Original Research Article

THE ASSESSMENT OF THE PROFICIENCY LEVEL AND CHALLENGES IN ECONOMICS OF GRADE 10 STUDENTS IN SELECTED PUBLIC SCHOOLS IN CENTRAL PHILIPPINES

ABSTRACT

Aims: This paper assessed the level of proficiency in Economics of Grade 10 students in selected public schools in the Philippines during the school year 2022in the areas of basic concepts of Economics, microeconomics, macroeconomics, and sectors of the economy and its policies when taken as a whole and grouped according to sex and grades. It also identified the challenges encountered by students in learning Economics. Lastly, it determined the difference in the proficiency level in Economics when grouped into demographics.*(You can safely delete this portion to reduce the number of words which is already exceeded for an abstract)*

Study design: The study utilized the quantitative design, particularly the descriptive-comparative approach.

Place and Duration of Study: The study was conducted among the Grade 10 junior high school students in Central Philippines during 2022.

Study design: The study utilized the quantitative design, particularly the descriptive-comparative approach.

Methodology: The study was responded to by 304 stratified randomly sampled students using a validated and reliability-tested researcher-made test questionnaire and checklist. In assessing the study, it utilized the scale in ascending order: beginning, developing, approaching proficiency, proficiency, and advanced. In data analysis, mean, standard deviation, frequency count, percentage, rank, Mann-Whitney, and Kruskal Wallis were used.

Results: Generally, the student's proficiency level in Economics (M=24.25; SD=6.43) was rated as approaching proficiency. The low areas with approaching proficiency ratings that need improvement are microeconomics (M=5.33; SD=2.02), macroeconomics (M=7.58; SD=2.84), and sectors of the economy and its policies (M=3.82; SD=1.71). Regarding the demographics, according to sex, the Economics proficiency of female (M=25.18; SD=6.11) and male (M=23.22; SD=6.64) students was approaching proficiency. Meanwhile, the student's proficiency level with a grade of 90-100 (M=27.02; SD=5.82) was proficient compared to other grades, 85-90 (M= 23.18; SD=6.64), 80-84 (M= 22.05; SD= 5.58), and 75-79 (M=22.17; SD= 3.66) which were approaching proficiency. On the one hand, the findings showed a significant difference in their proficiency level in Economics when grouped according to sex [U=9547.5, p=0.010] and grades in Economics [$\chi 2(3) = 31.377$, p=0.000]. Lastly, grade 10 students encountered challenges in learning Economics regarding teacher, student, learner environment, resources, facilities, and subject factors.

Conclusion: The findings imply a continuous improvement in instruction and the importance of programs and activities that encourage acquiring and developing proficiency in Economics. With the sustainable improvement in instruction intact, the student's proficiency in Economics is ensured.

Keywords: Economics, proficiency level, descriptive-comparative, Philippine public schools

1. INTRODUCTION

Economics is essential in preparing individuals to become nation-builders, globally competitive, and life-ready [1]. This discipline aims to develop their sense of responsibility as citizens in making sound judgments and effective life decisions [2]. Meanwhile, the knowledge of this field also helps them build secure financial management, potentially contributing to their growth, development, and future [3]. Interestingly, it gives them vast access to information that could help them address the economic challenges and demands of the nation and the world [4]. With these, Economics as a discipline is vitally

important to be offered in basic educational institutions to advance these potential advantages among learners [5].

When students acquire these competencies in schools, they become skillful in understanding national and international economic market functions [6]. Additionally, they comprehensively grasp economic concepts and principles necessary for making prudent decisions as citizens, producers, and consumers [7,8]. Through their acquisition of learning, they become well-informed about the government policies and legal matters which govern their economic functions and social relations [9]. Hence, every educational institution should see the relevance of putting a premium on this discipline to help these students acquire and exemplify these fundamental competencies of Economics [10,11].

In the Philippines, Economics is one of the curricula offered in the K to 12 programs of the Department of Education [12]. This course aims to provide the students with an understanding of the basic ideas, concepts, and principles along with the contemporary economic issues to help them shape their knowledge, skills, and attitude, which are critical in their lives and their disposition towards their country and the larger community [13]. However, given the nature of the subject, its complex concepts and terminologies, not to mention the numerical calculations, most students would find this discipline difficult [14,15,16]. Aside from these, there are also teachers handling this subject who are social science majors but are not specialized in Economics per se and find the instruction challenging [17]. Undeniably, this is also triggered by the pandemic circumstance, which altered the educational landscape [18,19,20]. The students' disposition towards this discipline is affected by the shift in instructional modality from face-to-face to modular online, negatively impacting their proficiency. Most learners and teachers were not designed for the new instructional setup [21,22,23]. These conditions compromise their learning motivation, interest, and acquisition towards Economics [24,25].

1.1 Research objective.

In the context of public secondary schools in Central Philippines, it is observed that most students do not find this subject interesting since it deals with higher-level ideas and concepts they need to memorize [26]. Regarding computations, some can perform the expected competencies, but most would consider this a demanding subject because it entails demonstrating knowledge and skills [27]. With these circumstances, most would just accomplish the requirements regardless of whether they learned something [28]. Not to mention, Moreover, the effect of the pandemic and the sudden shift of instruction to their interest and disposition challenged s them[29,30]. Some of these public school students also had problems with connectivity and comprehension of the modular instructions, which questioned their acquisition and proficiency in this subject [31].

There were several studies conducted on Economics: The perceived effect of instructional materials on the effective teaching and learning of Economics [32], Challenges of teaching economics for undergraduate-level students [33], difficulties encountered by pupils in learning Economics [27], investigation into challenges affecting learner academic performance in a Grade 10 Economics class[14], and activity-based teaching and its effects on student performance in Economics subject [26]. However, very little is known regarding the level of proficiency in Economics of students in the context of public secondary schools. This is the research gap that this study would like to fill in.

1.21.1Research ProblemSignificance of the study.

This paper assessed the level of proficiency in Economics of Grade 10 students in selected public schools in the Philippines during the school year 2022 in the areas of basic concepts of Economics, microeconomics, macroeconomics, and sectors of the economy and its policies when taken as a whole and grouped according to sex and grades. Likewise, it identified the challenges encountered by students in learning Economics. Also, it determined the difference in the level of proficiency in Economics when grouped into demographics. Significantly, the study's findings may serve as a basis for formulating the proposed Strategic Intervention Materials (SIM) for low-proficiency areas to improve Economics instruction among selected public schools.

1.32. FRAMEWORK OF THE STUDY

The study theorized that the proficiency level in Economics of Grade 10 junior high school students of selected public secondary schools in Central Philippines varies according to their sex and grades. In addition, it is also assumed that they have acquired a certain level of cognitive achievement as far as this subject matter is concerned since they already finished the course. These assumptions were anchored on Piaget's [34] Theory of Cognitive Development. This principle claims that the individual's cognitive abilities and understanding of concepts improve as they grow, mature, and progress. As they progress through the stages and develop cognitive abilities, they engage in higher-level thinking, comprehend higher concepts, and apply these learned principles to real-world situations. However, this approach believes that the individuals' cognitive development differs according to their profile, pacing, and formation. In the context of the study, these principles of cognitive development have something to do with the proficiency level of the students in Economics. Since these students, as respondents, have already finished the course, it is expected that they have achieved the full acquisition of the competencies of the subject matter. However, it cannot be denied that their proficiency depends on their background, formation, and performance.

(You need to state the research hypothesis here)

2.03. METHODOLOGY

23.1 Research Design

This study utilized a quantitative research design, particularly the descriptive-comparative approach. The design statistically measures a set of variables to answer theory-guided research problems and hypotheses [35]. The descriptive approach assessed the proficiency level in Economics of students and the challenges encountered in learning the subject. Meanwhile, the comparative approach investigated the difference in the proficiency level in Economics when grouped according to the demographics.

23.2 RespondentsStudy location and population.

The respondents of the study were 304 Grade 10 junior high school students in the selected public secondary schools in Central Philippines during 2022. These students were determined using stratified random sampling and the fishbowl technique.

Table 1.*Demographic Profile of the Respondents*

Variable	**F**	**%**
Sex		
Male	144	47.4
Female	160	52.6
Grade in Economics		
90-100	104	34.2
85-89	134	44.1
80-84	60	19.7
75-79	6	2.0
Total	***304***	***100.0***

(What does 'F' stand for in this table? Number? Use 'No.')

23.3 Research Instrument

A validated and reliability-tested researcher-made questionnaire based on the Grade 9 Social Studies Most Essential Learning Competencies (MELCs) of the Department of Education was used for

assessment into assess the study. This instrument is a 45-item multiple choice test measuring the four concept areas: basic concepts of Economics, microeconomics, macroeconomics, and sectors of the economy and its policies. It underwent validation by ten Subject Matter Experts (SMEs) and yielded a content validity index of 0.89. It was also subjected to pilot testing on 30 non-actual respondents and item analysis and yielded a reliable Cronbach's alpha score of 0.89. For the interpretation, it utilized the scale in ascending order: beginning, developing, approaching proficiency, proficiency, and advanced. Regarding the challenges, it employed a researcher-made checklist in the areas of teacher, student, learner environment, resources, facilities, and subject-related factors.

23.4Data Analysis

Descriptive and comparative analyses were utilized in analyzing the data. The descriptive analysis, specifically, the mean, standard deviation, frequency count, percentage, and rank, werreas used to determine the profile of the respondents, the proficiency level in Economics of Grade 10 students, and the challenges they encountered in learning the subject. For the comparative analysis, Kolmogorov-Smirnov was used to test the normality of the variables. The normality test revealed that the variable proficiency [KS=0.058, p=0.15] was not normally distributed. Hence, the use of nonparametric statistical tools. Mann Whitney U-Test and Kruskal Wallis were used in analyzing the difference in the proficiency level in Economics of the grade 10 students when grouped according to sex and grades.

23.5 Ethical Considerations

The study ensured the ethical soundness of the paper in adherence to the general principles of respect for persons, justice, and beneficence by the Philippine Health Research Ethics Board (PHREB). Specifically, it addressed the vulnerability of the research participants and ensured theiranonymity and the confidentiality of the data gathered.

3.04. RESULTS AND DISCUSSION

3.1 Level of Proficiency in Economics of Grade 10 Students

Proficiency in Economics refers to students' grasp and application of economic principles, ideas, and concepts. It necessitates an in-depth understanding of economic analysis and the ability to comprehend and analyze economic data and policy. Also, the student must understand the fundamental concepts of Economics, the relationship between demand and supply, and the market system as the foundation of wise decision-making and can demonstrate an understanding of the national economy [36]. Lastly, it demonstrates how students have attained their educational objectives in Economics, which are critical for building ambitions and indicators of the school's efficiency [37]. *(Break the paragraph here)* Table 2 below presents the level of proficiency of grade 10 students in Economics. Generally, their proficiency level in Economics (M=24.25; SD=6.43) is rated as approaching proficiency. The low areas with approaching proficiency ratings are microeconomics (M=5.33; SD=2.02), macroeconomics (M=7.58; SD=2.84), and sectors of the economy and its policies (M=3.82; SD=1.71). In terms of the demographics, both males (M=23.22; SD=6.64) and females (M=25.18; SD=6.11) acquired approaching proficiency ratings. Regarding the grades, those with 90-100 (M=27.02; SD=5.82) were proficient compared to those with grades 85-89 (M=23.18; SD=6.64), 80-84 (M=22.05; SD=5.58), and 75-79 (M=22.17; SD=3.66) with approaching proficiency results.

Table 2. *Level of Proficiency in Economics of Grade 10 students*

Variable	Basic Concepts			Microeconomics			Macroeconomics			Sectors of the Economy and its Policies			Proficiency in Economics		
	M	SD	Int	M	SD	Int	M	SD	Int	M	SD	Int	M	SD	Int
Sex															
Male	7.32	1.86	Pr	5.19	2.03	AP	7.06	3.07	AP	3.64	1.81	AP	23.22	6.64	AP

Female	7.72	1.88	Pr	5.44	2.02	AP	8.04	2.54	AP	3.98	1.59	AP	25.18	6.11	AP
Grade															
90-100	8.25	1.77	Pr	5.96	2.03	AP	8.77	2.24	Pr	4.04	1.66	AP	27.02	5.82	Pr
85-89	7.19	1.93	AP	4.98	2.07	AP	7.19	2.98	AP	3.82	1.73	AP	23.18	6.64	AP
80-84	7.15	1.58	AP	5.00	1.67	AP	6.52	2.90	AP	3.38	1.69	AP	22.05	5.58	AP
75-79	6.33	1.75	AP	5.33	1.86	AP	6.33	1.21	AP	4.17	1.72	AP	22.17	3.66	AP
Whole	***7.53***	***1.88***	***Pr***	***5.33***	***2.02***	***AP***	***7.58***	***2.84***	***AP***	***3.82***	***1.71***	***AP***	***24.25***	***6.43***	***AP***

Note: AP=Approaching Proficiency, Pr=Proficient

The students' overall approaching proficiency rating indicates that they have moderately acquired the fundamental knowledge, skills, and core understanding of Economics as a discipline. This also shows that the selected public secondary schools in Central Philippines have not fully exhausted all means and efforts in providing instruction that elicits the learners' acquisition of the subject's ideas, concepts, and principles. Meanwhile, by not garnering the advanced proficiency rating, the result calls for continuous improvement of the instruction, specifically focusing on the areas with approaching proficiency ratings, such as macroeconomics, microeconomics, and the sectors of the economy and its policies.

The overall result of the study is congruent with Saputra and Man [38], where students' proficiency and performance in Economics were low [38]. Several factors could be ascribed to the overall approaching proficiency result. Generally, this could be attributed to the fact that by nature Economics is labeled as a serious and difficult subject due to its complex concepts, principles, and terminologies, which must be memorized and learned by the students, as supported by Backhouse [15]. This argument is also supported by the students' challenges of the subject matter. Aside from this, it cannot be denied that this subject entails mathematical calculations, which normally most students in public schools do not like [39]. In fact, the studies of Hussein [33], Manzi et al. [40], and Inayati et al. [27] found that most students struggle with Economics in terms of numerical computations, data analysis, and mathematical interpretations, which causes them to be non-performing in the subject.

Another factor contributing to the students' approaching proficiency result in Economics could be that these students were a product of pandemic circumstances where their instruction in this subject was through modular-online instruction. Given the complexity and difficulty of this subject, their motivation and disposition towards instruction were also negatively affected since most of them were not designed for this new instructional set-up, as supported by the study of Cena and Bual [21]. For students to acquire the competencies of the subject, it must be supported by actual instruction and close guidance from the teachers. But, with modular-online instruction, their understanding and acquisition will be compromised [31]. Aside from this, Economics is offered in Grade 9, but the assessment was conducted on Grade 10 students expecting they have already acquired the competencies. This scenario could also influence the approaching proficiency result since most respondents perhaps have forgotten the economic concepts and principles they learned during their Grade 9 year. With this, replication of the study can be conducted to those grade 9 students during the post-pandemic instruction to validate the claims of this study. The findings imply the importance of improving instruction in Economics by providing strategies and activities that elicit the students' disposition and interest toward the subject amid its complexity and difficulty.

In terms of the low areas, specifically in microeconomics, the approaching proficiency could be ascribed to the nature of this domain of Economics which requires students to perform graphical presentations in elucidating economic concepts and relationships, mathematical skills, theory application, and problem-solving as supported by bin Abdul Aziz and binti Zulkifli [41] and Johari et al. [16]. Additionally, Johari et al. [16] and Nordin and Saud [42] found that most students struggle to grasp microeconomic concepts due to their lack of quantitative literacy and visualization skills in supply and demand, market equilibrium, and market structure. Aside from these, the findings of Saputra and Man [38] and Song [43] argued that microeconomics entails discussions on production and cost functions, national income accounting, and circular flow of income, which by nature, most of the students would not like. These complex terminologies and concepts might be the factors that influenced the approaching proficiency rating of this domain.

Regarding the approaching proficiency in macroeconomics, the rating could be attributed to the nature of this domain which most students find challenging. This area of Economics deals with concepts and principles like economic theories, economic analysis instruments, international economics, and concepts of curves and calculations which not all can easily fathom, as supported by Ede and Oleabhiele [44] and Inayati et al. [27]. In addition, Wuthisatian and Thanetsunthorn [45] found that learning macroeconomics is quite challenging for students, especially when the opportunity to interact with theories in real-world situations is not available. This is the problem since these students were within the pandemic instruction where the teachers found it difficult also to feedback and assess their learning, and opportunities to bring these learners to actual problems are limited. Meanwhile, they added that the intricacy of economic theory may overwhelm and frustrate them, and they may lose interest in studying Economics.

Relative to the students' approaching proficiency in sectors of the economy and its policies, the result could be influenced by the limited teaching-learning interaction, which hampered their learning of the different economic sectors and policies, as supported by Natividad and Ballena [46]. The students were not given ample opportunity to investigate various sectors of the economy and comprehensively elucidate the different policies that govern them. They were also not given an adequate chance to apply economic concepts and principles. With these, most learners found it difficult to transfer theoretical knowledge of the discipline to practical applications [47]. The findings encourage public schools to expose and provide their teachers with vast opportunities to learn these concepts and principles in economics along with the potential techniques to hit the students' motivation and interest.

In terms of the approaching proficiency of males and females, the result indicates that both moderately acquired the concepts, principles, knowledge, and skills of Economics as a discipline. The rating in terms of gender differencesex could be attributed to the fact that both males and females attended the instruction of Economics in the modular-online modality of the pandemic circumstance. With this scenario, both were also struggling with coping and surviving the shifting instructional modality, as supported by the studies of Abante et al. [31] and Pahilanga et al. [48]. Relative to the grades, those with the highest marks were proficient compared to their counterparts. Despite the instructional modality of the pandemic, it is expected that those performing as manifested by their grades have higher coping mechanisms than those with lower marks since most of them would want to maintain their performance amid the circumstance, as congruent to the findings of the study byRahiem [49]. These findings imply the essentials of continuously improving the instruction of Economics in the post-pandemic with high consideration for those non-performing in the subject.

Table 2.*Level of Proficiency in Economics of Grade 10 students*

Variable	Basic Concepts			Microeconomics			Macroeconomics			Sectors of the Economy and its Policies			Proficiency in Economics		
	M	SD	Int	M	SD	Int	M	SD	Int	M	SD	Int	M	SD	Int
Sex															
Male	7.32	1.86	Pr	5.19	2.03	AP	7.06	3.07	AP	3.64	1.81	AP	23.22	6.64	AP
Female	7.72	1.88	Pr	5.44	2.02	AP	8.04	2.54	AP	3.98	1.59	AP	25.18	6.11	AP
Grade															
90-100	8.25	1.77	Pr	5.96	2.03	AP	8.77	2.24	Pr	4.04	1.66	AP	27.02	5.82	Pr
85-89	7.19	1.93	AP	4.98	2.07	AP	7.19	2.98	AP	3.82	1.73	AP	23.18	6.64	AP
80-84	7.15	1.58	AP	5.00	1.67	AP	6.52	2.90	AP	3.38	1.69	AP	22.05	5.58	AP
75-79	6.33	1.75	AP	5.33	1.86	AP	6.33	1.21	AP	4.17	1.72	AP	22.17	3.66	AP
Whole	***7.53***	***1.88***	***Pr***	***5.33***	***2.02***	***AP***	***7.58***	***2.84***	***AP***	***3.82***	***1.71***	***AP***	***24.25***	***6.43***	***AP***

Note: AP=Approaching Proficiency, Pr=Proficient

3.2 *Challenges of Grade 10 Students in Learning Economics*

Table 3below presents the challenges the grade 10 students encountered in learning Economics in terms of teacher, student, learner environment, resources and facilities, and subject factors. Relative to the teacher-related factors, most students are challenged by the teachers' use of traditional/outdated teaching strategies (f=116, 38.2%). Regarding the student-related challenges, most lack the skills in numerical or mathematical calculations in Economics (f=84, 27.6%). In terms of learner environment, resources, and facilities, they saw that the references, books, and study materials for Economics are limited (f=101, 33.2%). Lastly, regarding the subject factor, the grade 10 students mainly have difficulties understanding the terms and concepts in Economics (f=119, 39.1%).

Table 3. *Challenges of Grade 10 Students in Learning Economics*

Factors	**F**	**%**
Teacher-Related Factors: The teacher…		
uses traditional/outdated teaching strategies (e.g. memorization, lecture).	116	38.2
requests the students' unattainable performance tasks within the given time.	49	16.1
misses connecting Economics lessons to real-life situations	36	11.8
misses giving feedback on the student's activities and tests.	33	10.9
lacks the training or qualifications to teach the subject.	22	7.2
Student-Related Factors: The students …		
lack skills in numerical/mathematical calculations.	84	27.6
have difficulty managing their time in studying Economics.	63	20.7
lacks prior knowledge of the Economics subject.	48	15.8
find the Economics subject boring and difficult to understand.	39	12.8
lacks critical thinking skills in learning Economics.	35	11.5
have difficulty achieving expected tasks and activities.	35	11.5
have difficulty connecting and applying lessons in their lives.	27	8.9
lacks interest and motivation to study Economics subject.	17	5.6
Learner Environment, Resources, and Facilities		
The references, books, and study materials of Economics are limited (e.g. online resources).	101	33.2
The school has inadequate facilities and resources for the study of Economics (e.g. library, computer laboratory))	48	15.8
The teachers and students lack administrative support for activities and instructions.	43	14.1
The home learning environment is not conducive to studying.	33	10.9
The classroom is not conducive to teaching and learning Economics (e.g. crowded with students).	32	10.5
Subject Factor		
The concepts and terms used in Economics are difficult.	119	39.1
The subjects/lessons in Economics are difficult to understand.	90	29.6
Little time is allocated per topic.	70	23.0

In terms of teacher-related factors, most students are challenged by the teachers' use of traditional/outdated instructional strategies in teaching Economics. This could be attributed to the fact that most of these teachers teaching this subject areis not normally specialized in Economics and resort to teaching the discipline using conventional instructions like lecture, discussion, and memorization, as supported by the studiesof Sitorus et al. [11] and Fridrich [17]. It is continuously observed in the studies of Cielo et al. [50] and Balansag [51] that in the Philippines, most teachers still prefer to teach using traditional methods where they dominate the classroom, and students mostly listen and learn from lectures. With this type of instruction, most students find this to be passive, which results in their demotivation and disinterest in the subject [11,50,26].

In support, Woldab [52] observed that "chalk-and-talk" is the most common strategy in teaching Economics [53]. However, using this method disregards the students' opinions, resulting in them being passive, creating a classroom dominated and controlled by teachers, and having little interest in the subject matter. In addition, Johari et al. [16] found that students who are educated solely by memorizing lack critical thinking skills and tend to forget what has been memorized shortly[16]. These scenarios are even triggered by the pandemic instructional modality, which limits the collaborative interaction among

students and teachers vis-à-vis learning Economics [46]. Without student engagement, the learners could only receive learning passively, which compromises the proficiency of the subject [53]. Hence, these findings imply the essentials of encouraging teachers to innovate in terms of their teaching strategies and methodologies to elicit students' active participation and quality acquisition of the lessons.

Regarding student-related issues, most students were challenged in terms of the mathematical calculations in Economics. By nature, it cannot be denied that this discipline contains numerical computations that students need to hurdle and perform [54]. Obviously, competent students can only relate when it comes to numbers. However, most students in public schools find it to be serious and difficult, as supported by the studies of Hussein [33], Manzi et al. [40], Inayati et al. [27], and Backhouse [15]. Given the nature of the subject, this could be the possible factor that influenced their rating of this challenge. Their difficulty in numerical concepts in Economics could be affected by their poor prior knowledge and mathematical skills prerequisite to learning this discipline. The study by Mohammed and Jimoh [55] agrees that mathematical and statistical concepts in Economics are the most difficult lessons students encounter[55]. In fact, according to Johari et al. [16], the students faced problems in learning Microeconomics courses due to their inability to perform basic mathematical and statistical tasks[16]. These findings imply the importance of introducing potential instructional strategies that elicit the students' motivation and interest in learning the subject amid the difficulty of mathematical concepts and calculations.

Regarding the learner environment, resources, and facilities, the students were challenged in terms of the limited references, books, and study materials for learning Economics. This could be affected by the unavailability of these resources among students during their modular-online instruction [31]. During the pandemic, these students were dependent only on their modules to learn [56,48]. There may be books for references in the modules, but most of these were unutilized since instruction is unsupervised by the teachers [46]. On the other hand, most of the students in public schools had problems with the availability of gadgets and connectivity to support their learning of Economics [31,48]. Learning Economics necessitates a favorable environment with instructional resources to boost the students' enthusiasm toward the subject [32]. According to Ogbonna [57], a lack of instructional resources may result in the poor performance of students in learning Economics[57]. In fact, according to Cabauatan and Dacles [58], students find it difficult to catch up with lessons in Economics if they are not provided with references to guide them[58]. Hence, these findings imply the schools' provision of updated Economics references and encourage the utilization of these instructional materials to support the learning and acquisition of the lessons.

In terms of the subject factor, the students were mostly having difficulties understanding the complex terms and concepts in Economics. This subject entails high-level ideas, and principles students must deal with [27]. It entails discussions on market structure and functions, legal matters on Economics, and various theories in understanding Economic concerns [44,27,41]. With these, it is expected that most of these students would find Economics and its principles difficult [15,11]. In fact, Inayati et al. [27] found that the students had difficulty understanding the lessons due to the presentation of new information and the simultaneous introduction of new concepts mixing micro and macroeconomics [27]. In addition, it also deals with real-life issues where the students are expected to apply what they have learned in these concepts, theories, and principles [14,33]. These concepts and complex terminologies were not elucidated well during the modular-online instruction and were left to the students to research and study. These could influence their rating of the challenge. Hence, the findings imply the essentials of defining and elucidating terminologies to help the students understand the lessons in Economics.

Table 3.*Challenges of Grade 10 Students in Learning Economics*

Factors	F	%
Teacher-Related Factors: The teacher…		
uses traditional/outdated teaching strategies (e.g. memorization, lecture).	116	38.2
requests the students' unattainable performance tasks within the given time.	49	16.1
misses connecting Economics lessons to real-life situations	36	11.8
misses giving feedback on the student's activities and tests.	33	10.9
lacks the training or qualifications to teach the subject.	22	7.2
Student-Related Factors: The students …		
lack skills in numerical/mathematical calculations.	84	27.6
have difficulty managing their time in studying Economics.	63	20.7
lacks prior knowledge of the Economics subject.	48	15.8
find the Economics subject boring and difficult to understand.	39	12.8
lacks critical thinking skills in learning Economics.	35	11.5
have difficulty achieving expected tasks and activities.	35	11.5
have difficulty connecting and applying lessons in their lives.	27	8.9
lacks interest and motivation to study Economics subject.	17	5.6
Learner Environment, Resources, and Facilities		
The references, books, and study materials of Economics are limited (e.g. online resources).	101	33.2
The school has inadequate facilities and resources for the study of Economics (e.g. library, computer laboratory))	48	15.8
The teachers and students lack administrative support for activities and instructions.	43	14.1
The home learning environment is not conducive to studying.	33	10.9
The classroom is not conducive to teaching and learning Economics (e.g. crowded with students).	32	10.5
Subject Factor		
The concepts and terms used in Economics are difficult.	119	39.1
The subjects/lessons in Economics are difficult to understand.	90	29.6
Little time is allocated per topic.	70	23.0

3.3 *Difference in the Proficiency Level of Grade 10 Students in Economics in terms of Sex*

Table 4below presents the significant difference in the proficiency level of Grade 10 students in Economics when grouped by gender differencessex. Using the Mann-Whitney U test, the result revealed a significant difference in their proficiency level in Economics when grouped according to sex [U=9547.5, *p*p=0.010]. Hence, the null hypothesis is rejected*(You are making reference to null hypothesis here! You would need to have describe the null hypothesis for this study earlier under introduction above)*. Post hoc analysis revealed that female students scored significantly higher than male students. The difference result indicates that the students, in terms of gender differencessex, have varied perceptions or assessments of their proficiency level in Economics. This is reflected in the Post hoc analysis result. Meaning to say that this result shows that girls are more proficient in terms of learning the subject than their counterparts.

Table 4. *Difference in the Level of Proficiency in Economics of Grade 10 Students in sex*

Variable	U	Z	*p*P
Sex	9547.500*	-2.580	0.010

Note: *difference is significant when p≤0.05

(You need to state the key indicating what U, Z, and p mean)

The significant difference and Post hoc analysis results could be attributed to the fact that the subject, by nature, is more female-oriented than male. This subject entails numerical calculations and complex terminologies, which normally do not interest most male students [59,60]. In support, the findings of Eleje [60] and Van der Vleuten et al. [61] agree that girls learn better, are more interested, and prefer Economics subjects to their male counterparts. Most male students nowadays prefer subjects that entail psychomotor activities rather than cognitive as supported by Lagestad et al. [62]. On the one hand, female learners are more cognitively inclined than males. Since Economics is more cognitive, as

manifested by its critical, analytical, and calculative nature, most male students tend to disregard the subject, as Lim et al. [63] argued.

In addition, Eleje's [60] and Van der Vleuten et al.'s [61] findings argued that female students would opt to take Economic tracks like Economics and Society[60, 61]. Meanwhile, Jüttler and Schumann [64] found that female students have a higher level of knowledge and interest in Economics than males, which are considered essential indicators in deciding to take these tracks[64]. In fact, women appear to be more sensitive to grades in Economics than their counterparts, as supported by Avilova and Goldin [65]. These findings imply continuous improvement of instruction in Economics, which considers strategies and activities that encourage both male and female students to learn and embrace the subject.

Table 4.*Difference in the Level of Proficiency in Economics of Grade 10 Students in sex*

Variable	**U**	**Z**	**P**
Sex	9547.500*	-2.580	0.010

Note: *difference is significant when p≤0.05

3.4 Difference in the Proficiency Level of Grade 10 Students in Economics in terms of Grades

Table 5 below presents the significant difference in the proficiency level of grade 10 students in Economics when grouped according to grades. Using Kruskal Wallis, the result showed a significant difference [$\chi^2$2(3)*(what does this (3) mean here?)* =31.377, *p*p=0.000]. Hence, the null hypothesis is rejected. Post hoc analysis revealed that students with grades of 90-100 scored significantly higher than any other students. The significant difference in results shows that the students, in terms of grades, have varied perceptions or assessments of their proficiency level in Economics. This is manifested in the Post hoc analysis result. Meaning those with higher grades are more proficient than those with lower grades. The result also shows that the higher the students' grades, the more they are performing and inclined toward the subject.

Table 5. *Difference in the Level of Proficiency in Economics of Grade 10 Students in terms of Grades*

Variable	**χ^2**	***Df***	***p*P**
Grades in Economics	31.377*	3	0.000

Note: *difference is significant when p≤0.05

The proficiency of the students with 90-100 grades in comparison to their counterparts could be ascribed to their vast acquisition of learning as a prior knowledge prerequisite to Economics, as supported by Happ et al. [66]. Given the nature of the subject with numerical calculations and complex concepts and terminologies, it is expected that those with higher grades with prior knowledge shall perform these competencies more than their counterparts. In support, tThis is congruent with the findings of Walstad and Miller [67], Kara et al. [68], and Schmidt [69], arguing that the student's interest and prior knowledge contribute to their disposition toward the subject[67, 68, 69]. Logically speaking, those with grades 97-100 are expected to have higher interest and motivation than those with grades below them.

Meanwhile, in the study of Kelani et al. [70], it was found that those students with high grades in Economics are performing and demonstrating a strong understanding of the concepts and applying them to real-world economic problems [70]. On the one hand, Avilova and Goldin [65] claimed that those with high grades in this subject not only show a strong interest in the subject but have a probability of taking courses related to Economics[65].

In terms of those with low grades, there are various reasons why they struggle, which result in poor performance and motivation toward the subject. According toIn Tang [71], most students find concepts and principles in Economics too abstract and irrelevant in their personal lives[71]. Feudel and Biehler [72] also found students to have difficulty in terms of economic interpretation and mathematical calculations, which manifests in their poor interest in the subject matter [72]. With the popular opinonreputation of this subject to be challenging, most students with low grades would simply accomplish the requirements

regardless of the learning, as supported by Walstad and Bosshardt [28]. Given the findings, these imply the essentials of improving the instruction of Economics among public schools by providing strategies that elicit the interest and motivation of those with low grades to learn the Economics as a subject amid its complex concepts and principles.

Table 5.*Difference in the Level of Proficiency in Economics of Grade 10 Students in terms of Grades*

Variable	χ^2	**Df**	**P**
Grades in Economics	31.377*	3	0.000

Note: *difference is significant when p≤0.05

Anchored on Piaget's [34] Cognitive Development Theory, this study determinedperceived that the proficiency level in Economics of Grade 10 junior high school students of selected public secondary schools in Central Philippines varies according to their gender differencessex and grades [34]. In addition, it is also assumed that they have acquired a certain level of cognitive achievement as far as this subject matter is concerned since they already finished the course. Given the results of the study, this paper partially validated the theory since the students were not able to fully acquire the advanced proficiency level which is supposed to be expected after finishing the course. On the one hand, it validated that their proficiency varies according to their profile and performance in the discipline. However, further studies should be conducted to validate this study's claims.

45. CONCLUSION AND RECOMMENDATIONS.

The results and findings of the study imply the importance of improving the instruction of economics among the selected public secondary schools in Central Philippines to increase the student's proficiency in the discipline. Guided by the approaching proficiency areas and the list of challenges encountered by the students in terms of teacher, student, environment and facilities, and subject-related factors, these educational institutions can address the various emerging issues that hamper the learners' acquisition of the competencies. With this, seminars and trainings specialized in teaching Economics for basic education students are essential to aid the teachers in instructing the subject matter. Through specialized training, the teachers are provided with the techniques and strategies that motivate the students and address their issues on complex concepts, principles, terminologies, and mathematical calculations, which barrier their interest in the lessons. Hence, the students with respect to the demographic profile become encouraged to improve their proficiency in Economics and their knowledge, skills, and attitude towards the discipline, contributing to their lives ahead and nation-building.

56. LIMITATIONS OF THE STUDY

The study has several limitations. The assessment of proficiency in Economics was limited to the four public school campuses in Central Philippines. Regarding respondents, it was limited to Grade 10 junior high school students. Relative to the method, this was only measured using a quantitative design. Lastly, it was limited to the demographic variables of sex and grades.

67. DIRECTION FOR FUTURE RESEARCH

This paper encourages future researchers to conduct similar studies on proficiency and challenges in Economics among public schools on a larger scale to validate the claims of this research. Aside from this, there is also a need to employ other demographic variables. Regarding the method used, future researchers are encouraged to employ qualitative method approaches to validate and deepen the study's findings.

78. PRACTICAL VALUE OF THE PAPER

This study can be utilized when coping with the challenges of the student learning process in the different city schools' divisions of the secondary schools in Central Philippines. For the Department of Education, the study hopes to necessitate a call for rethinking our professional standards and ensuring the delivery of quality education that meets the demands of a dynamic educational environment. The study proposes the need to re-evaluate the goals, objectives, and competencies in Economics for curriculum planners. Teachers may address the challenges that hinder students from learning Economics.

812. CONSENT

The authors collected and preserved the respondents' written consent per international and university standards.

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