ACADEMIC PERFORMANCE OF STUDENTS: BASIS IN DESIGNING AN INSTITUTIONAL COMPETENCY ENHANCEMENT PROGRAM

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(Received 08th June 2024; revised 22nd September 2024; accepted 30th September 2024)

Abstract. This study aimed to assess teachers' pedagogical approaches in Technology and Livelihood Education (TLE) and their impact on students' academic performance, informing the design of an institutional competency enhancement program. Participants included 90 junior high school students from La Salette of Ramon, Inc., in Ramon, Isabela, during the 2021-2022 school year. The study utilized frequency and percentage counts to describe student profiles and means for data analysis. To examine differences in the use of 2C-2I-1R pedagogical approaches based on gender, the Mann-Whitney U test was employed, while the Kruskal-Wallis H test assessed differences by grade level. Kendall's Tau-b determined significant relationships between variables. The gender distribution was equal, with 45 male and 45 female participants. For grade levels, there were 24 students in each of grades 8-10, while grade 7 had 18 participants. A validated two-part questionnaire collected demographic data and assessed pedagogical approaches using Likert-type items, demonstrating strong reliability through Cronbach's alpha. Results indicated that students achieved high marks in TLE, attributed to effective pedagogical strategies. Perceptions of the frequency of various teaching methods were consistent across genders and grade levels. Notably, some constructivist, collaborative, and reflective pedagogical approaches exhibited a statistically significant but modest correlation with student grades, identifying the strongest links between these strategies and academic performance. To enhance teaching techniques, school administrators should implement targeted programs for reinforcement and incorporate these into supervisory practices for better monitoring. Additionally, including this program in In-Service Training can help keep teachers updated on their competencies. The Institutional Competency Enhancement Program should also focus on enrichment strategies to further support teacher development.
Keywords: *pedagogical approaches, constructivist, collaborative, inquiry-based, reflective, integrative*

Introduction

Technology and Livelihood Education (TLE) as one of the subjects offered in all the curriculum levels under the K to 12 programs is another proof that the government recognizes the importance of technical and vocational education in national development. According to Tan (2021), TLE is one of the significant features in the secondary education development program curriculum. It is concerned with activities related to the development of a person or group of learners. It is a subject that prepares high school students in endeavors that will provide them the knowledge and skills to be productive and earn a living early should the possibility of Tertiary Education become elusive for one reason or the other. Technology and Livelihood Education is a work education course. It teaches the love and respect for work. It is the provision of skills to be productive and responsibility to economically uplift the family, the community and the country. Agluba (2021) also makes his point that Technology and Livelihood Education equips learners with knowledge and information, skills and processes, right work values, and life skills in the field of Home Economics, Industrial Arts, Agri-Fishery Arts, Information Communication Technology and Entrepreneurship. In addition, TLE aids in the development of work ethics, knowledge, skills, and values that

are essential to economically productive endeavors. It also brings about students' awareness in engaging themselves in income-generating activities and other livelihood projects that eventually improve their lives and lessen their dependence on employment as the only source of income.

In support to the provision of Regional Memorandum No. 11, s. 2015, the Department of Education reiterates the use of the 2C-2I-1R approaches (Constructivist, Collaborative, Inquiry-Based, Integrative, and Reflective) cum suggested strategies and underlying principles behind each pedagogical theory entitled "The 2C-2I-1R Pedagogical Approaches" and as mandated by RA 10533, to better implement the Enhanced Basic Education Curriculum in all grade levels. This was designed to assist all teachers facilitating learner-centered instruction in making the curriculum relevant and in strengthening a teaching and learning process that would rebound to better performance of all learners in any assessment given by Department of Education. The enhancement mandated under Republic Act 10533 stipulates that the program should meet the demand for quality teachers and school leaders. In response to this mandate, the curriculum for Technology and Livelihood Education (TLE) in high school was enhanced in terms of specific skills and knowledge that the students must develop in order to meet the requirements for further learning. In this sense, Javier (2021) recommends that teachers must be innovative in class towards achieving its vision-mission statement by integrating the use of digital teaching and learning tools into the curriculum and instruction. Pedagogical approaches, taken as an academic discipline, are the study of how knowledge and skills are imparted in an educational context, and it considers the interactions that take place during learning. The pedagogy adopted by teachers shapes their actions, judgments, and other teaching strategies by taking into consideration theories of learning, understandings of students and their needs, and the backgrounds and interests of individual students.

La Salette of Ramon offers TLE subjects depending on the available resources and qualifications of teachers. When the K to 12 Basic Education was implemented, the school added the exploratory courses for Grades 7 and 8. As early as Grade 9, the learner is offered multiple career pathways for Technology and Livelihood Education and this continues in Grades 11 and 12 where he/she is offered other specializations such as academics, sports and the arts in addition to technical and vocational education. These mentioned above gave the researcher an idea to conduct a study in response to the topic. The researcher is a Junior High School teacher teaching Technology and Livelihood Education (TLE) in the private school. His aspiration is to teach TLE effectively and efficiently so that learners will gain the desired skills set forth by the Department of Education (DepEd). Much to his desire to spell out the difference, he was confronted by various concerns that were detrimental to the teaching of TLE. The purpose of this study was to understand the idea about the pedagogical approaches being utilized which is effective in teaching and will improve student performance especially in the TLE subject and to conform with the instructional conditions that are usually utilized by the teachers considered to be successful with students in learning TLE, findings of which may serve as a basis in designing an institutional competency enhancement program.

Materials and Methods

This sections explores mainly the research method that was used in the study, the locale of the study, the respondents of the study, the data gathering instruments, the data gathering procedure and the statistical treatment of data.

Research design

This research used a descriptive correlational research design. This design appraised the relationship between the pedagogical approaches used by TLE teachers and the academic performance of the students in TLE among junior high school students of La Salette of Ramon. As defined previously, a correlational research design is a type of non-experimental research method, in which a researcher measures variables, understands and assesses the statistical relationship between them with no influence from any extraneous variable. Correlational research is used to explore the relationships or links between variables.

Locale of the study

La Salette of Ramon is a private Catholic school offering Integrated Levels (Kindergarten, Elementary, Junior and Senior High School) run by the Missionaries of Our Lady of La Salette. It is located in Ambatali Street, Bugallon Proper, Ramon, Isabela (*Figure 1*). Inspired by changes, improvements and uplifts within the institution, La Salette of Ramon, Inc., is now stronger and more ready to face the challenges of time, stand tall among other schools in town and in the province. Every Salettinian graduate will always make the difference and will be molded with passion for excellence, will live a God-centered life, become a responsible life-long learner, service-oriented, and in communion with others in building a better world. Every Salettinian graduate will always be proud to say: In my school, there is fullness of life. In 1964, Bugallon, a barrio of Santiago became a town. The town of Ramon came into existence with twelve barrios ceded by the municipalities of Santiago and San Mateo. At this time, the only existing school in the new town was an elementary school, hence pupils who wished to pursue secondary education went to nearby towns of Santiago, San Mateo, Echague, and Alicia. After three years of such experience, it was proposed in one of the town council meetings that a high school be established in the town.

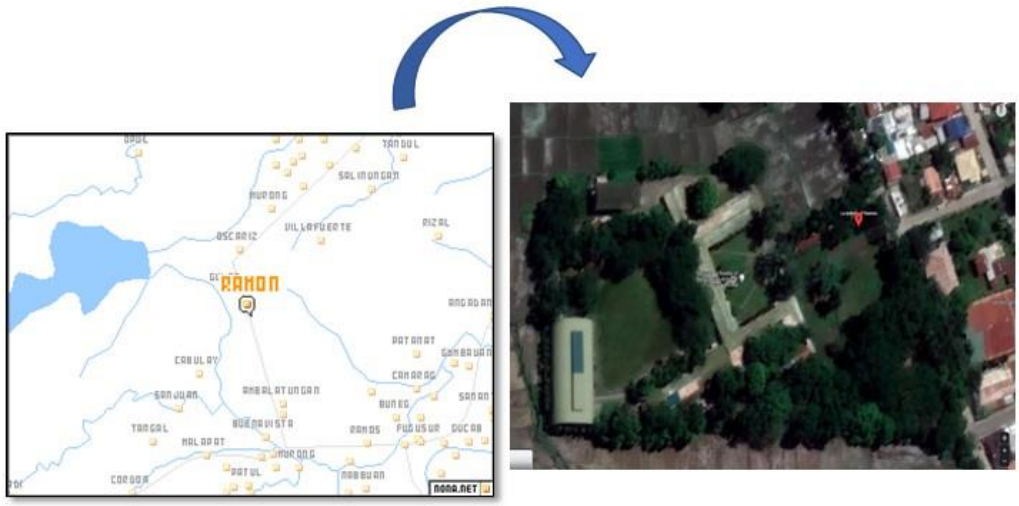

Figure 1. *Map of La Salette of Ramon.*

Respondents of the study

The respondents involved in the study were the junior high school students of La Salette of Ramon. 30% of the total population of the junior high school students was chosen using simple random sampling. Out of the 301 junior high school students enrolled in La Salette of Ramon, 90 of them were proportionally distributed (*Table 1*).

Table 1*. Distribution of respondents by grade level.*

Grade level	N	N
Grade 7	60	18
Grade 8	81	24
Grade 9	80	24
Grade 10	80	24
Total	301	90

Research instrument

The researcher utilized two tools in gathering information from the respondents-the survey questionnaire and the interview (*Table 2*). *Survey Questionnaire*: The main research instrument utilized in gathering the data needed is the questionnaire. Part I comprised the profile of the respondents in terms of gender and grade level while Part II comprised the pedagogical approaches utilized by the TLE teachers as to constructivist, collaborative, inquiry-based, integrative and reflective as perceived by the students. The instrument was adopted from the a research entitled "Pedagogical Approaches in Teaching and Students' Academic Performance in Mathematics among Public High School in Isabela". The survey questionnaire was designed to be quantitative rather than qualitative in nature in order to obtain valid and reliable measures of the variables. It has been administered to 30 students in Ramon District in both Public and Private School to determine the reliability of the questionnaire. Researcher's respondents are the subject area coordinator in Mathematics and Science, and teachers teaching Mathematics in the Junior and Senior High School. Each pedagogical approach contained five item statement-indicators. The reliability test was assessed through computing Cronbach's alpha which shows the reliability value of 0.9426 indicating the high consistency of the responses in the items used in the questionnaire. *Scoring*: The researcher utilized a five-point Likert scale in scoring the survey questionnaire and in determining the extent of the effectiveness of pedagogical approaches employed by the TLE teachers in their TLE subject. *Interview*: An interview was conducted at random in triangulating the data obtained from the questionnaire.

Table 2*. The survey scale used in the questionnaire.*

Scale	Range	Qualitative description
5	4.24-5.00	Always (A)
4	3.43-4.23	Very Often (VO)
3	2.62-3.42	Sometimes (S)
2	1.81-2.61	Rarely (R)
1	1.00-1.80	Never (N)

Data gathering procedure

To gather the needed data for the study, the following steps and procedures were by the researcher. Firstly, the researcher identified La Salette of Ramon, Inc. junior high school students as the respondents of the study. Secondly, a letter of endorsement for the school director and school principal was given to seek permission on the conduct of this research study to the identified respondents. Thirdly, with the approval of the school director and school principal on the conduct of the study, the survey questionnaire was administered to the student respondents. However, due to the unexpected occurrence of COVID-19 pandemic, the researcher had to consider the use of technology in gathering the data through the Google form application. As part of the ethical procedure, the researcher sought the assistance of the teachers to send the e-questionnaire which were created through Google forms to their students. With the help of the teachers, students actively participated in answering the online questionnaire and the data given were automatically consolidated in the researcher's Google drive server. Finally, the researcher personally retrieved the questionnaires from the students. Data gathered were analyzed, summarized, interpreted, and used as basis in crafting the recommendations to improve and enhance the teachers' pedagogical approaches and students' academic performance.

Statistical treatment of the study

The data gathered were computer processed using the Statistical Package for Social Sciences (SPSS) were: (1) Frequency and percentage counts were used to describe the profile of the students-respondents in terms of gender and grade level. This was also used to determine the distribution according to the students' academic performance in TLE for the School Year 2021-2022; (2) Mean was used in treating the data on the 2C-2I-1R pedagogical approaches used by the TLE Teachers; (3) For the difference between the use of 2C-2I-1R pedagogical approaches and respondents' gender, Mann-Whitney U test was utilized. Moreover, for the difference between the use of 2C-2I-1R pedagogical approaches and respondents' grade level, Kruskal-Wallis H test was used; and (4) Kendall's Tau-b was used for the purpose of determining the significant relationships between the 2C-2I-1R pedagogical approaches and the grade point average of the students in TLE.

Results and Discussion

This sections presents the interpretation and analysis of the data gathered following the sequence of the statement of the problem as well as the objectives and the hypotheses of the study.

Profile of the students respondents

Table 3 presents the profile of the respondents. Out of 90 sampled respondents, both male and female have an equal number of participants composed of 45 (50.00%) each. In terms of grade level, Grades 8-10 have an equal number of participants composed of 24 (26.67) while Grade 7 has 18 (20.00).

Table 3*. Profile of the respondents.*

Profile	Frequency (N=90)	Percentage (100.00)
Gender		

Male	45	50.00
Female	45	50.00
Grade level		
Grade 7	18	21.00
Grade 8	24	23.00
Grade 9	24	23.00
Grade 10	24	23.00

Distribution of respondents according to their academic performance in TLE

Table 4 illustrates the grade point average of the students in TLE. Out of the 90 students, 67 or 74.44% participants had an excellent grade in TLE, 11 or 12.12% had a very satisfactory grade, 8 or 8.89% had a satisfactory grade, and 4 or 4.44% had a fairly satisfactory grade. By average, the students had excellent grades in TLE.

Table 4. *Distribution of respondents according to their academic performance in TLE.*

Performance in TLE (SY 2021-2022)	Frequency (N=90)	Percentage (100.00)
75-79 (Fair)	4	4.44
80-84 (Satisfactory)	8	8.89
85-89 (Very Satisfactory)	11	12.22
90-100 (Excellent)	67	74.44

Students' perception on the extent of use of pedagogical approaches in teaching TLE

Table 5 presents the prevailing pedagogical approaches used by the TLE teachers. In terms of constructivist approach, students' perceived that teachers' use this "Very Often" with means ranged from 3.89 to 4.07. This implies that teachers focus on student-student interaction and facilitate discussion among students that explore different viewpoints, and also they define concept and lead students to give examples and non-examples, as well as they lead students to brainstorm an idea for them to assess students' prior knowledge, and focus on teacher-student interaction and give series of questions related to materials to facilitate students' grasp of one or more principles very often. However, the statement that teachers always lead students to a conceptual definition and giving examples to students received the highest mean. This implies that the more examples the teacher impart the students will have better understanding. For collaborative approach, students' perceived that teachers' use this "Very Often" with means ranged from 3.31 to 3.91 This implies that teachers sometimes use jigsaw puzzles that gives students practice in the acquisition and presentation of new material in review and in informed debate. On the other hand, teachers use the round table to allow students to assess prior knowledge, recall information and practice communication skills, and use brainstorming to find a conclusion for a specific problem by gathering a list of ideas spontaneously, furthermore the use of concept mapping that allows students working in groups as a way of illustrating the connections that exist between terms or concepts covered in course material very often. However, the teachers always use the think/write, pair, and share strategy as technique to encourage individual participation which received the highest mean of 3.91.

Table 5. *Extent of use of constructivist and collaborative pedagogical approaches in teaching TLE as perceived by students.*

Indicators	Mean	Description
Constructivist		

My teacher leads us to brainstorm an idea for him/her to assess students' prior knowledge.	3.96	VO
My teacher defines concept and lead students to give examples and non examples.	3.94	VO
My teacher leads students to a conceptual definition and examples are given.	4.07	VO
My teacher focuses on student-student interaction and facilitates discussion among students that explore different viewpoints.	3.89	VO
My teacher focuses on teacher-student interaction and gives series of questions related to materials to facilitate students' grasp of one or more principles.	4.01	VO
Collaborative		
My teacher uses the think/write, pair, and share strategy as a cooperative learning technique that encourages individual participation.	3.91	VO
My teacher uses round table as a collaborative learning technique that allows students to assess prior knowledge, recall information and practice communication skills.	3.60	VO
My teacher uses jigsaw as a collaborative learning technique that gives students practice in the acquisition and presentation of new material in review and in informed debate.	3.31	S
My teacher uses concept mapping as a collaborative learning technique that allows students working in groups a way of illustrating the connections that exist between terms or concepts covered in course material.	3.71	VO
My teacher uses brainstorming as a group collaborative technique by which efforts are made to find a conclusion for a specific problem by gathering a list of ideas spontaneously.	3.64	VO

Note: VO=Very Often; S=Sometimes.

This result is strengthened by the findings of Sedhu et al. (2015) which concluded that students' are more reflective and analytical of the tasks they had to carry out after they were allowed time to discuss with their group. In addition to this, students' comprehension of the tasks they had to carry out seemed to improve after group discussions. They gained clarity and focus from the discussions. More so, working in groups can also build confidence among students. For the inquiry-based approach, students' perceived that teachers' use this "Very Often" with means ranged from 4.06 to 4.21. This implies that teachers use students' interest as a guide when constructing their lessons, and encourage students to seek answers to their own questions, also provide them with inquiry experiences that are balanced between developing our skills and concept understanding and encourage them to explore the problems or scenarios as well as to ask questions and share ideas very often. However, the teachers would facilitate students' learning where students have the opportunity to fulfill their potential for intellectual, emotional, physical and psychological growth which received the highest mean of 4.21. For the integrative approach, students' perceived that teachers' use this "Very Often" with means ranged from 3.84 to 4.09. This implies that teachers fosters an atmosphere that welcomes and encourages creativity in the classroom, would incorporate the thematic and integrated curriculum in the daily schedule and daily or weekly lesson plan and use age-appropriate materials and techniques in teaching followed by the use of technological application for learning and use appropriate concepts and real life contexts to solve problems in both familiar and unfamiliar situations very often. Finally, for the reflective approach students' perceived that teachers' use this "Very Often" with means ranged from 4.04 to 4.41. This implies that teachers constantly discover what strategies works best in the classroom to enhance learning for all students and analyze the impact of task structures, such as cooperative learning groups, partner, peer or other groupings on students' learning have the genuine curiosity about the effectiveness of teaching practices, leading to experimentation and risk-taking, adjust methods and strategies based on students' relative performance very often. However, the teachers acknowledged what students bring to the learning process which received the highest mean of 4.41 (*Table 6*).

***Table 6**. Extent of use of inquiry-based integrative and reflective pedagogical approaches in teaching TLE as perceived by students.*

Indicators	Mean	Description

Inquiry-based		
My teacher is a facilitator of students' learning where students have the opportunity to fulfill their potential for intellectual, emotional, physical and psychological growth.	4.21	VO
My teacher encourages us to explore the problems or scenarios, ask questions, and share ideas.	4.16	VO
My teacher encourages us to seek answers to our own questions.	4.07	VO
My teacher uses students' interests as a guide when constructing the lessons.	4.06	VO
My teacher provides us with inquiry experiences that are balanced between developing our skills and concept understanding.	4/08	VO
Integrative		
My teacher is incorporating the thematic and integrated curriculum in the daily schedule and daily or weekly lesson plan.	3.86	VO
My teacher fosters an atmosphere that welcomes and encourages creativity in the classroom.	3.84	VO
My teacher is using age-appropriate materials and techniques in teaching.	3.99	VO
My teacher is using technological application for learning.	4.00	VO
My teacher is using appropriate concepts and real life contexts to solve problems in both familiar and unfamiliar situations.	4.09	VO
Reflective		
My teacher is constantly discovering what strategies works best in the classroom to enhance learning for all students.	4.04	VO
My teacher has genuine curiosity about the effectiveness of teaching practices, leading to experimentation and risk-taking.	4.09	VO
My teacher adjusts methods and strategies based on students' relative performance.	4.22	VO
My teacher analyzes the impact of task structures, such as cooperative learning groups, partner, peer or other groupings, on students' learning.	4.08	VO
My teacher acknowledges what students bring to the learning process.	4.41	A

Note: A=Always; VO=Very Often.

Difference in the perceptions of the students on the extent of use of pedagogical approaches in teaching TLE when grouped according to ther profile

Tables 7 to *Table 10* present the difference between the perceptions of the students in the extent of use of pedagogical approaches in TLE when grouped according to their profile variables. *Table 7* discloses that there is no significant difference between the perception of the students on the extent of use of the constructivist approach when they are grouped according to their gender. This implies that male and female students have a similar perception that teachers lead students to brainstorm an idea for them to assess their prior knowledge, define concept and lead students to give examples and non-examples, lead students to a conceptual definition and examples are given, and focus on teacher-student interaction and give series of questions related to materials to facilitate students' grasp of one or more principles on the same extent. This leads to the acceptance of the null hypothesis which states that both male and female respondents have almost the same observation in the extent of use of the constructivist approach as they perceived this very often. However, they differ on the extent to which they focus on student-student interaction and facilitate discussion among students that explore different viewpoints. This leads to the rejection of the null hypothesis. This means that male students have a higher perception on the constructivist approach compared to females.

Table 7*. Difference in the perception of the students on the extent of use of the constructivist and collaborative pedagogical approaches in teaching TLE according to their gender.*

Indicators	Male		Female		Z	Sig.
	Mean	Desc.	Mean	Desc.		
Constructivist						
My teacher leads us to brainstorm an idea for him/her to assess students' prior knowledge.	4.04	VO	3.87	VO	1.12^{NS}	0.26
My teacher defines concept and leads students to gibe examples and non-examples.	3.93	VO	3.96	VO	0.19^{NS}	0.85
My teacher leads students to a conceptual definition and examples are given.	4.04	VO	4.09	VO	0.32^{NS}	0.75
My teacher focuses on student-student interaction and	4.16	VO	3.62	VO	2.87*	0.00

facilitates discussion among students that explore different viewpoints.						
My teacher focuses on teacher-student interaction and gives series of questions related to materials to facilitate students' group of one or more principles.	4.13	VO	3.89	VO	1.60^{NS}	0.11
Collaborative						
My teacher uses the think/write, pair, and share strategy as a cooperative learning technique that encourages individual participation.	3.91	VO	3.91	VO	0.11^{NS}	0.91
My teacher uses round table as a collaborative learning technique that allows students to assess prior knowledge, recall information and practice communication skills.	3.71	VO	3.49	VO	1.24^{NS}	0.22
My teacher uses jigsaw as a collaborative learning technique that gives students practice in the acquisition and presentation of new material in review and in informed debate.	3.49	VO	3.13	S	1.65^{NS}	0.10
My teacher uses concept mapping as a collaborative learning technique that allows students working in groups a way of illustrating the connections that exist between terms or concepts covered in course material.	3.93	VO	3.49	VO	2.17*	0.03
My teacher uses brainstorming as a group collaborative technique by which efforts are made to find a conclusion for a specific problem by gathering a list of ideas spontaneously.	3.64	VO	3.64	VO	0.14^{NS}	0.89

*Note: *=Significant; NS=Not Significant; VO=Very Often.*

The findings obtained from this study can be verified in the study conducted by Beyhan and Köksal (2013). Their findings related with the gender variable were examined and it revealed that the mean constructivist teaching environment scores of the boys is higher than that of the girls. The finding states that girls are different from boys in that they assess the classroom and the teacher differently and their expectations from the teacher and the classroom are different. Furthermore, there was no significant difference between the perceptions of the students in the extent of use of the collaborative approach. This means that their teachers use the think/write, pair, and share strategy as a cooperative learning technique that encourages individual participation, use round table as a collaborative learning technique that allows students to assess prior knowledge, recall information and practiced communication skills, use jigsaw as a collaborative learning technique that gives students practice in the acquisition and presentation of new material in review and in informed debate and use brainstorming as a group collaborative technique by which efforts are made to find a conclusion for a specific problem by gathering a list of ideas spontaneously on the same extent. However, they differed on the extent to which they focused on the use of concept mapping as a collaborative learning technique that allows students working in groups a way of illustrating the connections that exist between terms or concepts covered in course material (Z=2.17, sig.=0.03). This led to the rejection of the null hypothesis. The study conducted by Cheema and Mirza (2013) is in consonance to the research findings. The result of their study showed that the male and female students taught through concept mapping performed better than the students taught through traditional teaching method. However male students taught through concept mapping performed significantly better than the female students.

Table 8 reveals that there was no significant difference between the perceptions of the students on the extent of use of the inquiry-based approach. This means that teachers facilitate students' learning where students have the opportunity to fulfill their potential for intellectual, emotional, physical, and psychological growth, encourage students to explore the problems or scenarios, ask questions, and share ideas, encourage students to seek answers to their own questions, use students' interests as a guide when constructing their lessons and provide students with inquiry experiences that are balanced between developing their mathematical skills and concept understanding on

the same extent. The findings are supported by the research of Akhter and Fatima (2016) who found both teachers and students appreciated the autonomy in learning from inquiry-based instruction in teacher education programs and that they held more positive attitudes about how the inquiry-based instruction made them critical thinkers and autonomous learners. Also, there was no significant difference between the perceptions of the students on the extent of use of the integrative approach. This means that teachers incorporated the thematic and integrated curriculum in the daily schedule and daily or weekly lesson plan, foster an atmosphere that welcomes and encourages creativity in the classroom, use age- appropriate materials and techniques in teaching, use technological and mathematics application for learning and use appropriate mathematical concepts and real-life contexts to solve problems in both familiar and unfamiliar situations on the same extent.

***Table 8**. Difference in the perception of the students on the extent of use of the inquiry-based, integrative and reflective pedagogical approaches in teaching TLE according to their gender.*

Indicators	Male		Female		Z	Sig.
	Mean	Desc.	Mean	Desc.		
Inquiry-based						
My teacher is a facilitator of students' learning where students have the opportunity to fulfill their potential for intellectual, emotional, physical and psychological growth.	4.31	A	4.11	VO	1.48^{NS}	0.14
My teacher encourages us to explore the problems or scenarios, ask questions, and share ideas.	4.00	VO	4.31	A	1.56^{NS}	0.12
My teacher encourages us to seek answers to our own questions.	4.02	VO	4.11	VO	0.50^{NS}	0.62
My teacher uses students' interests as a guide when constructing the lessons.	4.18	VO	3.93	VO	1.55^{NS}	0.12
My teacher provides us with inquiry experiences that are balanced between developing our skills and concept understanding.	4.13	VO	4.02	VO	0.75^{NS}	0.45
Integrative						
My teacher is incorporating the thematic and integrated curriculum in the daily schedule and daily or weekly lesson plan.	3.93	VO	3.78	VO	0.97^{NS}	0.33
My teacher fosters an atmosphere that welcomes and encourages creativity in the classroom.	3.93	VO	3.76	VO	0.92^{NS}	0.36
My teacher is using age-appropriate materials and techniques in teaching.	4.04	VO	3.93	VO	0.53^{NS}	0.59
My teacher is using technological application for learning.	4.04	VO	3.96	VO	0.46^{NS}	0.64
My teacher is using appropriate concepts and real life contexts to solve problems in both familiar and unfamiliar situations.	4.02	VO	4.16	VO	0.95^{NS}	0.34
Reflective						
My teacher is constantly discovering what strategies works best in the classroom to enhance learning for all students.	4.18	VO	3.91	VO	1.86^{NS}	0.06
My teacher has genuine curiosity about the effectiveness of teaching practices, leading to experimentation and risk-taking.	4.18	VO	4.00	VO	1.46^{NS}	0.14
My teacher adjusts methods and strategies based on students' relative performance.	4.29	A	4.16	VO	0.91^{NS}	0.36
My teacher analyzes the impact of task structures, such as cooperative learning groups, partner, peer or other groupings, on students' learning.	4.22	VO	3.93	VO	1.47^{NS}	0.14
My teacher acknowledges what students bring to the learning process.	4.49	A	4.33	A	1.39^{NS}	0.17

*Note: *=Significant; NS=Not Significant; A=Always; VO=Very Often.*

Finally, there was no significant difference between the perceptions of the students in the extent of use of the reflective approach. This means that teachers discover what strategies work best in the classroom to enhance learning for all students, and had genuine curiosity about the effectiveness of teaching practices, leading to experimentation and risk-taking, adjust methods and strategies based on students'

relative performance, analyze the impact of task structures, such as cooperative learning groups, partner, peer, or other groupings, on students' learning, and acknowledge what students bring to the learning process on the same extent. It can be inferred in *Table 9* that there was no significant difference between the perceptions of the students on the extent of use of the constructivist pedagogical approach according to grade level since the established x^2 values of all the statement-indicators are greater than the critical value (0.05). This means that regardless of their grade level, teachers lead students to brainstorm an idea for them to assess their prior knowledge, define concept and lead students to give examples and non-examples, lead students to a conceptual definition and examples are given, focus on student-student interaction and facilitate discussion among students that explore different viewpoints, and focus on teacher-student interaction and give series of questions related to materials to facilitate students' grasp of one or more principles, on the same extent. Furthermore, there was a significant difference between the perceptions of the students on the extent of use of the collaborative pedagogical approach according to grade level since the established x^2 value is less than the value of alpha (0.05) which led to the rejection of the null hypothesis. This implies that regardless of grade level, it has lesser tendency that they will strongly prefer the collaborative pedagogical approach. It looks like Grade 10 students would prefer this strategy from the collaborative approach more often compared to the Grade 7 and even those who are in Grade 8 and Grade 9.

Table 9. *Difference in the perception of the students on the extent of use of the constructivist and collaborative pedagogical approaches in teaching TLE according to grade level*.

Indicators	G7		G8		G9		G10		CS	Sg
	M	D	M	D	M	D	M	D		
Constructivist										
My teacher leads us to brainstorm an idea for him/her to assess students' prior knowledge.	4.28	A	3.75	VO	3.67	VO	4.21	VO	6.21^{NS}	0.10
My teacher defines concept and leads students to gibe examples and non-examples.	4.11	VO	3.96	VO	3.54	VO	4.21	VO	7.00^{NS}	0.07
My teacher leads students to a conceptual definition and examples are given.	4.50	A	3.88	VO	3.92	VO	4.08	VO	5.79^{NS}	0.12
My teacher focuses on student-student interaction and facilitates discussion among students that explore different viewpoints.	4.11	VO	3.88	VO	3.42	VO	4.21	VO	6.76^{NS}	0.08
My teacher focuses on teacher-student interaction and gives series of questions related to materials to facilitate students' group of one or more principles.	4.28	A	4.04	VO	3.71	VO	4.08	VO	3.20^{NS}	0.36
Collaborative										
My teacher uses the think/write, pair, and share strategy as a cooperative learning technique that encourages individual participation.	4.11	VO	3.71	VO	3.54	VO	4.33	A	8.49*	0.04
My teacher uses round table as a collaborative learning technique that allows students to assess prior knowledge, recall information and practice communication skills.	4.00	VO	3.50	VO	3.08	S	3.92	VO	9.49*	0.02
My teacher uses jigsaw as a collaborative learning technique that gives students practice in the acquisition and presentation of new material in review and in informed debate.	3.39	S	3.13	S	2.88	S	3.88	VO	10.01*	0.02
My teacher uses concept mapping as a	3.61	VO	3.58	VO	3.42	S	4.21	VO	8.89*	0.03

collaborative learning technique that allows students working in groups a way of illustrating the connections that exist between terms or concepts covered in course material.										
My teacher uses brainstorming as a group collaborative technique by which efforts are made to find a conclusion for a specific problem by gathering a list of ideas spontaneously.	3.67	VO	3.46	VO	3.33	S	4.13	VO	8.45*	0.04

*Note: G7=Grade 7; G8=Grade 8; G9=Grade 9; G10=Grade 10; M=Mean; D=Desc.; CS=Chi-Square; Sg=Significant; *=Significant; NS=Not Significant; S=Sometimes; A=Always; VO=Very Often.*

Table 10 shows that there was no significant difference between the perceptions of the students on the extent of use of the inquiry-based pedagogical approach according to grade level since the established x^2 values of all the statement-indicators are greater than the critical value (0.05). The teachers encourage students to explore the problems or scenarios, ask questions, and share ideas, encouraged students to seek answers to their own questions, use students' interests as a guide when constructing my lessons and provide students with inquiry experiences that are balanced between developing their skills and concept understanding. However, there was a significant difference on the way the teacher facilitates students' learning where students have the opportunity to fulfill their potential for intellectual, emotional, physical and psychological growth, since the established x^2 value is less than the value of alpha (0.05). It looks like Grade 7 or Grade 10 would prefer this strategy from the inquiry-based approach more often compared to Grade 9 and even those who are in Grade 8. Also, there was no significant difference in the extent of use of the integrative approach across students' grade level since the established x^2 values of the four statement- indicators are greater than 0.05 for level of significance. This means that their teacher fosters an atmosphere that welcomes and encourages creativity in the classroom, use age-appropriate materials and techniques in teaching use techno-logical application for learning, and uses appropriate concepts and real life contexts to solve problems in both familiar and unfamiliar situations on the same extent.

***Table 10**. Difference in the perception of the students on the extent of use of the inquiry-based, integrative and reflective pedagogical approaches in teaching TLE according to grade level.*

Indicators	G7		G8		G9		G10		CS	Sg
	M	D	M	D	M	D	M	D		
Inquiry-based										
My teacher is a facilitator of students' learning where students have the opportunity to fulfill their potential for intellectual, emotional, physical and psychological growth.	4.56	A	3.88	VO	4.00	VO	4.50	A	11.46*	0.01
My teacher encourages us to explore the problems or scenarios, ask questions, and share ideas.	4.28	A	3.83	VO	4.17	VO	4.38	A	5.69^{NS}	0.13
My teacher encourages us to seek answers to our own questions.	4.00	VO	3.88	VO	4.25	A	4.13	VO	2.19^{NS}	0.53
My teacher uses students' interests as a guide when constructing the lessons.	4.22	VO	4.00	VO	3.63	VO	4.42	A	5.21^{NS}	0.16
My teacher provides us with inquiry experiences that are balanced between developing our skills and concept understanding.	4.33	A	3.88	VO	3.83	VO	4.33	A	5.13^{NS}	0.16
Integrative										

My teacher is incorporating the thematic and integrated curriculum in the daily schedule and daily or weekly lesson plan.	3.94	VO	3.88	VO	3.38	S	4.25	A	9.42*	0.02
My teacher fosters an atmosphere that welcomes and encourages creativity in the classroom.	3.89	VO	3.67	VO	3.63	VO	4.21	VO	5.89^{NS}	0.12
My teacher is using age-appropriate materials and techniques in teaching.	3.72	VO	3.96	VO	3.83	VO	4.38	A	4.04^{NS}	0.26
My teacher is using technological application for learning.	3.83	VO	4.00	VO	3.92	VO	4.21	VO	1.75^{NS}	0.62
My teacher is using appropriate concepts and real life contexts to solve problems in both familiar and unfamiliar situations.	4.00	VO	4.17	VO	3.92	VO	4.25	A	0.36^{NS}	0.95
Reflective										
My teacher is constantly discovering what strategies works best in the classroom to enhance learning for all students.	4.00	VO	4.00	VO	4.04	VO	4.13	VO	0.32^{NS}	0.96
My teacher has genuine curiosity about the effectiveness of teaching practices, leading to experimentation and risk-taking.	4.11	VO	3.92	VO	4.08	VO	4.25	A	2.01^{NS}	0.57
My teacher adjusts methods and strategies based on students' relative performance.	4.22	VO	3.96	VO	4.08	VO	4.63	A	10.12*	0.02
My teacher analyzes the impact of task structures, such as cooperative learning groups, partner, peer or other groupings, on students' learning.	4.22	VO	3.71	VO	4.04	VO	4.38	A	8.10*	0.04
My teacher acknowledges what students bring to the learning process.	4.39	A	4.29	A	4.46	A	4.50	A	2.12^{NS}	0.55

*Note: G7=Grade 7; G8=Grade 8; G9=Grade 9; G10=Grade 10; M=Mean; D=Desc.; CS=Chi-Square; Sg=Significant; *=Significant; NS=Not Significant; A=Always; VO=Very Often.*

Relationship between the students' perception of the extent of the use of pedagogical approaches and their academic performance in TLE

Tables 11 and *Table 12* present the relationship between the students' perception of the extent of the use of pedagogical approaches and their academic performance in TLE. As revealed in *Table 11*, the students' perception on the extent of use of constructivist pedagogical approach does not have a significant relationship with the academic performance in TLE since the Kendall's Tau values of -0.02, -0.03, and -0.07 with their significant values of 0.84, 0.69, 0.38 respectively is greater than 0.05 level of significance leading to the acceptance of the null hypothesis which states that there is no significant relationship between respondents' perception on the extent of pedagogical approaches and their academic performance in TLE. This implies that their academic performance in TLE does not affect whether their teacher is constructivist or not particularly in leading their students to a conceptual definition and examples, defining concepts and leading students to give examples and non-examples, focusing on teacher-student interaction and gives series of questions related to materials to facilitate students' grasp of one or more principles and brainstorming an idea for him/her to assess students' prior knowledge. However, one statement in the constructivist approach recorded an association on the respondent's academic performance in TLE since the Kendall tau value of 0.24 with significant value of 0.00 is less than 0.05 level of significance leading to the rejection of the null hypothesis which states that there is significant relationship between the respondents' perception of the extent of pedagogical approaches and their academic performance. The Kendall's Tau value is

positive indicating direct correlation which simply implies that there is a possibility that the respondents' academic performance in TLE is affected when their teacher focuses on student-student interaction and facilitates discussion among students that explore different viewpoints.

Table 11. *Relationship between the students' perception on the extent of use of constructivist and collaborative pedagogical approaches and the academic performance of students in TLE.*

Indicators	Kendall Tau	Significant
Constructivist		
My teacher leads us to brainstorm an idea for him/her to assess students' prior knowledge.	-0.07^{NS}	0.38
My teacher defines concept and leads students to gibe examples and non-examples.	-0.03^{NS}	0.69
My teacher leads students to a conceptual definition and examples are given.	-0.02^{NS}	0.84
My teacher focuses on student-student interaction and facilitates discussion among students that explore different viewpoints.	0.24*	0.00
My teacher focuses on teacher-student interaction and gives series of questions related to materials to facilitate students' group of one or more principles.	-0.03^{NS}	0.69
Collaborative		
My teacher uses the think/write, pair, and share strategy as a cooperative learning technique that encourages individual participation.	-0.09^{NS}	0.29
My teacher uses round table as a collaborative learning technique that allows students to assess prior knowledge, recall information and practice communication skills.	0.17*	0.04
My teacher uses jigsaw as a collaborative learning technique that gives students practice in the acquisition and presentation of new material in review and in informed debate.	-0.08^{NS}	0.30
My teacher uses concept mapping as a collaborative learning technique that allows students working in groups a way of illustrating the connections that exist between terms or concepts covered in course material.	-0.01^{NS}	0.89
My teacher uses brainstorming as a group collaborative technique by which efforts are made to find a conclusion for a specific problem by gathering a list of ideas spontaneously.	0.03^{NS}	0.74

*Note: *=Significant; NS=Not Significant.*

Table 12. *Relationship between the students' perception of the extent of use of inquiry-based, integrative and reflective pedagogical approaches and the academic performance of students in TLE.*

Indicators	Kendall Tau	Significant
Inquiry-based		
My teacher is a facilitator of students' learning where students have the opportunity to fulfill their potential for intellectual, emotional, physical and psychological growth.	-0.14^{NS}	0.11
My teacher encourages us to explore the problems or scenarios, ask questions, and share ideas.	-0.01^{NS}	0.94
My teacher encourages us to seek answers to our own questions.	-0.05^{NS}	0.58
My teacher uses students' interests as a guide when constructing the lessons.	-0.07^{NS}	0.40
My teacher provides us with inquiry experiences that are balanced between developing our skills and concept understanding.	-0.12^{NS}	0.15
Integrative		
My teacher is incorporating the thematic and integrated curriculum in the daily schedule and daily or weekly lesson plan.	-0.16^{NS}	0.05
My teacher fosters an atmosphere that welcomes and encourages creativity in the classroom.	0.00^{NS}	0.97
My teacher is using age-appropriate materials and techniques in teaching.	0.09^{NS}	0.28
My teacher is using technological application for learning.	-0.03^{NS}	0.69
My teacher is using appropriate concepts and real life contexts to solve problems in both familiar and unfamiliar situations.	0.10^{NS}	0.25
Reflective		
My teacher is constantly discovering what strategies works best in the classroom to enhance learning for all students.	-0.13^{NS}	0.14
My teacher has genuine curiosity about the effectiveness of teaching practices, leading to experimentation and risk-taking.	0.23*	0.01
My teacher adjusts methods and strategies based on students' relative performance.	-0.03^{NS}	0.74
My teacher analyzes the impact of task structures, such as cooperative learning groups, partner, peer or other groupings, on students' learning.	-0.03^{NS}	0.70

My teacher acknowledges what students bring to the learning process.	-0.03^{NS}	0.74

*Note: *=Significant; NS=Not Significant.*

This finding is in consonance with the ideas of Benjamin (2003) that constructivist teaching category is related to the extent to which the teacher permits students to control their schedules, and physical and social climate of the classroom. Teachers involved students in planning, directing, and assessing. Many teachers are incorporating teaching methods and strategies based on constructive theories of learning in their subject matter. Nevertheless, most of them assume that many of their students are more comfortable with student-student interaction to explore different viewpoints. Therefore, many teachers believe that it is important for them to use constructivist approaches from a learners' perspective to improve academic performance. Moreover, Franada (2018) revealed in her study that the constructivist pedagogical approaches in teaching TLE exploratory courses is significantly related to academic performance of junior high school students. On the other hand, the students' perception on the extent of use of collaborative pedagogical approach does not have significant relationship to the academic performance in TLE since the Kendall's Tau values of -0.01, 0.03, -0.08 and -0.09 with their significant values of 0.89, 0.74, 0.30 and 0.29 respectively are greater than 0.05 level of significance leading to the acceptance of the null hypothesis which states that there is no significant relationship between respondents' perception on the extent of pedagogical approaches and their academic performance in TLE. This implies that their academic performance in TLE does not affect whether their teacher is collaborative or not particularly in using concept mapping as a collaborative learning technique that allows students working in groups a way of illustrating the connections that exist between terms or concepts covered in course material, using brainstorming as a group collaborative technique by which efforts are made to find a conclusion for a specific problem by gathering a list of ideas spontaneously, using jigsaw as a collaborative learning technique that gives students practice in the acquisition and presentation of new material in review and in informed debate, and using the think/write, pair, and share strategy as a cooperative learning technique that encourages individual participation.

However, one statement in collaborative approach recorded an association on the respondents' academic performance in TLE since the Kendall's Tau value of 0.17 with a significant value of 0.04 is less than 0.05 level of significance leading to the rejection of the null hypothesis which states that there is significant relationship between the respondents' perception on the extent of pedagogical approaches and their academic performance. The Kendall's Tau value is positive indicating direct correlation which simply implies that there is a possibility that the respondents' academic performance in TLE is affected when their teacher uses round table as a collaborative learning technique that allows students to assess prior knowledge, recall information and practice communication skills. In addition, Franada (2018) also concluded that collaborative pedagogical approaches in teaching TLE exploratory courses are not found significantly related pair wise with the academic performance of the students. *Table 12* reveals that the students' perception on the extent of use of inquiry-based pedagogical approach does not have significant relationship with the academic performance in TLE since the Kendall's Tau values of -0.01, -0.05, -0.07, -0.12 and -0.14 with their significant values of 0.94, 0.58, 0.40, 0.15 and 0.11) respectively are greater than 0.05 level of significance leading to the acceptance of the null hypothesis which states that there is no significant relationship between respondents' perception on the extent of pedagogical

approaches and their academic performance in TLE. This implies that their academic performance in TLE does not affect whether their teacher is inquiry-based or not particularly in encouraging the students to explore the problems or scenarios, ask questions, and share ideas, encouraging students to seek answers to their own questions, using students' interests as a guide when constructing the lessons, providing students with inquiry experiences that are balanced between developing students' skills and concept understanding, and a facilitator of students' learning where students have the opportunity to fulfill their potential for intellectual, emotional, physical and psychological growth.

The findings of Franada (2018) in her study stated that the inquiry-based pedagogical approaches in teaching TLE exploratory courses are not found significantly related pair wise with the academic performance of the students. On the other hand, the students' perception on the extent of use of integrative pedagogical approach does not have significant relationship to the academic performance in TLE since the Kendall's Tau values of 0.00, -0.03, 0.09, 0.10 and -0.16 with their significant values of 0.97, 0.69, 0.28, 0.25 and 0.05 respectively are greater than 0.05 level of significance leading to the acceptance of the null hypothesis which states that there is no significant relationship between respondents' perception on the extent of pedagogical approaches and their academic performance in TLE. This implies that their academic performance in TLE does not affect whether their teachers are integrative or not particularly in fostering an atmosphere that welcomes and encourages creativity in the classroom, using technological application for learning, using age-appropriate materials and techniques in teaching, using appropriate concepts and real life contexts to solve problems in both familiar and unfamiliar situations and incorporating the thematic and integrated curriculum in the daily schedule and daily or weekly lesson plan. There was also no significant relationship between the students' perception on the extent of use of reflective approach and the students' academic performance in TLE since the Kendall's Tau values of -0.03 and -0.13 with their significant values of 0.70, 0.74 and 0.14 respectively are greater than 0.05-level of significance leading to the acceptance of the null hypothesis. This implies that their academic performance in TLE does not affect whether their teachers are reflective or not particularly in analyzing the impact of task structures, such as cooperative learning groups, partner, peer or other groupings, on students' learning, acknowledging what students bring to the learning process, adjusting methods and strategies based on students' relative performance, and constantly discovering what strategies work best in the classroom to enhance learning for all students.

However, one statement in reflective approach recorded an association on the respondents' academic performance in TLE since the Kendall's Tau value of 0.23 with significant value of 0.01 is less than 0.05 level of significance leading to the rejection of the null hypothesis which states that there is no significant relationship between the respondents' perception on the extent of pedagogical approaches and their academic performance. The Kendall's Tau value is positive indicating direct correlation which simply implies that there is a possibility that the respondents' academic performance in TLE is affected when their teacher has genuine curiosity about the effectiveness of teaching practices, leading to experimentation and risk-taking. The findings are corroborated by the study conducted by Boris (2016) that by engaging in reflective teaching, teachers show a capacity (or disposition) to the process of what they are doing and to reconstruct their professional and personal knowledge schemes, while

simultaneously making a judgment to adapt their practice to best match the needs of students.

Proposed institutional competency enhancement program in TLE

Based on the result of this study, it was found out that the greater the extent of use of the pedagogical approaches, the higher the students' TLE grades become. This means that teachers may help students improve more their academic performance in TLE through strengthening the use of pedagogical approaches in teaching and considering the interest and needs of the students in developing their instructional strategies and approaches. The researcher hereby proposes an Institutional Competency Enhancement Program in TLE to further improve the quality of instruction and monitor the academic performance of the students. The plan includes the intensification of TLE teachers' methodologies, techniques and strategies toward improved quality instruction and with an observable application of the core purpose and values, empowerment of teachers in nurturing their skills and abilities in teaching using the different pedagogical approaches in teaching; horizontal alignment between standards, competencies, assessment, instruction and resources in all learning units; vertical learning progressions across the different grade levels; a system of formulating varied assessments that measure students' performance of standards and competencies, transfer of learning and development of 21st century learning skills; and an intervention program for students with learning difficulties (*Table 13*).

***Table 13**. Proposed institutional competency enhancement program in TLE.*

IPI	SG	P/A	TG	PC	TF	EO
The intensification of TLE teachers' methodologies, techniques and strategies toward improved quality instruction and with an observable application of the core purpose and values	To intensify the skills of TLE teachers of methodologies, techniques and strategies to empower them toward quality improvement of instruction in K12 program	Seminars, workshops and school-based in-service training programs on different methodologies, strategies and techniques inteachin needed in the K12 program	Teachers handling TLE subject	*Administration *TLE Coordinator *Invited speakers	Before the opening of school year or school-based in-service training program	Improved teaching strategies with an observable application of the core purpose and values of the school
	To promote systematic and organized implementation and evaluation of instructional activities in TLE, guided with the mission, vision and core values of the school	Checking of: a. Lesson plans b. Learning Modules c. Test questions d. Table of specifications construction Evaluation of instructional programs/ activities of the department	Teachers handling TLE subject	*School Principal *TLE Coordinator	Every Friday of the week or Monday of the week for lesson planning Semi-and quarterly basis for test questions	*Well-prepared lesson plans and learning modules *Well-prepared and articulated test questions *Enriched instructional plans of action program of the Department
Empower teachers in nurturing their skills and abilities in teaching using the different pedagogical approaches in teaching	To encourage and uplift teachers' abilities in molding the students using the different pedagogical approaches in	Use syllabi/curriculum guide in carrying out expected learning outcomes An announced and unannounced	Teachers handling TLE subject	*School Principal *TLE Coordinator	*Every end of the month	*Quality interaction of teacher and student inthe classroom and other activities

	teaching such as: *Constructivist *Collaborative *Inquiry-Based *Integrative *Reflective	classroom observation Post conference Meetings Student consultation				
Horizontal alignment between standards, competencies, assessment, instruction and resources in all learning units Vertical learning progressions across the different grade levels	To organize, regular vertical and horizontal articulation in the TLE department	Horizontal alignment between standards, competencies, assessment, instruction and resources in all learning units Vertical learning progressions across the different grade levels	Teachers handling TLE subject	*School Principal *TLE Coordinator	As scheduled	*Enriched classroom activities
A system of formulating varied assessments that measure students' performance of standardsand competencies, transfer of learning and development of 21st century learning skills	To create a system that formulates varied assessments that measure students' performance of standard and competencies, transfer of learning and development of 21st century learning skills	Check teacher-made assessments Check and evaluate different assessment introduced during seminars/worksho p s that is more appropriate to gauge student learning and teachers' effectiveness in teaching and to conduct formative feedback Introduce the choice assessment to parents and students Conduct students' assessment regularly for the whole school year	Teachers handling TLE subject	*School Principal *TLE Coordinator	Before opening of the school year	A system that formulates varied assessments that measure students' performance of standards and competencies, transfer of learning and development of the 21st century learning skills.
An intervention program for students with learning difficulties in TLE	To create an intervention program for students with learning difficulties in TLE	Schedule teachers to conduct remedial classes to students with learning difficulties every afternoon classes Check and follow-up if the schedules are followed Regular dialogue between the student and the guidance coordinator is required Regular communication	Teachers handling TLE subject Students with learning difficulties Parent/guar d ian	*School Principal *TLE Coordinator *Guidance Coordinator	During vacant period	An intervention program for students with learning difficulties in TLE

	between the student and parent/guardian	

Note: IPI=Improvement Plan Items; SG=Smart Goals; P/A=Projects/Activities; TG=Target Group; PC=Person in Charge; TF=Time Frame; EO=Expected Outcome.

Conclusion

The conclusions for the study are: (1) There are 45 male and 45 female comprises of grades 7 to 10 of junior high school respondents in this study; (2) Students have generally high grades in TLE. Given that the reflective approach had the greatest extent of use according to students, this may have contributed to the students' grades. For the prevalently used pedagogy, the most prevalent approach used by teachers is the reflective approach based on the perspective of the students. Since teachers were the ones using the said approach, there must be no other reason to think otherwise regardless of the students' perception since they may have insufficient knowledge on the matter; (3) The difference on the extent of use of the pedagogical approaches across the profile variables was generally not significant. Therefore, regardless of the gender and grade level of the respondents, they perceived that their teachers use these approaches in the same extent; (4) It was found out that the extent use of pedagogical approaches was not significantly related to the students' grades in TLE in general. On the other hand, the correlations found were negative. Therefore, the lower the extent of use of the given pedagogical approaches, the lower the students' grades becomes. However, the increase in grades may be small because of the weak association. And more importantly, the increase in grades cannot be associated to the use of these pedagogies alone since correlation coefficients cannot determine effects; as well as (5) The designed institutional enhancement program in TLE is include in the curriculum for the better result of students' academic performance.

Acknowledgement

This research is self- funded.

Conflict of interest

The authors confirm that there is no conflict of interest involve with any parties in this research study.

REFERENCES

[1] Agluba, C.A. (2021): Technical skills and the academic performance of grade 9 technology and livelihood education students: a basis for placement plan. – International Journal of Arts, Sciences and Education 1(3): 56-76.

[2] Akhter, N., Fatima, Q. (2016): Teachers' and Students' perceptions of Autonomy using Inquiry-Based Learning in Initial the Teacher Education. – Journal of Research & Reflections in Education (JRRE) 10(1): 15p.

[3] Benjamin, J. (2003): Revision and Validation of the Revised Teacher Beliefs Survey. – In the Annual Meeting of the American Educational Research Association, Chicago 20p.

[4] Beyhan, Ö., Köksal, O. (2013): Learner perceptions of building constructivist learning environments in secondary schools. – Journal of Educational and Instructional Studies in the World 3(2): 171-180.
[5] Boris, O.O. (2016): Effects of reflective teaching on secondary school students' learning outcomes (attitude and achievement) in Chemistry in Ondo State Nigeria. – Ekiti State University, Ado-Ekiti, Ekiti State 8p.
[6] Cheema, A.B., Mirza, M.S. (2013): Effect of Concept Mapping On Students' Academic Achievement. – Journal of Research & Reflections in Education (JRRE) 7(2): 125-132.
[7] Franada, J.M. (2018): 2C-2I-1R Pedagogical Approaches in Teaching Technology and Livelihood Education Exploratory Courses and the Academic Performance of Grade 8 Students in the Division of Lipa. – Ascendens Asia Journal of Multidisciplinary Research Abstracts 2(6): 15p.
[8] Javier, B.F. (2021): Practices of Filipino Public High School Teachers on Digital Teaching and Learning Technologies during the COVID-19 Pandemic Basis for Learning Action Cell Sessions. – International Journal of Computing Sciences Research 16p.
[9] Sedhu, D.S., Choy, S.C., Lee, M.Y. (2015): Students' perceptions of using collaborative learning as a tool for acquiring writing skills in university. – American Journal of Applied Psychology 4(3-1): 1-6.
[10] Tan, M.C. (2021): Technology and livelihood education (TLE) instruction in the secondary schools in northern Samar division, eastern Philippines. – Asian Journal of Advanced Research and Reports 15(2): 75-84.