical materials have greater impact and dynamic informative system.

For knowledge of content and strategies in teaching, teachers' way of entertaining students' questions and providing clarifications was rated the highest, 3.37, interpreted as Excellent, while their utilization of differentiated instruction depending on the needs and interests of the students, got the lowest rating, 3.23, equivalent to Satisfactory. Thus, it is a must to use the differentiated instructions and materials based on students' learning styles. In addition, teachers should acquire knowledge and more in-depth interpretation of the lessons so they could answer whatever questions students may raise, even if answers are not written on their books.

According to Walshaw (2012) teachers' conceptual understanding and knowledge is critically important at any level. They develop the flexibility for spotting opportunities that they can use for moving students' understanding forward. She adds that when teachers use their knowledge to enhance student learning, they are engaging in effective practice.

 Related to that, Jalbani (2014) wrote a literature review entitled "The impact of effective teaching strategies on the students' academic performance and learning outcome", and claimed that student learning dominantly depends on the teachers' selection and utilization of effective strategies for its instructional deliverance. She further posits that teachers must have passion for learning and teaching as well as understanding the needs and interests of their students. World is changing day by day, so teachers need to be technology savvies too, in order to meet new global emerging demands.

Lastly, for knowledge and management of students, the highest rating, 3.88, equivalent to Excellent, was given to the teachers' awareness and adaptation to students' different learning styles, while the lowest rating, 3.24, interpreted as Satisfactory, was given to teachers' ability of determining students' prior level of knowledge of the subject matter.

Vincent and Ross (2001), in their study entitled "Learning style awareness: A basis for developing and learning strategies", discuss the learning style theories and show how being aware of learning styles can benefit both teachers and students. Their study at the University of Loiusiana indicated a prevalence of auditory learners. They note that despite of the findings of their study, educators must be prepared to accommodate all learning styles.

Since it was rated the lowest, teachers need to work more on determining students' prior knowledge of the subject matter, Center for Teaching Innovation (2019), asserts that assessing students' prior knowledge allows teachers to focus and adapt their teaching plan. Moreover, for students, it helps them to construct connections between old and new knowledge.

2.2 Evaluation of the BIT program was assessed through cognitive learning domain, performance-based learning domain, and affective learning domain

Table 12
Assessment of Evaluation

Assessment for Cognitive Learning Domain	F	S	G	A	VD
1. Gives written work as an assessment for cognitive learning	3.86	3.24	3.40	3.50	Excellent
2. Conducts laboratory work as an assessment for cognitive learning	3.43	3.41	3.26	3.37	Excellent
3. Administers pen and paper tests as an assessment for cognitive learning	4.00	3.35	3.26	3.53	Excellent
4. Provides modern and innovative activities for cognitive learning	3.71	3.27	3.26	3.41	Excellent
Assessment for Performance-Based Learning Domain	**F**	**S**	**G**	**A**	**VD**
1. Gives written work as an assessment for performance-based learning	4.00	3.25	3.36	3.54	Excellent
2. Conducts laboratory work as an assessment for performance-based learning	3.57	3.31	3.26	3.38	Excellent
3. Administers pen and paper tests as an assessment for performance-based learning	3.86	3.29	3.30	3.48	Excellent
4. Provides modern and innovative activities for performance-based learning	3.57	3.24	3.30	3.37	Excellent
Assessment for Affective Learning Domain	**F**	**S**	**G**	**A**	**VD**
1. Gives written work as an assessment for affective learning	3.14	3.16	3.43	3.24	Satisfactory
2. Conducts laboratory work as an assessment for affective learning	3.57	3.29	3.26	3.37	Excellent
3. Administers pen and paper tests as an assessment for affective learning	3.57	3.27	3.21	3.35	Excellent
4. Provides modern and innovative activities for affective learning	3.29	3.33	3.48	3.36	Excellent

Legend: F- Faculty, S- Students, G- Graduates, A-Administrators, A- Average, VD-Verbal Description

Table 12 shows the respondents' assessment of Evaluation. For Cognitive Learning Domain, administrating pen and paper tests as assessment. It received the highest rating, 3.53, interpreted as Excellent, while conducting laboratory work assessment, got the lowest rating, 3.37, equivalent to Excellent.

For the assessment for Performance-Based Learning Domain, giving written work was rated the highest, 3.54, interpreted as Excellent, while the lowest, 3.37, equivalent to Excellent, was given to providing modern and innovative activities.

Lastly, the assessment for Affective Learning Domain, in which conducting laboratory work, received the highest rating, 3.37, equivalent to Excellent, while giving written work as an assessment got the lowest, 3.24, interpreted as Satisfactory.

Based on the rating, students and graduates are satisfied with the evaluation for the three learning domains their teacher administered to them and consider those as effective instruments in measuring what they had learned from them. They just recommend that they be given more innovative assessments appropriate for the learning domain.

Disha (2016) in her article entitled "Evaluation in teaching and learning process" emphasizes that evaluation plays an enormous role in the teaching-learning process. It helps teachers and learners to improve teaching and learning. Evaluation is a continuous process and a periodic exercise. It promotes forming the values of judgement, educational status, or achievement of students. Thus, all three learning domains should be provided

In connection, a study entitled *"The importance of classroom assessment and evaluation in educational system"*, conducted by Jabbarifar (2009), attempts to look at the importance of classroom assessment and evaluation advantages. The findings show that

classroom assessment and evaluation are highly concerned with qualitative judgements that are used to improve students' knowledge and learning. Assessment and evaluation also give teachers useful information about how to improve teaching methods.

Assessment of evaluation tools used in BIT program comprising of cognitive learning domain, performance-based learning domain, and affective learning domain

Table 13
Assessment of Evaluation Tools

Assessment Tools for Cognitive Learning Domain	F	S	G	A	VD
1. Gives essays as assessment for cognitive learning	3.14	3.34	3.21	3.22	Satisfactory
2. Conducts tests/quizzes as assessment for cognitive learning	3.57	3.18	3.26	3.34	Excellent
3. Scores outputs from the range of 1-100	3.57	3.33	3.23	3.37	Excellent
4. Grades cognitive outputs though rankings and percentages	3.29	3.43	3.26	3.23	Satisfactory
Assessment Tools for Performance-Based Learning Domain	**F**	**S**	**G**	**A**	**VD**
1. Gives laboratory works as assessment for performance-based learning	3.57	3.31	3.49	3.45	Excellent
2. Provides modern and innovative activities for performance-based learning	3.14	3.24	3.21	3.20	Satisfactory
3. Scores performances within the range of 1-100	3.43	3.20	3.30	3.30	Excellent
4. Grades performances outputs through rankings and percentages	3.28	3.33	3.19	3.27	Excellent
Assessment Tools for Affective Learning Domain	**F**	**S**	**G**	**A**	**VD**
1. Gives pen and paper tests as an assessment for affective learning	3.43	3.32	3.49	3.41	Excellent
2. Provides modern and innovative activities for affective	3.43	3.24	3.21	3.29	Excellent
3. Scores affective outputs from the range of 1-100	3.57	3.20	3.30	3.36	Excellent
4. Grades affective outputs though rankings and percentages.	3.29	3.33	3.19	3.27	Excellent

Legend: F- Faculty, S- Students, G- Graduates, A-Administrators, A- Average, VD-Verbal Description

Table 13. shows the assessment of Evaluation Tools. For Cognitive Learning Domain Tools, scoring outputs from the range of 1-100 received the highest rating, 3.37, equivalent to Excellent, while giving essays for this domain got the lowest, 3.22, interpreted as Satisfactory.

For Performance-Based Learning Domain Tools, the respondents rated giving laboratory works, the highest, 3.45, interpreted as Excellent, while the lowest, 3.20, equivalent to Satisfactory, was given to providing modern and innovative activities for performance-based learning.

Also, the assessment for Affective Learning Domain Tools in which giving pen and paper tests as assessment for affective learning, received the highest rating, 3.42, interpreted as Excellent, while grading affective outputs through rankings and percentages, got the lowest, 3.27, still interpreted as Excellent.

As much as evaluation is important to the teaching-learning process, the assessment tools used by teachers are equally important, too. Jabbarifar (2009) adds that through using appropriate classroom assessment strategies and tools, teachers can increase their students' motivation and show them how well they have learned the lesson. Evaluation goes beyond the students' achievements and language assessments to consider all aspects of teaching and learning, and to look at how educational decisions can be informed by the results of alternative forms of assessment and evaluation.

On the other hand, a study entitled "Assessment in higher education and student learning" by Rawlusyk (2019) addressed the ongoing academic concerns about whether assessment practices in higher education support student learning. Results found out that teachers have conflicting views relative to student use of feedback and the use of dialogue. The outcomes also show that there is limited involvement of learners in assessment strategies, which can affect learning. Thus, the study recommends that teachers utilize professional development to understand how to optimize the active participation of students in various authentic assessment method of feedback.

However, for this study, data imply that the students and graduates are more than satisfied with the assessment tools their teachers are utilizing. These tools include written work, laboratory work, pen and paper tests, and modern and innovative activities. The right tools for the three different learning domains help measure students' learning more efficiently.

EPRA International Journal of Research and Development (IJRD)

Conclusions

Three main concluding paragraphs consist this section of the study. Each conclusion was derived from the problems of the study:

1.1. Vision, Mission, Goal, and Objectives (VMGO) of Food Technology is rated Excellent. Its goal and objectives should be strengthened and carried out properly to better achieve them since they are already consistent with the institution's vision and mission.

1.2. The rating of Faculty is Excellent. Teachers are efficient in doing other tasks aside from actual teaching. However, they still need to pursue further studies and attend more seminars and training's to enhance their qualifications and competence more.

1.3. Curriculum and Instruction of Food Technology is rated Excellent. The curriculum efficiently provides for the development of its professional competencies however, teachers need to strategize more on stimulating and developing students' higher-order thinking skills. Also, students would like to attend more seminars and training's to learn deeper aside from what the actual instruction could give them.

1.4. The rating of Food Technology's Support to Students is Excellent. The institution conducts leadership training's efficiently. Meanwhile, the Student Affairs Services (SAS) Unit should provide more student welfare and student development programs. Moreover, financial support to students' activities such as laboratory works should be further strengthened.

1.5. Research of Food Technology is rated Excellent. The institution's approved Research Manual is already available while the system of implementation, monitoring, evaluation and utilization of research outputs just have to be implemented more appropriately. At this point, the assistance given to research could still be improved. The Researchers in the campus should be given more support in all forms and provide a venue for their studies.

1.6. The rating of Food Technology's Extension and Community Involvement is Excellent. Its strategy for involving the community, government and private agencies in the Extension Program, is seen as efficient. However, it still needs to work more on the conduction of benchmark survey of the problems, needs priorities and resources of the community. As of now, student participation to this area could be strengthened through future extension activities involving students' participation.

1.7. Library of Food Technology is rated Excellent. The Library resource sharing and linkage is already established. Nonetheless, the update, balance, and adequacy of the references in the library should be further developed. There are also times the library is closed and not accessible to students. Additional and modern references should be provided and the library should be open at all times.

1.8. The rating of Food Technology's Physical Plant and Facilities is Satisfactory. Offices and staff rooms are adequate and conducive to working environment. However, the safety, maintenance, and functions of the buildings and other facilities should be taken in great consideration. Currently, some facilities of Food Technology like classrooms, laboratories, and offices need minor improvement of its space, ventilation, lay-out and materials. Reconstruction, repair, and provision of new materials will further enhance those aforementioned facilities.

1.9. Laboratories of Food Technology is rated Satisfactory. The institution keeps them neat and orderly. Still, the laboratories and shops need to be more well-equipped, functional and conducive to learning. As of this day, the sufficiency, construction, tools, equipment, and high-technological practices of laboratories of Food Technology should be considered for further development. Hence, old laboratories should be reconstructed, new ones should be built and modern equipment should be provided.

1.10. The rating of Food Technology's Administration is Satisfactory. As of this moment, some facilities in the administration need improvement. Furthermore, there are minor misunderstanding between several teachers and administrators. There are also times that students feel distant from the administration. These simple concerns could be addressed through improvement of facilities, showing unity, and giving consideration.

2.1. Instruction of Food Technology of the BIT Program is rated Excellent. Teachers plan lessons, device materials, have mastery of the content, and adapt to their students' learning styles. Still, the institution should support them to pursue further studies and attend more seminars and trainings.

2.2. The rating of Food Technology's Evaluation, together with Evaluation Tools, is Excellent. Cognitive, Performance-based, and Affective Learning Domains are measured with the appropriate assessment tools and graded with the right matrix. Toward continuous development, teachers should come up with more modern and innovative ways of evaluating their students' learning.

Recommendations

Based on the listed conclusions, the following are the recommendations:

1. Suggestions and recommendations from teachers, students, graduates, and administrators of Food Technology should be considered in order to enhance all 10 areas of the program.

2. Facilities like classrooms, offices, laboratories, and libraries should be reconstructed to provide environments that are more conducive to the teaching-learning process.

3. Modern materials, tools, and equipment should be provided to classrooms, laboratories, and libraries to keep up with the modern trends in Education today.

4. A comparative study on the perspective and assessment of all Food Technology current students and graduates should be carried out to track the evolution of its implementation and the satisfaction of its students from various years.
5. Other specializations of the BIT Program should be assessed to identify projects for its enhancement.
6. A comparative study with other University, for further enhancement of research.
7. Objectivity must be maintained in the conduct of the research to avoid a subjective and neglected study.
8. The found assessments of the inputs, and implementation of the Food Technology of the BIT Program should be disseminated.

REFERENCES
1. Abdullaeva, M. (2018). "Laboratory work in education of Technology professionals". Vocational Teacher Education in Central Asia, pp. 53-63. Retrieved March 2018 fromhttps://www.researchgate.net/publication/323595592_Laboratory_Work_in_Education_of_Food_Technology_Professionals, May 12, 2020.
2. Allen, K. & Kern, P. (2018). "School vision and mission statements should not be dismissed as empty words". The Conversation Media Group Ltd. University of Melbourne. Retrieved from https://theconversation.com/ school-vision-and-mission-statements-should-not-be-dismissed-as-empty-words-97375, November February10, 2020.
3. Aloroy, M. (2016). "Evaluation of the Bachelor of Industrial Technology Program of the Nueva Ecija University of Science and Technology". Nueva Ecija University of Science and Technology, Cabanatuan City, Nueva Ecija. November 10, 2019
4. Casmeña, R. & Acosta, S. (2007). "Education institutions: Perspectives of university faculty. UNESCO Forum on Higher Education, Research and Knowledge". De La Salle University, Manila. Presented at the Regional Seminar: Competition, Cooperation and Change in the Academic Profession: Shaping Higher Education's Contribution to Knowledge and Research. (Hangzou, China, 18-19 September 2007).
5. Center for Teaching Innovation. (2019). "Assessing prior knowledge. Teaching Cornell". Retrieved from https://teaching.cornell.edu/teaching-resources /assessment-evaluation/assessing-prior-knowledge, November 15, 2019.
6. Chaudhari, B. (2017). "The role of library in higher education". Scholarly Research Journal for Interdisciplinary Studies, pp. 1-6. Retrieved from http://oaji. net/articles/2017/1201-1529748925.pdf, April 16, 2020.
7. Cicek, V. & Tok, H. (2013). "Effective use of lesson plans to enhance education in U.S. and Turkish Kindergarten thru 12th Grade public school system: A comparative study". International Journal of Teaching and Education. Vol. 2, No. 2. Retrieved from https://www.iises.net/download/Soubory/soubory-puvodni/pp10-20ijote_V2 N2.pdf, April 17, 2020.
8. Ciobanu, A. (2013). "The role of student's services in the improvement of student experience in higher education. Published Doctor's Dissertation. Faculty of Psychology and Education Sciences, University of Iasi, Iasi, Romania". Retrieved from file:///C:/Users/user1/Downloads/the-role-of-student-services-in-the-improving-of-student-experience-in-higher-education%20(1).pdf, April 17, 2020.
9. COMEX (2012). "Compilation of ComEx Reports. Batangas: Lyceum of the Philippines University, Batangas City". Retrieved from https://research .lpubatangas.edu.ph /wp-content/uploads/2017/07/JTHR-2017.1.06.pdf, April 16, 2020.
10. Cuban, L. (2001). "Computers in the classroom. Cambridge: M.A. Harvard University Press". Retrieved 2014, from http://www.sciepub.com/reference/66094, April 16, 2020.
11. Dial, J. (2008). "The effect of teacher experience and teacher degree levels on student achievement in mathematics and communication arts". Unpublished Doctor's Dissertation. Graduate Department and Faculty of the School of Education, Baker University, Kansas, United States. Retrieved April, 2008 from https:// www. bakeru.edu/images/pdf/SOE/EdD_Theses/Dial_Jaime.pdf, February 20, 2020.
12. Disha, M. (2016). "Evaluation in teaching and learning process". Your Article Library. Retrieved from https://www.yourarticlelibrary.com/statistics-2/valuation-in-teaching-and-learning-process-education, February 16, 2020
13. Felipe, R. (2013). "The Importance of Seminars and Trainings in Improving Teachers Performance. Teachers Essay". Retrieved from www.teachersessay.com/the-importance-of-seminars-and-trainings-in-improving-teachers-performance, February 15, 2020.
14. Fletcher, T. & Major, D. (2009). "Medical students' motivation to volunteer: An examination of the nature of gender differences". Sex Roles. Retrieved July, 2014 fromhttps://www.researchgate.net/publication/225844401_Medical_Students'_Motivations_to_Volunteer_An_Examination_of_the_ Nature_of_Gender_Differences, March 12, 2020.
15. Gupta, Priyanka. (2017). "Role and need of research in higher education. EdTech Review". Retrieved from https://edtechreview.in/trends-insights/insights/2741-research-in-higher-education, March 10, 2020.
16. Hill, Y., Lomas, L., & MacGregor, J. (2003. "Students' perceptions of quality in higher education. Quality Assurance in Education, Vol. 11 No. 1, pp. 15-20". Retrieved from https://doi.org/10.1108/09684880310462047, March 07, 2020.
17. Hong, A. & Jang, S. (2017). "The impact of graduate education on teacher effectiveness: Does a master's degree matter? MHEC Research Brief". Midwestern Higher Education Compact, Minneapolis, Minnesota. Retrieved March 2017, from https://eric.ed.gov/?id=ED587432, March 10, 2020.
18. Jabbarifar, T. (2009). "The importance of classroom assessment and evaluation in educational system". Unpublished Doctor's Dissertation. Yazd University, Iran, Retrieved from http://www.srjis.com/pages/pdfFiles/1517725113ONLINE%20DR .%20RENI.pdf March 04, 2020.

19. Jalbani, l. (2014). "The impact of effective teaching strategies on the students' academic performance and learning outcome". United States: Green Publishing. Retrieved May 20, 2015 from https://www.amazon.com/Effective-Teaching-Strategies-Students-Performance/dp/3656963533,March 13, 2020

20. Jaminal, B. (2019). "The impact of school facilities to the teaching-learning environment. SMCC Higher Education Research Journal. Vol. 6 No". 1. Retrieved January 2019, from https://sherj.smccnasipit.edu.ph/articles/Vol6/Jaminal.pdf, February 07, 2020.

21. Laguador, J., Dotong, C., & De Castro, E. (2014). "The experience of Lyceum of the Philippines University-Batangas in getting ahead of the accreditation and certification". International Journal of Science, Arts and Humanities, 2(2), pp. 56-61. Retrieved 2014 from http://research.lpubatangas.edu.ph/wp-content/ uploads/2014/12/AJSSAH-The-Experience-of-Lyceum-of-the-Philippines -University-Batangas-in-Getting-Ahead-of-Accreditation-and-Certification.pdf, March 16, 2020.

22. Lucey, T. (2013). "The importance of school administration to student achievement. The teachers.net Gazette". Retrieved from https://www.teachers.net/gazaette/FEB02/ lucey, February 18, 2020.

23. National Library of the Philippines (2018). "Status of Philippine public libraries and librarianship. Manila: National Library of the Philippines". Retrieved 2018, from http://web.nlp.gov.ph/nlp/sites/default/files/14Jun2019/Status%20of%20Philippine%20Public%20Libraries%20and%20librarianship.pdf, February 12, 2020.

24. Panigrahi, S. (2020). "Importance of seminars and workshops for students in higher education". The Higher Education Review. Retrieved from https://www.highereducationreview.com/news/ importance-of-seminars-and-workshops-for-students-in-higher-education, January 12, 2020.

25. Shabiralyani, G., Hasan, K., Hamad, N., & Iqbal, N. (2015). "Impact of visual aids in enhancing the learning process case research: District Dera Ghazi Khan. Journal of Education and Practice". Vol. 6, No. 19, pp. 1-2. Retrieved from https://files. eric.ed.gov/fulltext/EJ1079541.pdf, March 05, 2020.

26. Tanner, C. (2015). "The Importance of School Facilities in Improving Student Outcomes". The Pennsylvania State University, Pennsylvania, United States. Retrieved from https://www.scribd.com/doc/240433901/The-Impact-of-School-Facilities-on-the-Learning-EnvironmentNovember, 10, 2019.

27. UNESCO- United Nations Educational, Scientific and Cultural Organization (2002). "The role of the student affairs and services in higher education: A practical manual for developing, implementing, and assessing Student Affair Programmed and Services". Paris, UNESCO. Follow-up to the World Conference on Higher Education (Paris, 5-9 October 1998).

28. Vincent, A. & Ross, D. (2001). "Learning style awareness: A basis for developing and learning strategies". Journal of Research on Technology in Education. Vol. 33. Retrieved from http://eflpresentations.pbworks.com/f/Good+summary +of+learning+style+models.pdf, January 10, 2020.

29. Walshaw, M. (2012). "Teacher knowledge as fundamental to effective teaching practice. Journal of Mathematics Teacher Educatin". No. 3, Vol. 15, pp- 181-185. Retrieved May 06, 2012, from https://link.springer.com/article/10.1007/s10857-012-9217-0, January 16, 2020.

30. Wong, H. & Wong, R. (2009). "The first days of school: How to be an effective teacher". Harry K. Wong Publications. Vol. 12, No. 81, p 87, Retrieved from https://www. iises.net/download/Soubory/soubory-puvodni/pp10-20ijote_V2N2. pdf, January 16, 2020.