MATHEMATICAL PROFICIENCY, ENGLISH LANGUAGE COMPETENCE, EMOTIONAL INTELLIGENCE, AND MATHEMATICS ACHIEVEMENT OF GRADE 10 LEARNERS: A CORRELATIONAL ANALYSIS

Edda P. Montano[*1]

[*1]Lacson Integrated School, Junior High School Department, Davao City, Philippines.

Graduate School Student, Holy Cross Of Davao College, Davao City, Philippines.

ABSTRACT

Poor mathematics achievement has been a problem in education. This study aims to determine the significance of the relationship among mathematical proficiency, English language competence, emotional intelligence, and mathematics achievement of Grade 10 learners. Using a descriptive-correlational approach involving 300 grade 10 learners selected through stratified random sampling, it is concluded that all variables used in the study are not significantly correlated with each other. Thus, the Holistic Learning Theory is denied. Adopting an inclusive approach that incorporates diversified instructional strategies, emphasizes the broader range of skills, provides targeted intervention programs, refines holistic educational frameworks, supports continuous research, and ensures equitable access to resources and support for all students is recommended.

Keywords: Mathematical Proficiency, English Language Competence, Emotional Intelligence, And Mathematics Achievement.

I. INTRODUCTION

Poor mathematics achievement among learners is a central problem of education. Learning mathematics is never easy and sometimes brings anxiety to learners. However, mathematics involves deductive reasoning, complex problem-solving, and thinking, which are essential life skills (Correa & Haslam, 2021). While mathematical understanding is highly valued in today's global economy, arithmetic challenges are faced by students everywhere (Daucourt et al., 2021). In today's knowledge-based economy, mathematics is more critical than ever. Nevertheless, a persistent challenge plagues education systems worldwide: poor mathematics achievement among learners (Bah, 2022).

Globally, learners' mathematics achievement has been a big concern. In South Africa, math achievement among learners is poor, which negatively prevents them from progressing to the next grade level (Mabena et al., 2021). Furthermore, low mathematics achievement in the senior secondary school grades in Fiji has been noted, which has prevented students from meeting the curriculum's requirements in mathematics (Chand et al., 2021). Additionally, a sizable portion of low-achieving math students in Taiwan was identified by the 2015 "Program for International Student Assessment (PISA) and Trends in Mathematics and Science Study (TIMSS)" results (Yeh et al., 2019).

Filipino learners scored below the PISA's lowest competency level in the "2018 Programme for International Student Assessment (PISA)", making them one of the learner groups with the lowest statistics for mathematical education performance (Bernardo et al., 2022). Moreover, the "Trends in International Mathematics and Science Study (TIMSS) 2019" scores for the Philippines in math are 297, below the global average (Emergency Response Integration Center, 2020). Moreover, in Davao City, the mathematics performance of the grade six learners was on the approaching stage (Jordan, 2018).

Mathematical skills are required for labor market development; the latter needs understanding, computing, applying, and reasoning (Kandeel, 2021). Hence, it is urgent to study mathematics achievement. Amidst this urgency, little research has been published on this concern, especially in the Philippines. Hence, the conduct of this study was pursued.

II. METHODOLOGY

Respondents

The respondents of this study were the Grade 10 public junior high school learners in one of the clusters in Davao City. They are mainly chosen because they are in their last year of junior high school, and there is a need to investigate the factors that influence their mathematics performance in preparation for their senior high school years. A target of 300 sample respondents was determined by using stratified random sampling, which can be considered more than enough size for meaningful results. Hayes (2023) stated that stratified random sampling divides a population into smaller groupings or strata. Stratified random sampling, also called stratification, groups learners based on shared attributes such as educational achievement or wealth. This sampling method is best for this study to achieve a more accurate and reliable result from the randomly selected participants.

Research Instrument

The respondents answered three sets of adapted and modified survey questionnaires and a self-made test questionnaire. The first questionnaire which focused on learner's mathematical proficiency was adapted from (Faustino, 2022). The second set of questions inquired about learners' English language competence which utilized an adapted questionnaire from (Eslit, 2023). The third questionnaire assessed learners' emotional intelligence from an adapted-modified questionnaire of the San Diego City College MESA Program based on Mohapel (2015). Lastly, a self-made test questionnaire was used to assess learners' achievement in Mathematics 10. These questionnaires underwent validation by the experts and then pilot testing to establish reliability. The instrument's validity had an average of 4.61. The reliability results of mathematical proficiency, English language competence, and emotional intelligence questionnaires revealed Cronbach alpha values of .979, .974, and .936, respectively, which means that the equivalent internal consistency was excellent. On the other hand, for mathematics achievement, the results showed a Cronbach alpha value of .846, which means that the equivalent internal consistency was good.

Procedure

The researcher secured a REC certificate prior to data gathering. The researchers first sought the approval and consent of the school division superintendent, followed by the district supervisor and principal. When the approval for the conduct of the study was granted, the researchers coordinated with the grade 10 mathematics teachers regarding the schedule of giving survey questionnaires to the learners. Furthermore, since the researcher's respondents were minors, the informed consent was first administered face-to-face to the parents or guardians during the third quarter parents-teachers conference in the public school. During the administration of the informed consent, all the aspects of respondents' involvement in the research were discussed with the parents. In retrieving the informed consent, only the respondents with the signature of their parents or guardians were given the informed assent. During the face-to-face administration of informed assent, all the aspects of participation in the research were discussed with the respondents. Moreover, the index of agreement for the minor respondents is their signature, which affirmed their willingness to be part of the study. After administering and retrieving the survey questionnaires, the researcher collected and tabulated the data, and employed appropriate statistical tools to obtain the necessary data for interpretation and further analysis.

III. MODELING AND ANALYSIS

The obtained data were analyzed, summarized, and assessed. The Pearson Product- Moment Correlation Coefficient was utilized to analyze the significant relationship among mathematical proficiency, English language competence, emotional intelligence, and mathematics achievement of Grade 10 learners.
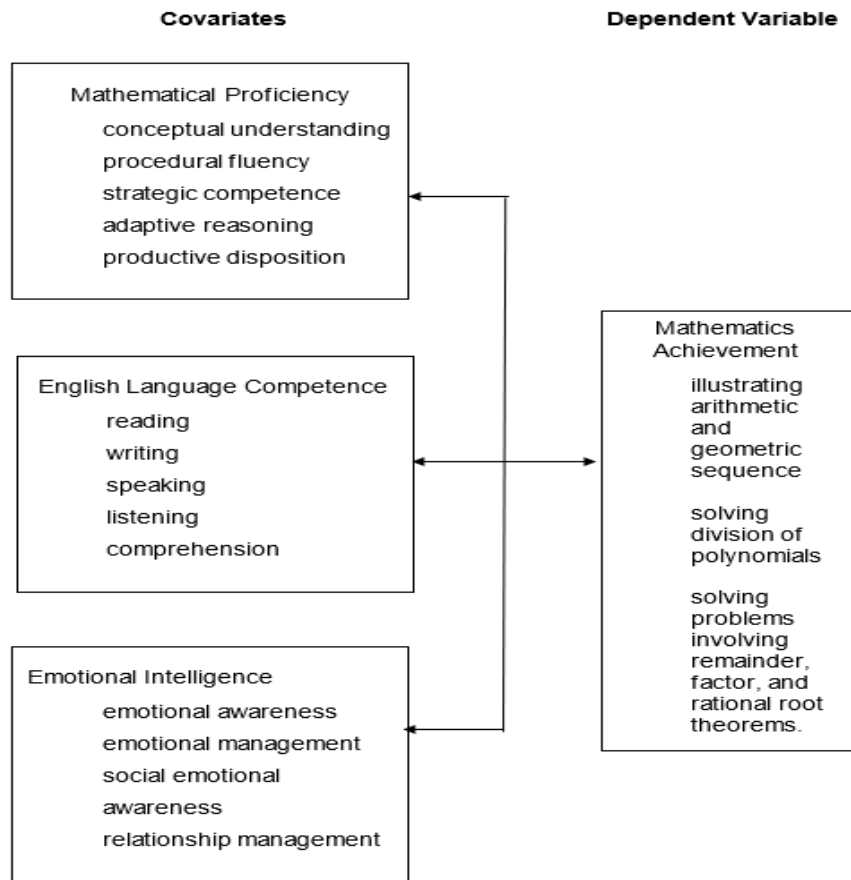
Figure 1: Conceptual Framework of the Study

IV. RESULTS AND DISCUSSION

This section focuses on the findings, analyses, and interpretations of the results obtained.

Table 1. Level of Mathematical Proficiency of Grade 10 Learners

Indicators	Mean	Descriptive Level
Conceptual Understanding	3.58	High
Procedural Fluency	3.64	High
Strategic Competence	3.72	High
Adaptive Reasoning	3.73	High
Productive Disposition	3.55	High
Overall	**3.64**	**High**

Table 1 shows the level of mathematical proficiency of Grade 10 learners in terms of conceptual understanding, procedural fluency, strategic competence, adaptive reasoning, and productive disposition.

The overall mean score of the mathematical proficiency of grade 10 learners was 3.64. This means that the descriptive level is high and often manifested. Learners possess mathematical proficiency, which includes all facets of understanding mathematics, and comprises five interdependent strands that support each other: conceptual understanding, procedural fluency, strategic competence, adaptive reasoning, and productive disposition (Alfayez, 2022). Since learners achieve a certain level of mathematical competence, the coordination between training and assessment plays a role in their development (Corrêa & Haslam, 2021). Thus, having a high level of mathematical proficiency conforms to the purpose of learning mathematics: for learners to succeed in their mathematics achievement (Yulian & Wahyudin , 2018).

In particular, among the five indicators of mathematical proficiency, respondents perceived that adaptive reasoning has the highest mean score of 3.73. The descriptive level is high, which means that it is often

manifested. Adaptive reasoning is the process by which mathematical concepts, facts, procedures, and methods are applied to a problem-solving scenario in mathematics. Then, the relationship between the concepts and the situation is explained, justified, and reflected upon (Syukriani et al., 2017). This further implies that learners could think logically about the relationships of concepts and situations and have the ability to develop logical solutions but also defend those solutions.

The finding is congruent with Darwani et al. (2020), who asserts that learners who have adaptive reasoning can draw connections between ideas and circumstances that are related to the capacity for logical thought, possess the capacity to evaluate mathematical truth, reason logically, estimate answers, and explain the ideas behind the results used. When the learners' level of adaptive reasoning is high, Elsayed (2022) said they could demonstrate adaptive reasoning by using logical linkages between concepts and scenarios, giving informal explanations and justifications, intuition and inductive reasoning, and using adaptive reasoning as the foundation for task completion.

The second highest indicator is strategic competence, with a mean score of 3.72. The descriptive level is high, which means that it is often manifested. Strategic competence in mathematics entails authentic problem-solving, where learners must formulate mathematical models to represent real-world problems and then determine the necessary operations to find a solution (Milou, 2021). Also, success in learning is not just measured by how quickly learners can solve a mathematical problem; it also has to do with their ability to use logic to justify and explain the conclusions reached as a result of their reasoning and the approach they took to finding solutions (Syukriani et al., 2017). This implies that learners can formulate, represent, and solve mathematical problems. Moreover, they also understand and are aware of solving problems differently.

Since learners have a high level of strategic competence, they can implement the best approach to solve an issue, evaluate their progress, and devise backup plans if the original ideas are ineffective. They can create, communicate, and resolve mathematical problems (Darwani et al., 2019). Furthermore, learners' high level of strategic competence has something to do with their ability to use logic to justify and explain the conclusions reached due to their reasoning and approach to finding solutions (Syukriani et al., 2017).

The third indicator is procedural fluency, with a mean score of 3.64. The descriptive level is high, which means that it is often manifested. Procedural fluency means applying procedures accurately, transferring procedures to different problems and contexts, modifying procedures from other procedures, and recognizing when one strategy or procedure is more appropriate (Milou, 2021). Furthermore, Indah et al. (2022) asserted that having procedural fluency is a crucial skill that becomes the focal point of assisting learners in each class with math problems. Learners' high procedural fluency further implies that learners can develop or alter procedures from other procedures, apply procedures accurately, flexibly, and efficiently, transfer processes to new issues and contexts, and identify when one technique or procedure is more appropriate.

Also, a high level of procedural fluency among learners involves memory work and the ability to think clearly. The thinking process is crucial to procedural fluency because it enhances learners' conceptual understanding and the foundation for procedures (Afghani et al., 2016). Furthermore, procedural fluency is a crucial skill that becomes the focal point of assisting learners in each class with math problems (Indah et al., 2022).

The fourth indicator, conceptual understanding, is second to the least among the five indicators, with a mean score of 3.58. The descriptive level is high, which means that it is often manifested. Conceptual understanding refers to mathematical relationships that are not isolated from one another. When learners can explain, define, and apply the same concept in several contexts, they are assumed to have conceptual comprehension (Malatjie & Machaba, 2019). The result implies that learners can comprehend ideas and are knowledgeable about more than just specific techniques and facts. They can understand the significance of a mathematical concept and its different applications.

Milou (2021) stated that learners with conceptual understanding can apply their knowledge to new contexts and situations to solve the problem at hand. This knowledge transfer is essential for success in math, other subjects, and the profession. Afghani et al. (2016) said learners must approach mathematics with comprehension, actively creating new information from past knowledge and experience. Thus, learners who understand concepts well can arrange their information into coherent systems and explain them.

The lowest indicator is productive disposition, with a mean score of 3.55. The descriptive level is high, which means it is often manifested. Productive disposition means viewing math as making sense, seeing it as useful and valuable, believing that putting effort into learning math is worth it, and feeling confident in one's ability to learn and do math well (Milou, 2021). Furthermore, a productive disposition convinces learners that they can understand and appreciate the great value of what they know. Elsayed (2022) said that the following beliefs help learners demonstrate constructive desire: mathematics can be grasped, and mathematics is a skill that can be taught and applied with diligence. Learners' high level of productive disposition further implies that they see the value and use of mathematics in life and perceive learning mathematics as worthwhile.

Also, learners with a highly productive disposition view mathematics as reasonable, valuable, and worthwhile, with a conviction in their hard work and effectiveness (Correa & Haslam, 2021). Moreover, fostering learners' mathematical dispositions throughout the educational process is necessary for them to be motivated to learn mathematics (Haji et al., 2019).

Table 2. Level of English Language Competence of Grade 10 Learners

Indicators	Mean	Descriptive Level
Reading	3.74	High
Writing	3.50	High
Speaking	3.46	Moderate
Listening	3.65	High
Comprehension	3.65	High
Overall	**3.60**	**High**

Table 2 shows the English language competence of Grade 10 learners in terms of reading, writing, speaking, listening, and comprehension.

The overall mean score of the English language competence of grade 10 learners is 3.60. This means that the descriptive level is high and often manifested. English plays an essential role in our lives and helps us communicate globally. Speaking, listening, reading, writing, and comprehension are interconnected language skills that makeup language competence (Felix-Aguelo, 2017). English proficient learners can apply language norms and elements in natural, non-rehearsed ways in situations seen in everyday life (Armea et al., 2022).

In particular, among the five indicators of English language competence, respondents perceived that reading has the highest mean score of 3.74. The descriptive level is high, which means that it is often manifested. The most basic definition of reading is the capacity to interpret written language and understand printed material. Learning to read requires patience, continuous exposure to printed material, and reading-related activities, like learning to walk and talk (Johnson, 2017). The result further implies that learners can decipher written language and comprehend printed content.

Reading well helps learners communicate better. When learners read different types of writing, like stories or essays, they learn various ways to use language. This makes them better at expressing themselves clearly, persuading others, and having meaningful conversations. Additionally, proficient readers are adept at articulating their thoughts cogently, expressing ideas persuasively, and engaging in meaningful discourse. Reading competence involves learners' different skills, wherein they can already understand printed text (Talwar et al., 2021). Thus, the result relates to the importance of reading: for learners to achieve overall academic achievement, they must learn to read well, for it promotes vocabulary growth, critical thinking, and communication abilities and improves comprehension (Cadiz-Gabejan & Quirino, 2021).

The second highest indicators are listening and comprehension, with the same mean score of 3.65. The descriptive level is high, which means that it is often manifested. Listening means telling sounds apart, understanding how words sound together, picking out important information, remembering it, and understanding how sounds connect to what they mean. Your brain does this to help you know what is being said (Ahmadi, 2016). On the other hand, reading comprehension refers to learning and comprehending text. Constructing meaning from written text is a dynamic process that involves reading for written symbols, comprehending the context of the symbols, and learning the relationship between words and concepts. To understand the content, techniques like summarizing details, drawing conclusions, asking questions, and connecting existing knowledge to the text are all necessary for effective readers (Ebadi & Samiei, 2021). The

result further implies that the learners can listen attentively and comprehend information. They can hear, understand, and process the information being conveyed.

A high level of listening is connected to listening as an initial step in comprehension. Language is learned through awareness, and advancing the learner's language abilities can be done by listening (Coskun & Uzunyol-Kopru, 2021). Since the learners have developed a high level of hearing, it is substantially simpler to build other language abilities once a language is grasped. On the other hand, when learners can relate their personal experiences to the written text and express them, it indicates a high level of comprehension, showing that they have truly understood what they read. (Caraig & Quimbo, 2022).

The second least indicator is writing, with a mean score of 3.50. The descriptive level is high, which means that it is often manifested. Writing is a thinking process characterized by the deliberate choice and arrangement of experiences (Espina, 2003, as cited in Barbecho, 2019). Also, writing is the most complex linguistic talent to master since it requires both thoughts and skills to make written ideas readable (Alova & Alova, 2023). Since the learners' level of writing is high, they can convey their message even in a non-verbal manner and enhance other linguistic skills.

The finding is congruent with Kim et al. (2021), in which writing helps learners organize and clarify their ideas, allowing them to write something about a subject and make it their own. Writing correctly will enable learners to convey their message even in a non-verbal manner. Having impressive writing skills helps improve other linguistic skills. Furthermore, Domantay and Ramos (2018) said that a variety of learning materials helps learners develop more effective compositions that engage them in different reading and writing activities.

The lowest indicator is speaking, with a mean score of 3.46. The descriptive level is moderate, which means that it is sometimes manifested. Speaking is an important language skill that should be continuously developed, enabling learners to communicate in English effectively (Maba, 2022). Studying the language structure and other linguistic components affecting the communication process is necessary to learn to speak. Learning speaking skills with a linguistic approach helps the learners improve their speaking competence in and outside the classroom and effectively introduces updated learning (Wardana et al., 2022). The result further implies that learners have average speaking ability, and their level of proficiency could be better.

The average speaking ability among learners affirmed that speaking is tricky for non-native English speakers. Speaking is considered a highly complex skill in great demand since speakers use it in interpersonal communication (Chee-Keong et al., 2015). Additionally, Speaking is essential for all learners who want to learn English since the language can help improve their career, business, and confidence levels. Harnessing speaking skills helps get job opportunities and participate in debates and discussions (Rao, 2019, as cited in Suwartono & Yani, 2020).

Table 3. Level of Emotional Intelligence of Grade 10 Learners

Indicators	Mean	Descriptive Level
Emotional Awareness	3.81	High
Emotional Management	3.76	High
Social Emotional Awareness	3.99	High
Relationship Management	3.73	High
Overall	**3.82**	**High**

Table 3 shows the level of emotional Intelligence of Grade 10 learners in terms of reading, writing, speaking, listening, and comprehension.

The overall mean score of the Emotional Intelligence of grade 10 learners is 3.82. This means that the descriptive level is high and often manifested. Emotional Intelligence is the capacity to identify, comprehend, and control our own emotions and those of others, and includes understanding how emotions affect conduct both favorably and unfavorably (Grigoraskos, 2018). In addition, Emotional Intelligence is the ability to control one's feelings and behavior, to understand and be able to affect key individuals' emotions, and to be sensitive to and match one's urges and passions with responsible and moral behavior to attain one's objectives (Igbinovia, 2016). The result further implies that learners' emotional Intelligence was perceived and that they can evaluate, control their own emotions, and comprehend those of others.

In particular, among the four indicators of emotional Intelligence, respondents perceived that social-emotional awareness had the highest mean score of 3.99. The descriptive level is high, which means that it is often manifested. Social awareness involves understanding how to behave appropriately, sympathizing with people from various backgrounds, and knowing the support available from family, school, and community. It includes four parts: seeing things from others' perspectives, understanding their feelings, respecting differences, and caring for others (Chin, 2018). This implies that students can freely express and understand certain feelings towards others. Moreover, they could recognize and interpret mostly nonverbal signs used to communicate with each other and let the person know how people feel and how a person's emotional state can fluctuate.

The finding confirms that socially solid and Emotional Intelligence learners can recognize and respond positively to their actions (Grigoropoulos, 2019). Additionally, social and emotional intelligence help learners succeed academically and learn positively in the future. Furthermore, understanding other people's emotions is necessary for success in many social situations (Lane & Smith, 2021).

The second highest indicator is emotional awareness, with a mean score of 3.81. The descriptive level is high, which means that it is often manifested. Emotional awareness refers to the ability to understand and express both one's own emotions and those of others. This skill enhances the management of complex social scenarios and the enjoyment of relationships and fosters better physical and mental well-being (Lane & Smith, 2021). Furthermore, emotional awareness is slightly related to time and self-management. When learners are aware of their emotions, they may do better in behavioral engagement and achievement and, to a lesser extent, cognitive engagement, and self-regulation (Arguedas et al., 2016). The findings suggest that learners could understand and recognize their moods, feelings, and impulses. They could also remember how their emotions impact their thoughts and behavior towards others.

Moreover, Sabater (2022) stated that emotional awareness is unquestionably a talent that one should learn because it is a valuable tool for improving one's ability to regulate one's emotions. Lane and Smith (2021) said that awareness of their feelings can help learners adapt to different life challenges. Since the learners' level of emotional awareness is high, they can manage challenging social situations and enjoy relationships, promoting greater physical and mental health.

The second-lowest indicator is emotional management, with a mean score of 3.76. The descriptive level is high, which means that it is often manifested.

Emotional management is understanding, controlling, and reacting appropriately to emotions and environmental signals. Emotions are crucial for shaping behavior, decision-making, personality, and relationships, underscoring the importance of managing them effectively. How individuals respond emotionally is influenced by their innate drive to adapt to their environment (Lei, 2022). The result implies that learners can understand, accept, regulate, and express their emotions healthily.

Moreover, learners are accountable for their emotional control, and accountability is a character trait needed for qualification and success in school, which is attainable with education (Arikan, 2020). Since learners have a high level of emotional management, they are much more capable of controlling their emotions towards themselves and others. Kalaiamuthan (2016) mentioned that emotional management and its impact on learner success significantly predict learner employability.

The lowest indicator is still under the description level high, relationship management, with a mean score of 3.73, which means it is often manifested. Effective relationship management can inspire and influence others, allowing learners to build emotional intelligence and conflict management skills (Grigoraskos, 2018). Empathy relates to relationship management as the most vital factor in fostering collaborative learning and the academic success of exceptional learners (Obilor & Uchendo, 2020). The finding implies that the learners can build and preserve strong relationships, communicate effectively, motivate and sway others, collaborate effectively, and handle disagreements.

In connection, learners' high level of relationship management means a lifelong relationship between emotional state and learning may be maintained because the classroom is an emotionally charged environment (Ochoa et al. Gallego, 2019). Furthermore, the result suggests the need for educators to shift from only caring about academic results to also caring about learners' overall growth and happiness, which includes their social and emotional learning (Culkin et al., 2022).

Table 4. Mathematics Achievement of Grade 10 Learners in the First Quarter

Mathematics Achievement	Mean	Descriptive Level
illustrating arithmetic and geometric sequence		
solving division of polynomials	**1.09**	**Very Low**
solving problems involving remainder, factor, and rational root theorems		

Table 4 shows the level of mathematics achievement of the grade 10 learners in the first quarter. A 30-item test questionnaire measures their math level. The scores are interpreted based on the DepEd grading system.

Mathematics achievement garnered a mean score of 1.09, which was described as very low, with a K to 12 grade standard descriptor of needs improvement. Globally, learners' mathematics achievement has been a big concern. In South Africa, math achievement among learners could be better, which negatively prevents them from progressing to the next grade level (Mabena et al., 2021). Additionally, in Fiji, there is evidence of low mathematical achievement in secondary school senior grades, which prevents students from meeting curricular requirements in mathematics (Chand et al., 2021). The result further implies that learners could not meet the learning standard and badly needed improvement in their mathematics achievement.

Filipino learners were among the learner groups with the lowest performance in the "2018 Programme for Foreign Student Assessment (PISA)", and they have lagged behind their foreign counterparts in the subject of mathematics education (Bernardo et al., 2022). Furthermore, the Philippines scored 297 in math as per Trends in International Mathematics and Science Study (TIMSS) 2019, which means they are below the international average (Emergency Response Integration Center, 2020). Also, in Bukidnon, researchers found that grade 9 learners have a mediocre attitude toward mathematics, affecting their performance (Cordova & Tan, 2018). Additionally, struggling Filipino learners in mathematics often come from disadvantaged socioeconomic backgrounds, lack access to technology, and have parents with low status (Rose et al., 2022).

Table 5. Significance on the Relationship between Mathematical Proficiency, English Language Competence, Emotional Intelligence, and Mathematics Achievement of Grade 10 Learners

	Mathematics Achievement of Grade 10 Learners in the First Quarter			
	R	p-value	Decision on H_0 @ 0.05 level of significance	Interpretation
Mathematical Proficiency	0.038	0.511	**Failed to Reject H_0**	**Not Significant**
English Language Competence	-0.12	0.833	**Failed to Reject H_0**	**Not Significant**
Emotional Intelligence	0.057	0.326	**Failed to Reject H_0**	**Not Significant**

Table 5 shows the overall relationship between mathematical proficiency, English language competence, emotional intelligence, and mathematics achievement of Grade 10 learners.

The correlation between mathematical proficiency and mathematics achievement of grade 10 learners generated an r-value of 0.038 with a p-value of 0.511, more excellent than 0.05 in the significance level. This means there is no significant relationship between the two variables, which indicates a failure to reject the null hypothesis.

The result above relates to the study of Cowan et al. (2011), wherein the development of learners' basic mathematical calculation skills was only partially predicted by their conceptual understanding and cognitive factors of mathematical proficiency. These factors only partially mediated the relationship between math achievement and basic calculation. Moreover, several reasons could explain why there is no significant relationship between mathematical proficiency and mathematics achievement. In his study, Mutawah (2015) stated that learners may experience mathematics anxiety, which can hinder their ability to perform well on math assessments despite having solid mathematical proficiency. Yang (2023) also asserted the crucial role of mathematics self-efficacy in the motivational process and academic achievement in mathematics. The findings of his study offer valuable insights into the factors that contribute to learners' success in mathematics and reveal the mediating effect of mathematics self-efficacy in shaping learners' mathematics achievement.

Furthermore, the correlation between English language competence and mathematics achievement of grade 10 learners generated an r-value of -0.12 with a p-value of 0.833, more excellent than 0.05 in the significance level. This means there is no significant relationship between English language competence and mathematics achievement, which indicates a failure to reject the null hypothesis.

The result above agrees with the study conducted by Hasan and Khan (2015) in Aligarh District, U.P. India, wherein the findings demonstrated that the scores of male ninth-grade students in mathematics and English did not significantly differ. The results showed that male ninth-grade students' performance in English and mathematics showed a modest positive link, whereas female students in the same grade showed a moderate positive correlation. These findings underscore the importance of fostering motivation and encouraging both male and female students to improve their academic achievement scores.

Furthermore, Cekiso et al. (2015) investigated the impact of English language proficiency on learners' academic achievement in Mathematics. A purposeful sample of 215 students was selected for analysis. The findings indicated no significant relationship between students' English proficiency and their performance in Mathematics.

Lastly, the overall relationship between emotional Intelligence and mathematics achievement of grade 10 learners generated an r-value of 0.057 with a p-value of 0.326, which is more significant than 0.05 at the significance level. This suggests that no significant relationship exists between emotional Intelligence and mathematics achievement. This indicates a failure to reject the null hypothesis. Furthermore, this means no significant relationship exists between emotional intelligence and mathematics achievement of Grade 10 learners.

The result is similar to the study of Ariati et al. (2022) in Bandung, Indonesia, wherein the impact of learners' emotional Intelligence and self-efficacy on their mathematical achievement was explored using a correlational survey approach involving 140 senior high school students from a school in Riau. Moreover, the findings revealed that emotional intelligence did not significantly predict students' mathematical success. In addition, Seng et al. (2016) indicated that none of the dimensions of emotional Intelligence significantly influenced academic achievement. Thus, emotional awareness, regulation, self-motivation, empathy, and social skills do not impact learners' academic achievement.

V.   CONCLUSION

Based on findings, it is concluded that all variables, mathematical proficiency, English language competence, emotional Intelligence, and mathematics achievement, are not significantly correlated. Thus, the Holistic Learning Theory, which states that knowledge is a social construct that posits that explicit, implicit, and emancipatory are interrelated, is denied.

The following recommendations are made based on the conclusions drawn from the study: (1) consider using various teaching techniques to accommodate different learning preferences. To suit the needs of the learners, this may entail combining visual, auditory, and kinesthetic learning techniques; (2) emphasize acquiring a wide variety of abilities beyond language and math. Include cooperative projects, critical thinking, and problem-solving techniques that could tangentially improve mathematical comprehension through real-world application and contextual learning; (3) create specialized intervention programs for learners with math difficulties. Peer mentoring, after-school tutoring, and technologically enhanced learning resources are a few examples of these initiatives; (4) review and improve comprehensive strategies. Schools should target social,

emotional, and cognitive development as a complete educational goal, modifying their approach in response to empirical research and changing conditions; (5) promote continuous research to find additional elements that might affect students' achievement in mathematics. Data gathering and analysis can inform dynamic educational practices and assist in identifying emerging patterns; and (6) ensure that all students, regardless of background, have equal opportunity in education through inclusive practices.

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