**THE MEDIATING EFFECT OF ACADEMIC MOTIVATION ON THE RELATIONSHIP BETWEEN GRAMMAR LEARNING STRATEGIES AND ATTITUDES TOWARDS LEARNING ENGLISH LANGUAGE**

**ABSTRACT**

This study determined the mediating role of academic motivation on the relationship between grammar learning strategies and attitudes towards learning English language. A non-experimental quantitative research design using descriptive-correlational research design was applied and employed stratified random sampling with 352 secondary public school students in the Philippines as sample. Data collection was made through survey instrument. Data analysis was done through Mean, Pearson-r, Multiple Regression and Medgraph using Sobel z-test. Results revealed that academic motivation, grammar learning strategies and attitudes towards learning English language were high. Findings revealed that students exhibited a high level of grammar learning strategies and a positive attitude toward learning English. Similarly, academic motivation was also at a high level, indicating that students were generally motivated to engage in learning activities. Results further showed significant relationships between grammar learning strategies and attitudes toward English, as well as between grammar learning strategies and academic motivation. Additionally, academic motivation demonstrated a significant positive correlation with attitudes toward English learning. More importantly, academic motivation was found to have a statistically significant mediating role, strengthening the impact of grammar learning strategies on students' attitudes.

Based on these findings, it is recommended that structured grammar learning strategies be integrated into the curriculum to further enhance students' attitudes toward English learning. Schools should also implement programs that promote academic motivation, such as goal-setting activities and incentive-based learning. Teachers are encouraged to adopt innovative instructional approaches that cater to students’ diverse needs and foster engagement. Future researchers may explore other factors that influence students' language learning experiences, such as self-efficacy or learning environments, to gain a broader understanding of the subject.

**Keywords:** education, grammar learning strategies, academic motivation, attitudes toward learning English, mediation effect, Philippines.

# **INTRODUCTION**

English learning can be successful if the teacher correctly identifies the students' attitudes and then constructs a good emotion to counteract the student's negative sensation (Borja 11). These attitudes toward English learning have an impact on students' learning. These factors may influence students' decisions about whether or not to learn English in the recommended manner. Learners' attitudes toward English learning are influenced by a variety of factors, including educational factors, social factors, and learner personality characteristics. According to Kara, as cited by Abidin, Pour-Mohammadi, and Alzwari (119), attitudes toward learning, along with opinions and beliefs, have a significant impact on students' behavior and consequently on their performance. Learners may have varying attitudes regarding language acquisition. They may have a good attitude toward learning a new language, which gives them an advantage over other students or teachers, or they may have a negative attitude toward learning a new language, which impedes their language acquisition (118). As a result, more research is needed to determine how these factors influence learners' attitudes toward English learning.

In the changing landscape of language teaching theories and practices, learners' attitudes are critical for optimizing learning and teaching output, as learners increasingly take precedence over teachers (Ahmed 6). Reid stated, "Attitudes are critical to us because they cannot be easily separated from research." Attitude is widely regarded as an important factor influencing language competence (Getie). Success in a target language is dependent not only on cognitive ability, but also on the learner's attitude toward language learning. Aside from academic considerations, language acquisition has psychological and social dimensions that are heavily influenced by the learners' motivation and attitude toward learning the target language (1). Gardner and Lambert discovered that students' ability to grasp a second language is influenced not only by their mental abilities or language skills, but also by their attitudes and perceptions of the target language. Furthermore, they argued that the attitude concept could benefit language learning by changing the nature of students' behaviors and ideas about the other language, its culture, and community, thereby determining their proclivity to learn that language.

It is on this aspect that the researcher was interested in understanding the relationship among the variables. The researcher believes that there is an underlying association between attitudes toward English learning, grammar learning methodologies, and academic motivation in this study. The approach toward English studies is seen as critical. Numerous studies have been conducted in several countries to ascertain students' opinions regarding English learning. The majority of evidence indicates that pupils approach language learning constructively (Siddiq et.al 19). As Orfan indicated, Smith stated that students' habits influence how easy or difficult it is to succeed in a class taught in a foreign language. Attitude is regarded to be a critical aspect in learning a foreign language. Students' mindsets, abilities, and methods are supposed to influence their ability to acquire and appreciate the complexity of the language (4). Academic motivation is, in some ways, an internal component of a person.

Optimistic attitudes are critical throughout this era. Attitudes are essential component of academic motivation. Students who are highly motivated to study and have positive views toward English will find the experience of learning the language pleasurable (Liu and Zhang 971). Additionally, Root discussed motivation and learning strategies in a case study. The research was a step forward in defining the elements that motivate FL students. The centrality of the learning scenario in Dörnyei's paradigm demonstrates the critical role of the classroom in inspiring students. The usage of grammar learning strategies also has an effect on motivation (48).

According to Oxford's viewpoint, a lot of research has concentrated on foreign language learning, with the emphasis frequently being on language learning strategies. Several studies have shown that grammar learning strategies help students become more effective learners and have positive attitudes toward language learning in the classroom, as well as foster a more efficient development of students' mastery of the target language after they graduate (Habok and Magyar 1).

Appropriate grammar learning strategies, according to Dornyei, result in increased motivation and confidence. Strategies are not the end for language learning; rather, they're suggestions for increasing learners' drive and confidence. In strategy instruction, Dornyei emphasized the importance of regular praise, positive reinforcement, and a supportive setting. It is also stated that grammatical learning skills can be educated and taught, as numerous researchers have suggested (Shi 31).

In the last decade, motivation research has gotten a lot of attention. "Students' wishes and needs to work freely depend on their motivation, attitude, and responsibility," according to Liuoliene and Metiuniene's research on second language learning motivation. Learning motivation is a driving factor in learning a foreign language, according to the researchers. "The higher the motivation, the more independent learning students wish to have in this learning process" (Abdollahi-Guilani and Nazari 586).

Shown in Figure 1 is the conceptual framework of the study that highlights the independent variable, mediating variable and dependent variable.

The independent variable of the study is grammar learning strategies (Bozinovic & Sindik 64). This is measured through the following indicators: *memory strategies, metacognitive strategies, cognitive strategies, and social – affective strategies*. *Memory strategies* refer to the use of sentences as a way to memorize a new grammar form; *Metacognitive strategies* refer to the ability of memorizing grammar forms while reading books or magazines in L2; *Cognitive strategies* refer to writing down a new grammar form to remember it more easily; and *Social – affective strategies* refer to the ability of memorizing new grammar form more easily when teacher corrects the student if he/she uses it incorrectly.

The dependent variable of the study is attitudes towards learning English language (Abidin & Mohammadi 128). It consists of the following indicators: *behavioral aspect, cognitive aspect, and emotional aspect*. *Behavioral aspect* means studying English helps to have good relationships with friends; *Cognitive aspect* means studying English is important to be more educated; and *Emotional aspect* means studying English makes the students proud.

The mediating variable is academic motivation (Njiru 78). This is measured through the following indicators: *striving for excellence, desire to learn, and personal incentives*. *Striving for excellence* refers to studying hard as much as the student can; *Desire to learn* refers to the ability of student to show genuine interest in learning; and *Personal incentives* refer to the reward that studies bring.

Mediating Variable

**ACADEMIC MOTIVATION**

* Striving for excellence
* Desire to learn
* Personal incentives

**ATTITUDES TOWARDS LEARNING ENGLISH LANGUAGE**

* Behavioral aspect
* Cognitive aspect
* Emotional aspect

**GRAMMAR LEARNING**

**STRATEGIES**

* Memory Strategies
* Metacognitive Strategies
* Cognitive Strategies
* Social Affective-

Strategies

PATH C

Independent Variable Dependent Variable

Figure 1. Conceptual Framework of the Study

It is in the light that most studies in the previous paragraphs mentioned that English language learning, being the common language of the world, is affected by underlying factors. Furthermore, the problematic issue and the relevance of the attitudes towards English learning were discussed. Despite the fact that the aforementioned topics are extensively researched around the world, the researcher has yet to come across a study that examines and discusses the connection among academic motivation, attitudes towards learning, and grammar learning strategies. As a result, in this study, the researcher would conduct a quantitative study that will discover the said relationship among Grade 9 students. In connection, the findings of this study may serve best not only the instructors, professors, academic coordinators, and school administrators, but also the civil society and the government. Likewise, the results of this study will be presented in academic and administrative meetings as well as symposia and conferences, especially during this time of pandemic and online classes. As such, the quantitative findings will provide a better understanding on the problem of Grade 9 students regarding their attitudes towards learning English.

This study, entitled The Mediating Effect of Academic Motivation in the Relationship between Grammar Learning Strategies and Attitudes Towards Learning English will benefit the global scene. First, it would add to the review of literature about the variables involved which can be cited in future researches. This will also arouse curiosity of other researchers to conduct investigations using the variables in a different context. Further, the result of this research will serve as an eye-opener for learners in the community that they can learn English in their most comfortable strategy, and there are numerous grammar learning strategies ready to be utilized. Thus, a changed perception about English, specifically in grammar learning can be stimulated from the students.

The result of this research endeavor is beneficial to the Department of Education personnel, school administrators, teachers, and future researchers. Firstly, personnel from the regional and division offices of the Department of Education may be guided by the result of the study to make programs or spearhead seminars that will uplift the grammar learning strategies of learners. Secondly, administrators will also benefit from the results as they may make programs or craft policies regarding the enhancement of attitudes towards learning English of students. Additionally, teachers may self-reflect on their contribution to the academic motivation of their students. The result of the study will make students and teachers aware of what they need to improve on in their performance in the classroom and the school. Furthermore, this research will serve as a valuable reference for future researchers who wish to explore similar topics related to language learning, motivation, and education. By shedding light on the crucial role of academic motivation, this study contributes to the continuous improvement of English language instruction, ultimately benefiting both learners and educators.

This study aims to examine the mediating effect of academic motivation on the relationship between grammar learning strategies and attitudes toward learning English. Specifically, it seeks to determine the level of grammar learning strategies in terms of memory, metacognitive, cognitive, and social-affective strategies, as well as assess attitudes toward learning English based on behavioral, cognitive, and emotional aspects. Additionally, the study measures the level of academic motivation in terms of striving for excellence, desire to learn, and personal incentives. It also explores the significance of the relationships between grammar learning strategies and attitudes toward learning English, grammar learning strategies and academic motivation, and academic motivation and attitudes toward learning English. Lastly, it investigates whether academic motivation significantly mediates the relationship between grammar learning strategies and attitudes toward learning English.

**METHOD**

**Research Respondents**

The respondents of the study were 352 Grade 9 general section students in Davao City. They were chosen through stratified random sampling. In this method, the population was divided into strata (or subgroups), and a random sample was obtained from each segment. A subgroup is a naturally occurring collection of elements that could be formed based on factors such as the size of the organization, gender, or occupation. Stratified sampling was frequently used when there was significant variance within a population. Its goal was to ensure that every socioeconomic group was adequately represented (Taherdoost, 21).

Moreover, the researcher considered the inclusion and exclusion criteria in selecting the respondents for the study. The student respondents were bona fide students who were officially enrolled for the Academic Year 2021-2022 in three different secondary public schools in Davao City. A letter of permission to conduct the study was explained to these student respondents. Those who voluntarily agreed to the informed consent were included in the survey. The study's respondents consisted of 352 Grade 9 general section students in Davao City. Students who did not voluntarily agree to the informed consent were excluded from the survey. Additionally, students who were not officially enrolled were not allowed to participate in the study. Grade 7, 8, and 10 students were also discouraged from participating. Furthermore, students had the option not to answer the survey questionnaire or participate in the study. The researcher also considered students who decided to withdraw during the actual administration of the survey questionnaires.

The study was conducted in the City of Davao, Province of Davao del Sur. Three (3) secondary public schools were included in the study – School A (School ID number: 304359), School B (School ID number: 316202), and School C (School ID number: 304375). These schools belonged to the Region XI Schools Division of Davao City-Cluster 2 Secondary Schools.

**Materials and Instruments**

The major instrument used in gathering the data was adapted survey questionnaires. Each variable of the study had its own questionnaire, which was adapted from various sources. The research instrument used for grammar learning strategies was adapted from Bozinovic and Sindik (64-67). The following Likert scale was used to interpret the mean for grammar learning strategies.

The range of means is used to interpret the level of grammar learning strategies among students. A mean score between 4.20 and 5.00 indicates a very high level, suggesting that students' grammar learning strategies are far above the expected level. A score between 3.40 and 4.19 is classified as high, meaning that students' grammar learning strategies exceed the expected level. A moderate level is represented by scores ranging from 2.60 to 3.39, signifying that students' grammar learning strategies are within the expected level. Meanwhile, a low level, with scores between 1.80 and 2.59, suggests that students' grammar learning strategies are below the expected level. Lastly, a very low level is indicated by scores between 1.00 and 1.79, meaning that students' grammar learning strategies are far below the expected level.

The instrument used to measure attitudes toward learning the English language was adapted from Abidin, Mohammadi, and Alzwari (128–130). The following Likert scale was used to interpret the mean scores for attitudes toward learning English. The range of means and their corresponding descriptive levels provide a clear interpretation of students' attitudes toward learning the English language. A mean score between 4.20 and 5.00 is categorized as Very High, indicating that students' attitudes toward learning English are far above the expected level. A mean score ranging from 3.40 to 4.19 falls under the High category, suggesting that students’ attitudes are above the expected level. Meanwhile, scores between 2.60 and 3.39 are classified as Moderate, meaning that students' attitudes are within the expected level. A mean score ranging from 1.80 to 2.59 is considered Low, reflecting attitudes below the expected level. Lastly, scores between 1.00 and 1.79 indicate a Very Low level, suggesting that students' attitudes toward learning English are far below the expected level.

On the other hand, the questionnaire for academic motivation was adapted from (Njiru 78-80). To interpret the mean, the following Likert scale was used. The range of means provides a structured interpretation of students' levels of academic motivation. A mean score between 4.20 and 5.00 is categorized as Very High, indicating that students' academic motivation is far above the expected level. Scores ranging from 3.40 to 4.19 fall under the High category, suggesting that students exhibit motivation above the expected level. Meanwhile, a mean score between 2.60 and 3.39 is classified as Moderate, meaning that students' academic motivation is within the expected level. Scores ranging from 1.80 to 2.59 are considered Low, reflecting academic motivation below the expected level. Lastly, a mean score between 1.00 and 1.79 is categorized as Very Low, indicating that students' academic motivation is far below the expected level.

Before the actual gathering of data, the three sets of questionnaires were subjected to validation and reliability testing. The researcher edited or made revisions to the questions to ensure they suited the context of the study. Afterward, a copy was forwarded to a pool of experts to validate and rate the content of the questionnaires. Once the questionnaires were revised based on the comments and suggestions of the validators, the research proceeded to its reliability test.

To achieve reliability, the validated questionnaire was answered by 60 non-respondents for a pilot test. After retrieving the questionnaires and tallying the responses, the researcher forwarded the soft copy of the tally to a statistician. The statistician computed the reliability using the Cronbach-alpha test of reliability.

**Design and Procedure**

This study utilized a quantitative descriptive-correlational research design, which aimed to determine relationships between two or more variables. A correlational study allowed the researcher to assess whether and to what extent two variables changed together (Tan 1). Additionally, correlational research is a type of non-experimental research method in which a researcher measures two variables, analyses their statistical relationship, and ensures that no external factors influence the results (Question Pro).

To interpret the data, several statistical tools were employed. The mean was used to determine the levels of leader accountability, transcendental leadership of school heads, and teacher self-efficacy. Pearson-r was applied to measure significant relationships between leader accountability and transcendental leadership, leader accountability and teacher self-efficacy, and transcendental leadership and teacher self-efficacy. Regression analysis was conducted to test data validity for mediation using the Sobel Z-test. Additionally, Medgraph with the Sobel Z-test was used to confirm mediation effects and further strengthen the obtained results.

To ensure a systematic and ethical data collection process, the researcher obtained the necessary permissions before proceeding with the study.

Before collecting the data, the researcher sought approval from the Schools Division Superintendent (SDS) of the Division of Davao City. Once the SDS granted approval, the researcher forwarded the endorsement to the respective school heads to request permission to gather data from their teachers.

After receiving approval from the school heads, the researcher identified the respondents and oriented them on the study’s objectives, assuring them that their responses would remain confidential. The respondents then answered the questionnaires, which the researcher personally retrieved to ensure that no items were left unanswered.

Additionally, the researcher secured a certificate of appearance from each school to confirm that the data collection was conducted in person. Once all questionnaires were retrieved, the responses were tallied and forwarded to a statistician for computation and interpretation.

The recruitment process followed ethical standards, ensuring that potential respondents received clear and accurate information about the study before agreeing to participate. This process marked the beginning of the informed consent procedure and was conducted ethically to protect the rights and welfare of the participants. Furthermore, the study did not expose respondents to high-risk situations, whether physical, psychological, or socioeconomic. Given the risks associated with COVID-19, data collection was conducted through online surveys using Google Forms. In cases where respondents had concerns about potential risks, the researcher sought guidance on health and safety policies to ensure their well-being. Participation in the study was designed to be mutually beneficial, and any risks or benefits were clearly communicated before respondents agreed to take part.

The study provided several benefits to respondents. It allowed them to express themselves freely on the topic, exercise their freedom of expression, and reflect on their grammar learning strategies and attitudes toward learning English. Additionally, the study helped them evaluate their academic motivation and its mediating effect on their learning attitudes. Since the researcher borrowed the respondents’ time and effort, appropriate tokens of appreciation or incentives were provided.

To ensure research integrity, the study adhered to academic ethical standards. All sources were properly cited, and ideas from authors were paraphrased and synthesized appropriately to avoid plagiarism. The study underwent the Turnitin plagiarism checker to verify originality. It was anchored on accurate and reliable studies, ensuring that no fabricated or falsified data were included. The researcher did not manipulate or exaggerate findings to fit predetermined conclusions. The theoretical framework and models used were based on valid sources, and no conflicts of interest were present, as the researcher had no personal relationships with respondents or participating schools. Furthermore, the study upheld honesty, assuring participants that their data would not be used to mislead or harm them in any way.

Permission to conduct the study was sought from the School Division Superintendent and school heads. Once approved, an endorsement letter was used to facilitate the administration of survey questionnaires. The researcher ensured that the survey questionnaire was clear and comprehensible and that respondents were fully aware of the study’s potential benefits to their schools. Additionally, technological considerations were taken into account due to COVID-19 risks. Online data collection methods, particularly Google Forms, were used, with respondents receiving clear instructions on the process and procedures.

Lastly, authorship qualifications were considered in the study’s development. The researcher, with the guidance of the research adviser, contributed significantly to the study's design, data collection, and analysis. Both collaborated in drafting and revising the research, ensuring that it met academic standards and could contribute to the broader research community.

**RESULTS AND DISCUSSION**

**Table 1**

**Perceived level of grammar learning strategies**

|  |  |  |  |
| --- | --- | --- | --- |
| Indicators | Mean | SD | Descriptive Level |
| memory strategies | 3.82 | .723 | high |
| metacognitive strategies | 3.77 | .772 | high |
| cognitive strategies | 3.56 | .844 | high |
| social-affective strategies | 3.89 | .792 | high |

\* Each grammar learning strategy is treated as unique.

The descriptive statistics in Table 1 show that students utilize all grammar learning strategies at a high level. Social-affective strategies have the highest mean (3.89, SD = 0.792), followed by memory strategies (Mean = 3.82, SD = 0.723) and metacognitive strategies (Mean = 3.77, SD = 0.772). Although cognitive strategies have the lowest mean (3.56, SD = 0.844), they remain within the high range. The consistency across all strategies, as reflected in relatively low standard deviations, suggests a uniformity in students’ learning preferences.

This result supports and contradicts the findings of different studies. (Roca, 147) revealed in their study that respondents highly utilized grammar learning strategies. However, unlike the result of this study, cognitive strategies are the most frequently used. (Abdulhassan, Ala Hussein, and Rana Abdul-Settar, 677) have different findings since their study found that learners used these strategies to a moderate degree. On the contrary, the study (Lv and Kong, 88) presented different findings, indicating that the overall use of grammar learning strategies was relatively low.

**Table 2**

**Extent of academic motivation of students**

|  |  |  |  |
| --- | --- | --- | --- |
| Indicator | Mean | SD | Descriptive Level |
| striving for excellence | 4.03 | 0.758 | high |
| desire to learn | 4.05 | 0.795 | high |
| personal incentives | 3.84 | 0.833 | high |
| Overall | 3.97 | 0.757 | high |

The analysis of students' academic motivation, as presented in Table 2, reveals a consistently high level of motivation across several key indicators. The first indicator, striving for excellence, has a mean of 4.03 (SD = 0.758). The desire to learn shows the highest mean of 4.05 (SD = 0.795). Personal incentives, with a mean of 3.84 (SD = 0.833), also reflect a high level of motivation, though it is slightly lower compared to the other indicators. The small variations in these scores show that motivation levels are fairly consistent, which means that these motivating factors are shared broadly among the respondents, rather than being limited to just a few individuals.

Table 3

Perceived level of attitude towards learning English

|  |  |  |  |
| --- | --- | --- | --- |
| Indicator | Mean | SD | Descriptive Level |
| Behavioral | 3.81 | 0.792 | high |
| Cognitive | 4.01 | 0.774 | high |
| Emotional | 3.96 | 0.799 | high |
| Overall | 3.93 | 0.748 | high |

The data on student's attitudes towards learning English, as presented in Table 3, reveals consistently high scores across the three dimensions—behavioral, cognitive, and emotional. The cognitive indicator, with a mean of 4.01 (SD = 0.774), indicates that students exhibit a strong intellectual commitment to learning English. The emotional indicator, with a mean of 3.96 (SD = 0.799), reflects students' affective responses to learning English. Although the behavioral dimension, with a mean of 3.81 (SD = 0.792), is slightly lower than the cognitive and emotional scores, this behavioral commitment still reflects a strong positive attitude towards learning English.

This result aligns with findings from several studies on language attitudes among students. Magadan and Limpot reported that senior high school students generally exhibit a high attitude toward language learning, with an overall mean score of 4.03 and a standard deviation of 0.356. Their behavioral attitude scored the highest at 4.10, followed by cognitive at 4.08, and affective at 3.92, indicating strong engagement in language learning activities (358). Similarly, Memon's study on intermediate-level students in the Matyari district revealed a significantly positive attitude towards English, with a mean score of 4.72 for positive attitudes compared to just 1.35 for negative attitudes, demonstrating considerable enthusiasm for learning the language (65).

In Indonesia, Lizawati's research on junior high school students also supported these findings, with the Behavior Aspect of Attitude (BAA) having a mean of 3.304 and a standard deviation of 0.815, the Cognitive Aspect of Attitude (CAA) at 3.579 and 0.829, respectively, and the Emotional Aspect of Attitude (EAA) at 3.457 and 0.832, reflecting a favorable disposition towards English learning (77).

Table 4

Correlation matrix of the variables

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Pair | Variables |  | *p*-value | Decision on Ho |
| IV and DV | memory strategies and attitude towards learning English | 0.689 | <0.000\* | Rejected |
|  | metacognitive strategies and attitude towards learning English | 0.750 | <0.000\* | Rejected |
|  | cognitive strategies and attitude towards learning English | 0.660 | <0.000\* | Rejected |
|  | social-affective strategies and attitude towards learning English | 0.739 | <0.000\* | Rejected |
|  |  |  |  |  |
| IV and MV | memory strategies and academic motivation | 0.700 | <0.000 | Rejected |
|  | metacognitive strategies and academic motivation | 0.739 | <0.000\* | Rejected |
|  | cognitive strategies and academic motivation | 0.655 | <0.000\* | Rejected |
|  | social-affective strategies and academic motivation | 0.714 | <0.000\* | Rejected |
|  |  |  |  |  |
| MV and DV | academic motivation and attitude towards learning English | 0.847 | <0.000\* | Rejected |

Displayed in Table 4 are the results of the relationship between the independent variable (grammar learning strategies), the dependent variable (attitude toward learning English), and the mediator (academic motivation). The dependent variable focuses on the student's attitudes, while the independent variable is broken down into memory strategies, metacognitive strategies, cognitive strategies, and social-affective strategies. Bivariate correlation analysis using Pearson product-moment correlation was employed to determine the relationships between these variables.

The first set of correlations examines the relationship between grammar learning strategies and attitudes toward learning English. The results show strong positive correlations across all strategy types. Specifically, memory strategies and attitude toward learning English yielded an r-value of 0.689, with a p-value of <0.000, indicating a significant and strong positive relationship. Similarly, metacognitive strategies correlated strongly with attitude, producing an r-value of 0.750 and a p-value of <0.000. Cognitive strategy also showed a strong positive correlation with attitude, reflected by an r-value of 0.660 and a p-value of <0.000. Finally, the correlation between social-affective strategies and attitude yielded an r-value of 0.739, with a p-value of <0.000, further confirming a significant positive relationship.

This result aligns with the findings of Li, which revealed better users of grammar learning strategies (GLS) are those students with positive beliefs and attitudes toward English language. Moreover, Oxford's viewpoint highlights that grammar learning strategies develop positive attitudes toward language learning in the classroom (Habok and Magyar 1).

The second set of correlations investigates the relationship between grammar learning strategies and academic motivation, revealing strong positive connections across all strategy types. Memory strategies and academic motivation showed a strong positive correlation, with an r-value of 0.700 and a p-value of <0.000. Similarly, metacognitive strategies demonstrated a significant and strong positive relationship with academic motivation, yielding an r-value of 0.739 and a p-value of <0.000. Cognitive strategy also showed a strong positive correlation, with an r-value of 0.655 and a p-value of <0.000. Finally, the relationship between social-affective strategies and academic motivation resulted in an r-value of 0.714, with a p-value of <0.000, indicating a significant positive correlation.

This result supports the claims of other studies. Qomariyah, studies have demonstrated a positive correlation between using grammar learning strategies (GLSs) and students' academic motivation. Specifically, research indicates that students who actively employ GLSs tend to exhibit higher motivation levels in learning grammar. This correlation suggests that a strategic approach to grammar learning can significantly enhance students' enthusiasm and commitment to their studies (Qomariyah 19). Jaruteerapan found that motivation is one of the factors mediating the use of grammar learning strategies (GLSs) among students (243). Khalil claims that high-achieving students tend to employ a wider variety of GLSs, including cognitive strategies that enhance understanding and metacognitive strategies that promote self-regulation, leading to increased motivation (1954). Moreover, Yuliana et al. state that male and female students exhibit different preferences for GLSs, with males favoring social strategies and females leaning towards cognitive strategies, which may influence their motivation levels differently (18).

The final correlation analysis focuses on the relationship between academic motivation and attitude toward learning English. The results reveal a very strong positive relationship, with an r-value of 0.847 and a p-value of <0.000. Since the p-value is below the 0.05 significance level, this correlation is statistically significant, indicating that higher academic motivation is closely associated with a more positive attitude toward learning English.

Research suggests that motivated students typically demonstrate more positive attitudes, which subsequently enhance their language learning performance. Both motivation and positive attitudes are essential components for successful English language acquisition. Students with higher levels of motivation are more likely to develop positive attitudes toward learning English, ultimately leading to improved learning outcomes (Mushaathoni and Cekiso 2). This result further supports the findings of Zdillar. The paper highlights that students' attitudes towards learning English significantly influence their academic motivation and success. Understanding these attitudes can enhance insights into why Croatian students pursue English language learning and what factors may further motivate their proficiency improvement (52).

Moreover, the study of Rodriguez and Barreiro is also supported by the findings of this study. Based on their findings, academic motivation significantly influences students' attitudes toward learning a second language. The study found that students in Content and Language Integrated Learning programs exhibited higher motivation, positively impacting their knowledge, skill development, and overall performance in learning English (20).

Table 5

Regression analysis showing the influence of grammar learning strategies on overall attitude towards learning English as mediated by academic motivation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step | Path | Beta (Unstandardized) | Standard Error | Beta (Standardized) |
| **Model 1 (memory strategies as IV)** | | | | |
| Step 1 | C | 0.713 | 0.036 | 0.689\* |
| Step 2 | A | 0.733 | 0.036 | 0.700\* |
| Step 3 | B | 0.196 | 0.036 | 0.190\* |
| Step 4 | c’ | 0.705 | 0.035 | 0.714\* |
| **Model 2 (metacognitive strategies as IV)** | | | | |
| Step 1 | C | 0.726 | 0.031 | 0.750\* |
| Step 2 | A | 0.725 | 0.032 | 0.739\* |
| Step 3 | B | 0.637 | 0.036 | 0.646\* |
| Step 4 | c’ | 0.264 | 0.035 | 0.272\* |
| **Model 3 (cognitive strategies as IV)** | | | | |
| Step 1 | C | 0.585 | 0.032 | 0.660\* |
| Step 2 | A | 0.588 | 0.033 | 0.655\* |
| Step 3 | B | 0.717 | 0.033 | 0.726\* |
| Step 4 | c’ | 0.164 | 0.029 | 0.185\* |
| **Model 4 (socio-affective strategies as IV)** | | | | |
| Step 1 | C | 0.697 | 0.031 | 0.739\* |
| Step 2 | A | 0.683 | 0.033 | 0.714\* |
| Step 3 | B | 0.643 | 0.034 | 0.652\* |
| Step 4 | c’ | 0.258 | 0.032 | 0.274\* |

\* *p*<0.05

Following the mediation analysis approach developed by Baron and Kenny (1986), this study evaluates how grammar learning strategies influence students’ overall attitude toward learning English, with academic motivation as the mediator. There are four steps to establish mediation, with the outcomes presented across four models, representing different grammar learning strategies.

The regression analysis presented in Table 5 explores the influence of various grammar learning strategies on students' overall attitude toward learning English, with academic motivation as a mediating variable. The results indicate that all models show significant mediation, with academic motivation partially mediating between grammar learning strategies and students' attitudes towards learning English.

For Model 1, which uses memory strategies as the independent variable (IV), the results show that memory strategies significantly predict overall attitude toward learning English (DV) with a standardized beta of 0.689 (p < 0.05). Memory strategies also significantly predict academic motivation (M) in Step 2 with a beta of 0.700 (p < 0.05). In Step 3, academic motivation significantly predicts its effect on overall attitude, with a beta of 0.190 (p < 0.05). In Step 4 (c'), the direct effect of memory strategies on overall attitude remains significant (β = 0.714, p < 0.05), indicating partial mediation.

In Model 2, which uses metacognitive strategies as the independent variable (IV), metacognitive strategies significantly predict the overall attitude toward learning English in Step 1, with a beta of 0.750 (p < 0.05). In Step 2, they also significantly predict academic motivation, with a beta of 0.739 (p < 0.05). In Step 3, academic motivation significantly predicts its effect on overall attitude, with a beta of 0.646 (p < 0.05). In Step 4 (c'), the direct effect of metacognitive strategies on attitude decreases but remains significant (β = 0.272, p < 0.05), indicating partial mediation.

Model 3, which examines cognitive strategies, shows that cognitive strategies significantly predict overall attitude toward learning English with a beta of 0.660 (p < 0.05). Cognitive strategies also significantly predict academic motivation with a beta of 0.655 (p < 0.05). In Step 3, academic motivation significantly predicts overall attitude, with a beta of 0.726 (p < 0.05). In Step 4 (c'), the direct effect of cognitive strategies on attitude decreases but remains significant (β = 0.185, p < 0.05), suggesting partial mediation.

Lastly, Model 4, which focuses on socio-affective strategies, shows that these strategies significantly predict the overall attitude toward learning English with a beta of 0.739 (p < 0.05). Socio-affective strategies also significantly predict academic motivation with a beta of 0.714 (p < 0.05). In Step 3, academic motivation significantly predicts its effect on overall attitude, with a beta of 0.652 (p < 0.05). In Step 4 (c'), the direct effect of socio-affective strategies on attitude decreases but remains significant (β = 0.274, p < 0.05), indicating partial mediation.

Table 6

Results of statistical analysis on presence (or absence) of mediating effect

|  |  |  |  |
| --- | --- | --- | --- |
| **Combination of Variables** | **Sobel z** | **p-value** | **Mediation** |
| Memory Strategies 🡪 Academic Motivation 🡪 Attitude Towards Learning English | 14.350945 | <0.000 | Partial |
| Metacognitive strategies 🡪 Academic motivation 🡪 Attitude Towards Learning English | 14.049289 | <0.000 | Partial |
| Cognitive Strategies 🡪 Academic Motivation 🡪 Attitude towards Learning English | 13.861596 | <0.000\* | Partial |
| Memory strategies 🡪 Academic motivation 🡪 Attitude Towards Learning English | 14.061320 | <0.000\* | Partial |

\* *p*<0.05

The Sobel test results in Table 6 offer further validation of the partial mediation effect, confirming that academic motivation plays a role in enhancing the relationship between grammar learning strategies and students' attitudes toward learning English. Across all models, the mediation effect was found to be statistically significant at p < 0.000, indicating that the indirect pathway through motivation strengthens the impact of grammar learning strategies on students’ attitudes.

For memory strategies, the Sobel test yields a z-value of 14.350945 (p < 0.000), confirming the presence of partial mediation. This means that while memory strategies directly influence students’ attitude, academic motivation significantly enhances this effect. Similarly, for metacognitive strategies (z = 14.049289, p < 0.000), there is strong evidence of partial mediation, further emphasizing the role of motivation in amplifying the positive impact of metacognitive strategies on students' attitudes.

The results for cognitive strategies (z = 13.861596, p < 0.000) and social-affective strategies (z = 14.061320, p < 0.000) also show significant partial mediation, indicating that academic motivation consistently plays a crucial role across different types of grammar learning strategies. In each case, motivation enhances the direct effect of these strategies on attitude, though the strategies themselves retain a significant direct influence.

Among the tested relationships, the highest z-score was observed for the path involving memory strategies, academic motivation, and attitudes toward learning English (z = 14.351), signifying a particularly strong mediating effect. This outcome suggests that students who rely on memory strategies are more likely to develop favorable attitudes toward learning English when highly motivated.

**CONCLUSION AND RECOMMENDATION**

This part of the paper will specifically present the encapsulation of the results and findings of the study, as well as the recommendations that are based on the findings and results of the study.

The data obtained for this study was analyzed and found to be adequate to support the following conclusions. The level of grammar learning strategies and attitudes toward learning English are high. This means that the grammar learning strategies and attitudes toward learning English are above the expected level by the grade 9 students of public schools in Davao City- Cluster 2 Secondary Schools.

Likewise, the level of academic motivation as the mediator is high which also means that academic motivation is above the expected level by the grade 9 students of secondary public schools.

Moreover, there is a significant relationship between grammar learning strategies and attitudes toward learning English language among the grade 9 students of secondary public schools in Davao City. Also, grammar learning strategies have a significant relationship between academic motivation and attitudes toward learning English language. Finally, there is a positive relationship between academic motivation and attitudes toward learning the English language. This signifies that academic motivation is correlated with attitudes toward learning English language.

Lastly, the mediating role of academic motivation on the relationship between grammar learning strategies and attitudes toward learning the English language among grade 9 students of secondary public schools is significant. The mediation effect was found to be statistically significant, indicating that the indirect pathway through motivation strengthens the impact of grammar learning strategies on students’ attitudes.

Based on the findings and results of the study, several specific and viable recommendations can be made to the key stakeholders identified in the significance of the study, including Department of Education personnel, school administrators, teachers, and future researchers. For the Department of Education (DepEd), integrating structured grammar learning strategies into the curriculum is highly encouraged to further improve students’ attitudes toward learning English. Additionally, implementing programs that boost academic motivation, such as goal-setting workshops and incentive-based learning, may help sustain students' high motivation levels and reinforce their engagement in English language learning.

For school administrators, providing professional development opportunities for teachers focused on innovative grammar instruction and student motivation techniques is essential. Schools may also implement policies and initiatives that promote a positive English learning environment, such as establishing English-speaking zones, organizing competitions, and introducing student engagement programs that make English learning more interactive and meaningful.

For teachers, it is recommended that they continue utilizing effective grammar learning strategies while incorporating activities that stimulate students’ academic motivation. Differentiated instruction should be adopted to address diverse learning needs, ensuring that all students benefit from an inclusive and engaging classroom environment. Additionally, teachers should encourage interactive learning approaches that foster positive attitudes toward English.

Lastly, for future researchers, further studies may explore additional factors influencing students’ grammar learning strategies, academic motivation, and attitudes toward English. Investigating other potential mediators or moderators, such as self-efficacy or learning environments, could provide deeper insights into student learning experiences. Future research could also expand the scope to include other grade levels or private schools, allowing for a more comprehensive understanding of the topic.

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