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PERCEIVED COMPETENCIES AND PERFORMANCE OF GRADE 8 TLE LEARNERS IN ELECTIVE COURSES

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ABSTRACT

This study looks at the perceived capabilities and academic achievement of Grade 8-TLE students at Santa Maria National High School. It concentrated on the respondents' profiles, the relationship between their profiles and perceived skills, and the connection between profiles and academic success. During the 2021-2022 school year, 85 students in the 8-Jacinto and 8-Silang classrooms completed a researcher-created questionnaire, and data was analyzed using frequency counts, percentages, weighted averages, and correlation analysis. According to the findings, the majority of respondents are females aged 12 to 15, with parents who are largely high school graduates and self-employed. Students mostly use cellphones as learning tools, relying on mobile data for internet access. Their perceived competencies in EPAS and Cookery are regarded "highly attained," but their academic achievement is evaluated as "satisfactory." It is worth noting that no significant association was established between the students' profiles and their perceived competencies. Conclusions reflect a typical profile of students in a rural setting, emphasizing measuring and calculation issues. Prioritizing education at all ages, increasing parental support, using instructional films to develop skills, giving additional learning activities, and encouraging peer collaboration to improve competency are among the recommendations. Additional research is encouraged to investigate characteristics not covered in this study.

KeyWords

Perceived Competencies, Academic Performance, EPAS, Cookery, TLE Learners, Elective Courses, Students' Competence

I. INTRODUCTION

Learning is critical to education's success. Learning is the process of learning knowledge or improving one's capacity to do new behaviors. Furthermore, learning occurs throughout our lives and influences nearly everything we do. The study of learning is significant in a variety of professions. Teachers must grasp the most effective techniques to educate students. They must observe and acquire facts that will allow them to reach out to their students (Ambrose, 2010). Competencies are specific and self-evident qualities or properties required for teaching experts to create a persuasive and student-friendly environment. Competencies are concerned with three aspects of learner behavior that are essential for teachers to fulfill their primary responsibilities. Aside from disseminating information, teachers assist students in the following ways: developing a foundation and exploratory inclination; predicting progressions in all aspects of life and their impact on the social order; and assisting learners in moderating and transmitting attributes supported by the social order. Simple acquisition of knowledge and demonstrated capacity provides no certification to achieve the previously stated requirements. Because of the significant growth in functions and responsibilities, a teacher must demonstrate high levels of professionalism both inside and outside the classroom. It is impossible for a teacher to possess all talents and abilities in perfect harmony Bennacer, H. (2000).

Technology and Livelihood Education (TLE) is one of the learning categories included in the country's secondary school curriculum. It gives junior high school students actual experience, technical knowledge, and skills in home economics, entrepreneurship, and other areas of technology. Technology and livelihood education focus more on activities and applications that help students build their abilities. The teacher must employ instructional tactics that will improve the pupils' performance. This subject must include studying concepts and ideas from its various sections. In accordance with this, the Department of Education has offered instructors with training and assessments to get a National Certificate II or higher, which is required for teaching this subject.

TLE is a high school topic with four component areas: Home Economics (H.E.), Agri-Fishery Arts (AFA), Industrial Arts (IA), and Information and Communication Technology. Home Economics, on the other hand, is one of the four divisions of TLE that helps stu-

dents develop their creativity while also assisting them in thinking, searching, and analyzing in their respective domains. One of the most significant aspects of Home Economics in Education is that students learn about topics that are not only relevant to their current lives, but will also be useful as they grow. One of the most important aspects of Home Economics is the emphasis on personal development, decision making, and interpersonal skills (Dep,Ed Order No. 37, 2003).

Furthermore, the course comprises two streams: Training Regulations-based TLE and Entrepreneur-based TLE. Every institution has the option of offering one or more streams, taking into account faculty, facilities, and resources. Both streams are based on training regulations, but the Entrepreneur-Based TLE incorporates entrepreneurship themes into the teaching of several disciplines in higher education. IA, AFA, and ICT. TLE is designed to enhance technological competency and is based on knowledge and information, entrepreneurial principles, process and delivery, workplace values, and life skills.

This means that a successful TLE is one that is based on proper mastery of knowledge and information, skills and procedures, as well as the development of appropriate work values and life skills. A functional TLE provides students with the tools they need for lifetime learning. TLE that focuses solely on the definition of terminology is useless and superficial. TLE that focuses on skill and process mastery but lacks the appropriate work values is anemic and risky. An efficient TLE is one that is based on the cognitive, behavioral, psychomotor, and effective elements of human development. TLE is mostly a skill-based subject, hence the teacher must engage students in an experienced, contextualized, and authentic teaching learning process.

Areas in Technology and Livelihood Education are chosen to avoid duplication, to connect the areas, and to include other cross-curricular elements (mensuration, technical drawing, use of hand tools, occupational health and safety, and tools/equipment maintenance) to ensure greater coherence in the curriculum as a whole.

When offering TLE courses, the institution will select at least eight mini courses. The decision is based on the availability of its resources (faculty and facilities), as well as the community's local requirements and assets. However, the school lacks adequate facilities, tools, and equipment, as well as trained teachers, to teach other specializations. In relation to the aforementioned statements, the administrator conceptualized the current scenario before the school allocated the necessary resources. He wants to know which areas of Technology and Livelihood Education are in high demand around Santa Maria National High School.

The school provides exploratory TLE courses in Grades 7 and 8, which will serve as choices for specialization in Grade 9. The curriculum guide provides an exploratory course in Cookery and EPAS that leads to a National Certificate Level II (NC II). It covers five common competencies that a high school student should have, namely: 1) knowledge of the use of tools, equipment, and paraphernalia; 2) maintenance of tools, equipment, and paraphernalia; 3) performance of mensuration and calculation; 4) interpretation of technical drawings and plans; and 5) the practice of Occupational Health and Safety Procedures (OHSP). The preliminaries of this exploratory course comprise the following: 1) a discussion of the course's relevance; 2) an explanation of essential ideas related to the course; and 3) an exploration of career options and the preparation, cooking, presentation, and evaluation of meat dishes. Electronic Product Assembly (EPAS) covers five common competencies that a Grade 7 / Grade 8 Technology and Livelihood Education (TLE) student should have: 1) using hand tools; 2) performing mensuration and calculation; 3) preparing and interpreting technical drawings; 4) practicing occupational safety and health; and 5) maintaining tools and equipment.

Indeed, electronic devices have become an integral part of our daily lives. We now find it difficult to work without the use of electronic devices. We live in an electronic and technological age, when robots and artificial intelligence can perform human tasks more easily and efficiently.

Cookery is characterized as a "chemical process" that includes the combining of components, the application and removal of heat, decision making, technical knowledge, and manipulation abilities. In the most advanced stages, a new element emerges: creativity. Cooking is thought to be both an art and a technology. Food preparation is a contemporary word in professional cooking. It refers to preparation and cooking. It follows a flow pattern that begins with the purchase and selection of ingredients, then moves on to their handling, processing, and finally the presentation of dishes to clients, where "food service" takes control. Cuisine in French refers to the art of cooking and creating dishes, as well as the kitchen where they are prepared (https://www.ihmnotes).

Furthermore, some of the students who completed the skills in culinary and EPAS have already taken the National Certificate II assessment with the assistance of supportive parents and administration. We feel that with this achievement, people can now hunt for a local or perhaps international career that matches their skills. Students clearly have diverse abilities, requirements, and interests. All students deserve the opportunity to understand the necessary know-how and practical methods of learning TLE using current technologies. Students need to acquire new tactics and fundamentals that will allow them to be creative and inventive. It has taken so long to realize the value of studying this technique.

These discoveries and innovations are the result of modern technology, often known as the Industrial Age, which saw the introduction of technical devices and gadgets. Multimedia applications can assist students become more interested in the learning process. These applications make their lives easier. These would lead to improvement and the potential for kids to become resourceful and innovative.

Furthermore, how have these technologies and the epidemic influenced the student's abilities and academic performance? What influence does the new educational landscape incorporating technology have on student interest in EPAS and Cookery? In light of this, the researcher intends to undertake this study to better understand the perceived skills and performance of Grade 8 TLE students at Santa Maria National High School. Thus, this investigation is carried out.

II. RESEARCH METHODOLOGY

Research Design

The descriptive research design was used in this study. According to Johnson and Christensen (2014), as referenced by Pantaleon (2022), descriptive research seeks to provide an accurate description or image of the condition or qualities of a situation or phenomena. The descriptive section discusses the respondents' demographics, including age, gender, parental education, and occupation. Correlation research, on the other hand, uses statistics to characterize and quantify the strength and type of scores (Creswell, 2012). With this research approach, the researcher was able to correlate the respondents' profiles with their perceived competency and academic success.

Population and Locale of the Study

Total enumeration was employed in this study which involved all the 85 Grade 8 students of Santa Maria National High School from 8-Silang Section and 8-Jacinto Section enrolled for School Year 2021-2022 as the respondents. It is composed of 43 students from Silang section and 42 students from Jacinto section.

Table 1 presents the distribution of students per section of the School Year 2021-2022.

Table 1. Distribution of Respondents

Section	Male Sample (n)	Female Sample (n)	Total sample (n)
8-Silang	21	22	43
8-Jacinto	19	23	42
Total	**40**	**45**	**85**

Research Instrument

A validated researcher-made instrument was utilized to determine the perceived level of competency of the Grade 8 TLE learners in EPAS and Cookery. It contains two main parts. Part 1 was used to elicit the student's profile such as name, age, gender, education and occupation of parents and Part 2, using a rating scale, identifies the level of perceived academic performance of the Grade 8 TLE learners in the Basic Competencies of EPAS and Cookery. The academic performance was based on the average grade from the first and second quarterly grades of the student-respondents.

A pilot test was conducted to Grade 8 students of Ag-Agrao National High School and Burgos National High School to fine tune the survey instrument. The questionnaires were validated by the experts in EPAS and Cookery which includes the Associate Professor, Master Teacher, Head Teacher, Teacher III and Instructor. The questionnaires were collected and the response of the validators were tailed and submitted for statistical treatment.

The validated questionnaire was distributed to the student-respondents from Grade 8 learners of Jacinto section and Silang section of Santa Maria National High School after approval from school authorities.

Statistical Treatment of Data

Data information that were gathered in this study were collated, treated, and analyzed using statistical tools. The following statistical tools were employed.

Frequency Count and Percentage were used to describe the profile of the respondents as to their age, sex, educational attainment of parents, occupation of parents, learning available at home and source of internet connection.

Mean was utilized to describe the level of perceived competency and academic performance of the students' respondents.

Spearman rank correlations coefficient (rho) was used to determine the relationship between the student performance and the competencies of the students in modular distance learning. This was also utilized to determine the relationship between profile and competencies.

Data gathered were treated, analyzed and interpret at 0.05 level of significance.

Data Categorization

The following data categorization were used in the study.

A. Competency Level of the Students

Procedural Limit	Item Descriptive Rating
4.21-5.00	Very Highly Attained (VHA)
3.41-4.20	Highly Attained (HA)
2.61-3.40	Attained(A)

1.81-2.60	Fairly Attained (FA)
1.00-1.80	Not Attained (NA)

B. Level of Academic Performance

Grading Scales	Descriptors
90-100	Outstanding
85-89	Very Satisfactory
80-84	Satisfactory
75-79	Fairly Satisfactory
Below 75	Did Not Meet Expectation

C. Correlation

Range of r	Degree of Relationship
±1.00- ±0.99	Perfect
±0.81- ±0.99	High, to Very High
±0.61- ±0.80	Marked/Substantial
±0.41- ±0.60	Moderate
±0.21- ±0.40	Low
±0.01- ±0.20	Almost Negligible to Very Low
±0.00	No Relationship

III. RESULTS AND DISCUSSIONS

Profile of the Respondents

Age. According to the findings, the majority of respondents are between the ages of 12 and 15, accounting for 83 or 97.65% of the total population, with only 2 or 2.35% being 16 to 19. This suggests that the majority of pupils are entering eighth grade at the typical age. Based on their 14-year-old developmental task, kids are already capable of taking on new challenges with the help of competent adults.

Sex. According to the data, males account for 40, or 47.06%, and females account for 45, or 52.94%, of the total population. The findings indicate that it has always been noticed that there are more girls than boys in a classroom. This could be explained by the fact that girls are more likely than boys to want to attend school. This is backed by Mutai's (2016) study, which found that there are more girls than boys. Gender can be a useful predictor of performance and achievement. According to Ibesate's (2004) study, gender effects academic accomplishment; he discovered that female students have higher academic self-concepts and achievement than male students. Similarly, Rowe (2000), as referenced by Valencia (2010), noted that boys are much more disengaged from school and are more likely to struggle academically, particularly in reading. Boys have much more externalizing behavior problems in the school and at home.

However, Eldon and Peterson (as reported by Pacer, 2002) and Valencia (2010) stated that employment while in high school was observed for both boys and girls. For boys, employment had no significant effect on academic success, extracurricular engagement, socioeconomic position, or self-esteem; however, guys who worked had somewhat higher grades and self-esteem. Employment was found to be substantially connected with improved academic achievement and self-esteem among girls.

Parents Educational Attainment. Respondents' parents are primarily high school graduates, with the maximum frequency being 49. The item college graduate took second place with a recorded frequency of 33. Elementary graduates, on the other hand, came in third place with three out of the total population. These figures demonstrate that most parents have at least a high school diploma/certificate. This suggests that they can help their children with their homework and tasks.

Velasco, as referenced by Dumas (2010), indicated that employees with higher levels of education place a higher priority on work values. Despite their numerous aid tasks and obligations at home and in the school community, they choose to complete their studies to meet their need for personal and professional development. They believe it will assist them have greater performance.

McKenzie and Schweitzer (2001) conducted a prospective study to investigate the psychosocial, cognitive, and demographic factors of academic achievement among first-year Australian university students. The findings show that earlier academic performance was the most significant predictor of university performance. In this study, the researchers primarily want to investigate the factors linked with students' success in intermediate examinations. This study shows that attitudes toward class attendance, time allocation for studies, parents' economic level, mother's age, and mother's education are the most important factors influencing student success. The report explained how these factors have a detrimental impact on academic achievement and how they should be reduced in order for pupils to perform better. According to the study, truancy has a significant impact on academic achievement and can occasionally lead to school dropout.

Parents Occupation. According to data, 31 (36.47%) of their parents are self-employed, while 36 (42.35%) are unemployed. The highest percentages reported indicate that most parents are struggling to locate blue- and white-collar professions because of their educational background and a dearth of job possibilities, particularly during the epidemic. The majority of responders participate in intensive field activities. Given that the majority of them are definitely unemployed, it is understandable that they are struggling to care for their children's basic necessities.

Cajindos (2009) agrees with this conclusion, stating that parents were not professionals. In a similar vein, Gabriel (2012) reports that only 9% of parents work as professionals, either in government or the private sector.

Learning Materials Available at Home. According to the findings, 32 or 37.65% of respondents have only one learning item at home, which is a cellphone, whereas 20 or 23.53% have at least three learning materials, which are a cellphone, a television, and a radio. This score demonstrates that the majority of respondents are less capable of providing multiple learning resources for oneself, which has a significant impact on their ability to keep up with current learning trends. Scholars have found concerns with phone usage and time (Junco, Merson, and Salter, 2010; Wei and Lo, 2006), as well as attachment to phones (Gaser, 2006), and there is a need to demonstrate a link between these observations and academic achievement. When analyzing the problem of these internet phones, and in order to synchronize and have a clearer understanding of the problem as it relates to this study, it must be remembered that other varying platforms of distractions to the academic performance of undergraduate students in the university are also implicated, such as computer usages, which generate internet social sites, and visual display devices for relaxation such as televisions.

Source of Internet Connection. The results showed that 77, or 90.59%, of the pupils had an internet access through their own mobile data. 6 or 7.06 connects to the internet via broadband (DSL or fiber). This demonstrates that students can manage their study using their mobile data.

The use of Internet-enabled phones has become a 21st-century phenomenon, spreading for a variety of purposes and activities. This study investigates the usage and perceived effects of internet-enabled phones on students' academic achievement. It was conducted to determine and highlight if students' academic performance is impacted by the amount of time spent on their phones during class hours, which is widely seen as a source of distraction for pupils. The examination of students' perceptions revealed that internet-enabled phone usage has no effect on academic performance, however phone-related distractions were admitted.

Table 2. Level of competency of the Grade 8 TLE learners in EPAS

A .Electronic Product Assembly and Servicing		
Competencies	Mean	DR
a. Can assess quality of received material or components within workplace standards and specifications.	3.64	HA
b. Can assess own work in accordance with the workplace' standard operating procedures	3.49	HA
c. Can engage in quality improvement in accordance with process improvement procedures	3.44	HA
d. Can select appropriate measuring instruments in line with job requirements	3.41	HA
e. Can carry out measurements and calculations	3.48	HA
f. Can maintain measuring instruments according to manufacturer's specifications and standard	3.71	HA
g. Can store technical drawings and equipment/instruments	3.75	HA
h. Can identify different kinds of technical drawings	3.78	HA
i. Can interpret technical drawing against job requirements or equipment in accordance with standard operating procedures	3.47	HA
j. Can prepare/make changes to electrical/ electronic schematics and drawings procedures	3.49	HA
AVERAGE MEAN	**3.57**	**HA**

The table displays the EPAS competencies, with an average mean of 3.57 indicating "Highly attained". The chart shows that

the indicator "Can identify different kinds of technical drawings" has the highest mean of 3.78. It means that students are interested in learning how to interact on a common ground using specific sketching styles. The indicator "can select appropriate measuring instruments in line with job requirements" has the lowest mean of 3.41, which is classified as "Attained". It means that students who are unaware of how to use adequate measuring equipment may be unable to complete the task correctly, so it is critical that you keep your gages in good working order. Some of these tools are extremely sensitive, and tiny changes in conditions can lead them to malfunction and produce erroneous findings.

Table 3. Level of competency of the Grade 8 TLE learners in Cookery

B. Cookery		
Competencies	Mean	DR
a. Can utilize kitchen tools and equipment	4.23	HA
b. Can maintain kitchen tools, equipment and working area	4.27	VHA
c. Can store and stack kitchen tools and equipment	4.1	HA
d. Can carry out measurement and calculations in a required task	3.92	HA
e. Can calculate cost of production	3.92	HA
f. Can read and interpret kitchen plans	3.97	HA
AVE. MEAN	**4.07**	**HA**

The table the competency in cooking, with an average mean of 4.07. The indication "Can maintain kitchen tools, equipment, and working area" has the greatest mean of 4.27, which is classified as "Highly attained". It implies that students can create a clean and safe kitchen, which is an important step toward a healthy home, especially during pandemics, because a clean house reduces your family's risk of exposure to many indoor pollutants such as bacteria and allergens, such as dust mites, which can cause disease.

The indicators "can carry out measurement and calculations in a required task" and "can calculate cost of production" have the lowest mean of 3.92. It means that the majority of students are uninterested or unable of performing computations, measurements, or other tasks involving mathematical qualities. Understanding the amounts of ingredients added in cooking begins with proper measurement.

Supported by Caine & Caine's Brain-Based Learning Theory, which claims that learning is a sense-making activity in which new knowledge is learned in relation to current knowledge. Caine and Caine further believe that brain research reveals that several complicated and tangible experiences are required for meaningful learning and teaching. They say that the brain is created as a "pattern detector" and that educators' role should be to equip pupils with experiences that allow them to recognize "the patterns that connect." This is consistent with Vygotsky's (1978) "zone of proximal development" theory, which outlines the teachable range between what a kid already knows and what he or she is expected to learn. These beliefs are consistent with constructivism and active learning environments in which students are actively engaged and given opportunities to develop connections.

Table 4. The academic performance level in TLE 8 of the learners' respondents

General Point Average	**Descriptors**	**Frequency**	**Percentage**
90-100	Outstanding	7	8.23
85-89	Very Satisfactory	19	22.35
80-84	Satisfactory	39	45.89
75-79	Fairly Satisfactory	20	23.53
TOTAL		**85**	**100**

Mean GPA: 82.82

Based on the table, 39 or 45.89% of respondents have a grade point average ranging from 80 to 84, with a descriptive rating of Satisfactory. Seven (7) of the student responders had a grade point average in the 90-100 range, indicating "Outstanding". Twenty (20) were assigned an overall point average of "Fairly Satisfactory" for the 75-79 range. It is worth noting that no student got a GPA of less than 75, indicating that pupils performed well academically despite the obstacles of modular distance learning. This means that despite having no face-to-face connection with their teachers and just modules and other learning materials at their disposal, with the support and supervision of their learning facilitators, students were able to understand the lesson and receive a passing mark.
A high degree of academic accomplishment does not always imply a high intelligence quotient or hard work. It is typically associated

with good learning and cognitive techniques. Some of these strategies include proper time management, improved study strategies, increased competency in taking examinations, and overall competency in academic course work (HA Lamas, 2015). However, the results contradict Barnvill's (2000) study, which states that a student's academic performance cannot be determined solely based on whether they received the highest or lowest performance in modular learning. Performance and experience can show more of a learner's potential.

Table 5. Correlation: Profile and Perceived Competencies

Profile	EPAS		Cookery	
	r-value	**p-value**	**r-value**	**p-value**
Age	0.090	0.411	0.41	0.707
Sex	0.027	0.807	-0.014	0.879
Education	-0.023	0.838	0.11	0.317
Occupation	0.004	0.973	-0.043	0.696
Learning Materials	0.046	0.677	-0.091	0.406
Source of Internet	0.049	0.653	-0.033	0.762

The table reveals no significant variations between the profile and perceived skills. It implies that the students' perceived competency in EPAS and Cookery is unaffected by their age, gender, education of parents, or occupation of parents. It indicates that using a profile as an evaluation method portrays it as an inherent aspect of students. Competencies necessitate suitable mechanisms of evaluating and exporting student achievement based on what they know rather than in contrast to what other students know. The student competence profile is used as a check-off list to indicate when a student has completed specific competencies and to report the student's level of proficiency. When beneficial traits are present and utilized correctly, the profile gains dimension. Consideration is given to the student's monitoring requirements. Assessments are predicated on the notion that the skill offered is targeted at achieving great academic achievement. As a result, the maximum performance rating a student can achieve is Highly Attained, while the lowest performance competency is Not Attained.

Table 6. Correlation: Profile and Academic Performance

Profile	**General Point Average**	
	r-value	**p-value**
Age	-0.024	0.827
Sex	-0.002	0.989
Education	0.106	0.336
Occupation	-0.206	0.060
Learning Materials	0.131	0.234
Source of Internet	0.086	0.434

The data shows that students' perceived skills have no meaningful effect on their academic success. This indicates that perceived competencies in EPAS and Cookery do not always affect the student's academic achievement. It suggests that the academic achievement of the student responders is more or less comparable, regardless of their estimated competencies in EPAS and Cookery. This means that attitudes toward time allocation for studies, parents' degree of wealth or occupation, parents' education, materials available at home, and source of internet connection were the most important factors influencing student success. The study explained how these elements influence academic achievement and how they should be optimized to help students perform better.

Furthermore, the study discovered that other factors such as children' parental levels of education and income, the availability and accessibility of learning resources, and teachers have a significant impact on students' academic success in school. Students who are above average academically and are positively exposed to these elements are more likely to perform well than those who are not exposed to them. The study suggests that elements such as truancy, parental education and income levels, learning material availability and accessibility, and teachers be reviewed and altered on a regular basis to fulfill students' needs and expectations. This will significantly improve students' academic performance, allowing them to fulfill their life goals (Mckenzie and Schweitzer 2001).

IV. CONCLUSIONS

The following conclusions were drawn based on the findings of the study.

1. The profile of the student respondents is typical for a family in a rural community. Most of the respondents are 12-15 years old, majority of which are female. Parents are mostly high school graduate and self-employed. Cellphones is the only gadget used as learning material and own mobile data is the only source of internet connectivity.

2. Student respondents were having a difficulty in carrying out measurements and calculations in EPAS and can select appropriate measuring instruments in line with job requirements in Cookery.

3. The level of competency as perceived by the respondents in EPAS and Cookery is "highly attained".

4. The academic performance of the student respondents was satisfactory.

5. The profile of the student respondents and the perceived competencies has no significant relationship.

6. The profile of the student respondents and the academic performance has no significant relationship.

V. RECOMMENDATIONS

The following recommendations are forwarded based on the conclusions drawn.

1. Students of all ages should equally perceive education with utmost priority. Parents' support would make difference in the academic performance of the students.

2. Student respondents should watch instructional videos on measurements and calculations and using appropriate measuring instruments in line with job requirements frequently. This will surely improve their mathematical skills. Provide the student respondents additional activities and remedial outputs to improve their academic performance.

3. The different perceived competencies must be sustained for it is relevant regardless of the of the student respondents' profile.

4. The student respondents should increase their level of competency by developing and expanding their educational environment through involvement in peer and group learning to improved their academic performance.

5. Further researches can be explored using other variables not included in this study to verify results.

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