# 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. This descriptive correlational research design with mediation analysis employed stratified random sampling to select the 352 secondary public-school students as respondents, using an adapted questionnaire for data collection. Mean, Pearson’s r, Multiple Regression, and Medgraph using Sobel’s z-test were used as statistical tools. Results revealed that academic motivation (X̄=3.97), grammar learning strategies (X̄=3.76) and attitudes towards learning English (X̄=3.93) language were high. Results further showed significant relationships between grammar learning strategies and attitudes toward English (*P*=<0.000\*), as well as between grammar learning strategies and academic motivation (*P*=<0.000\*). Additionally, academic motivation demonstrated a significant positive correlation with attitudes toward English learning (*P*=<0.000\*) and academic motivation was found to have a statistically significant mediating role (*P*=<0.000\*), 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. The findings have significant implications for language learning practice, highlighting the critical need to foster academic motivation to maximize the positive impact of grammar instruction and cultivate favorable student attitudes.

**Keywords:** *education, grammar learning strategies, academic motivation, attitudes toward learning english, mediation effect, secondary public schools, Philippines*

**SDG Indicator:** #4 (Quality Education)

# INTRODUCTION

A pressing concern surrounding English Language education stems mostly from the increasingly negative attitude of learners towards the subject (Ahmed et al. 75; Pacheco 3; Rahman 2435-2453). Lin (1193-1207) added that this concern is neither a matter of performance nor preference, but a multifaceted problem stemming from the connection between cognitive processing, behavioral engagement, and emotional experience. Additionally, Agustina (6-84), Geletu (1), and Zarzycka et al. (1) unanimously agreed and shared the same notion that students nowadays demonstrate a significant decline in active participation, as exhibited in their oral communication and collaborative tasks.

Cognitively, many learners perceive the English Language as disconnected from their daily lives. Instructional practices mostly prioritize rule-based learning and assessment over contextualized and more functional use of the language (Amirjanli and Povey 11-25). Consequentially, learners struggle to internalize and relate to English Language as a tool for authentic communication (Matiso 310). For those without strong foundational skills, this can lead to feelings of incompetence and helplessness, further solidifying their disengagement. Behaviorally, this disengagement is manifested through minimal classroom interaction, avoidance of language use, and tendency to complete tasks for compliance rather than meaningful engagement. These patterns suggest a lack of intrinsic motivation and ownership over their learning process.

Emotionally, Adamson (3275-3290), Boté (143), and Co & Soriano (449) discussed that students often associate the English Language with anxiety, embarrassment, and frustration, especially on activities where students fear they might be judged or fail. Espiritu and Caparas (809) concluded that when learning the language becomes more corrective than connective, this pushes learners to develop affective resistance towards it, and over time, this may solidify into a belief that the English Language is not “for them”, undermining motivation and self- efficacy.

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). Studying the learner’s attitudes towards English Language learning lies in its direct impact towards student motivation, engagement, and the overall success in acquiring language skills. Positive attitude can lead to better participation and confidence, while negative attitudes can hinder learning and acquisition, and can lead to language anxiety (Aparece and Bacasmot 7).

Studies have presented that the usage of Grammar Learning Strategies improves the learners’ grammar skills (Ismail and Dedi 263; Nosirova 349; Wang, Chen, and Zhang 12; Mohamad et al. 463). However, the effect of these strategies towards the learners’ attitude towards learning the English Language remains unclear. Studies by Chehrazi (349), Shakmalova & Zotova (1875-1895) and Zarrinabadi, Rezazadeh say that GLS can positively influence the learner’s

attitudes towards learning the English Language. Others, like one by Paputungan, Helingo, and Rahmah (10-17) would say there are no link at all.

Meanwhile, Academic Motivation is known to encourage learners to acquire the English Language better and feel more positive about learning (Kumar 411; Ramzan 2236). Hariri et al. added that students who are more motivated are more likely to acquire and use the learning strategies in their daily lives (39-49). However, only a few studies have investigated whether academic motivation acts as a connection between GLS and Attitude (Aisyah, Hidayad, Purwanto 141).

It is on this aspect that this study aims to examine how academic motivation intercedes the relationship between Grammar Learning Strategies and the learners’ attitude towards learning the English Language. Specifically, this paper seeks to determine whether motivated students are more likely to utilize effective grammar strategies, which in turn, will shape a more positive attitude towards learning the English language. The goal of this paper is to better understand how motivation, grammar strategies, and attitude work together so educators can improve both how learners acquire and feel about English.

As mentioned before, learners who utilize grammar learning strategies tend to have a more positive attitude towards learning the English Language. This is supported with the notion of Oxford, found on the works of Li (208), where they elucidated that the strategic use of cognitive, memory, and metacognitive techniques can help students feel more in control of their language learning, which in turn, can significantly improve their confidence and attitude.

Dörnyei, found in the work of Demibulak and Zeyrek (156), and Giangan (648) even added that strategy use enhances perceived competence, where students feel more capable. This leads to more favorable attitude towards the English Language. Learners who actively engage in language strategies also tend to see learning as fun and enjoyable, which in turn, fosters a stronger emotional connection to the language (Ramzan et al. 2). Simply put, when learners use effective grammar strategies, their mindset towards learning English becomes more positive.

On the other hand, research shows that grammar learning strategies are also closely and positively related to academic motivation. Several authors (An, Xi, and Yu 2605; Ramzan, Javaid, Fatima 224; Teng 53) noted that strategy use often reflects a learner’s motivation level, where students who apply strategies how a stronger drive and motivation to master the content being provided. Multiple authors (Achiri 10; Madhavan and Venugopalan 955; Wahyuni 5) also explained that self-monitored learners tend to score higher in motivational indicators such as effort, goal setting, and persistence. GLS fuels motivation by making learning more structured and less overwhelming. To put it simply, learners who use GLS are kept engaged because they see progress in acquiring the language.

To support these notions, several theories were selected to show clear relationship and correlation between the variables, and to support the concreteness of the results later. To begin, the binding theory for this study will be the Theory of Planned Behavior by Ajzen, as cited in the work of Oraif and Elyas

(99), where they posited that a learner’s behavior is influenced by factors and perceived control. On the context of this paper, the attitudes of the learners towards the English Language are shaped by how motivated they are and how capable they feel when using the strategies taught to them.

Several theories were also added to support the result of the relationship between variables. To begin with, the connection between Strategies and Attitudes is supported by Social Cognitive Theory of Bandura, as cited in the work of Razman (2236-2246). It posits that learners acquire positive attitudes when they believe that they can use the strategies to effectively succeed. Succinctly, when students the strategies and see results, they are more likely to be more positive about learning English.

The connection between Strategies and Motivation is supported by Self- Regulated Learning Theory of Zimmerman, as cited in the work of Omura and Little (253-301), where it posits that the more one uses strategy to foster autonomy, monitoring, and goal-setting, the more their motivation increases. In essence, students who use learning strategies to feel more in control are driven to stay motivated. Lastly, the connection between Motivation and Attitudes is supported by Expectancy-Value Theory by Eccles and Wigfield, as cited in the work of Mahnaz, Mehmood, and Umar (659-665), which posits that motivation affects the value and enjoyment of learners towards a subject. To put it plainly, if students are more motivated, they are more likely to enjoy and appreciate learning the English Language.

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.

|  |  |  |
| --- | --- | --- |
| Independent Variable |  | Dependent Variable |
| **GRAMMAR LEARNING STRATEGIES**1. Memory Strategies
2. Metacognitive Strategies
3. Cognitive Strategies
4. Social Affective Strategies

 | **Path A** | **ATTITUDE TOWARDS LEARNING ENGLISH LANGUAGE**1. Behavioral Aspect
2. Cognitive Aspect
3. Emotional Aspect
 |
|  | Mediating Variable |  |
| **ACADEMIC MOTIVATION**1. Striving for Excellence

1. Desire to Learn
2. Personal Incentives
 |

***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 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 learners. 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 will benefit the global scene. First, it would add to the review of literature about the variables involved which can be cited in future research. 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 grammars 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 study’s population was 2,938 Grade 9 students from the general sections of three public secondary institutions in Davao City- Cluster 2. Out of the total population, 352 students were chosen as the respondents of the study. Grade 9 students, typically 14-15 years old, were selected as ideal study participants since they are in a crucial developmental stage. Their developing independence, study habits, solidified attitudes, and metacognitive skills allow them to provide relevant insights into academic motivation, grammar learning strategies, and attitudes towards learning English (Celik 2-4; Cherry).

Respondents were selected through stratified random sampling technique. In this sampling method, the population is divided into strata. Afterward, a random sample is obtained from each stratum. A stratum is a naturally occurring collection of elements, which can be formed based on several factors, such as the location of the organization, gender, or occupation. When there is a lot of variances within a population, stratified sampling is frequently used. Its goal is to ensure that every group in the target population is adequately represented (Taherdoost 21). The stratified random sampling was deemed appropriate in this study because the population was divided into strata based on the schools the students were enrolled. 192 students were selected from School A, 68 students from School B, and 92 students from School C. In sum, out of an accumulated population of 2,938, the total sample size of this study are 352 Grade 9 students.

In selecting the respondents, a predefined inclusion and exclusion criteria were duly established. A participant was eligible for inclusion in the study if the following criteria were met. First, the participant had to be a bona fide Grade 9 student of the Academic Year 2021-2022 from the three secondary public schools in Davao City that served as the study’ research setting. They also had to fully give their consent to participate in the study, without any forms of coercion, through an assent form. Since the study’s population mostly included students of minor age, their parent or legal guardian also had to give their written consent.

The students who did not voluntarily agree, and whose parent/legal guardian chose not to grant permission for their child’s participation, were excluded from the study. In addition, student who were not officially enrolled as Grade 9 students of A.Y. 2021-2022 were excluded. Lastly, this study did not cover students who dropped, withdrawn, or transferred to schools other than the study's setting.

Of their own volition, participants who initially agreed to participate had the option to discontinue or withdraw their participation from the study. They can choose not to answer the survey questionnaire during the actual administration, even with initial consent. Furthermore, participants were excluded from further data collection if their parent/legal guardian decided to withdraw their consent. No penalty was gained and no benefit was lost due to instances of withdrawal from the study.

The study was conducted in the city of Davao, Province of Davao del Sur. Three 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

Data were collected using a standardized survey. Each variable of the study had its own survey 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 range of means was used to interpret the level of grammar learning strategies among students. A mean score between 4.20 and 5.00 indicated a very high level, suggesting that students' grammar learning strategies were far above the expected level. A score between 3.40 and 4.19 was classified as high, meaning that students' grammar learning strategies exceed the expected level. A moderate level was represented by scores ranging from 2.60 to 3.39, signifying that students' grammar learning strategies are within the moderate level. Meanwhile, a low level, with scores between 1.80 and 2.59, suggested that students' grammar learning strategies were below the expected level. Lastly, a very low level was indicated by scores between 1.00 and 1.79, meaning that students' grammar learning strategies were 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 range of means was used to interpret the mean scores for attitudes toward learning English. The range of means and their corresponding descriptive levels provided a clear interpretation of students' attitudes toward learning the English language. A mean score between 4.20 and 5.00 was categorized as Very High, indicating that students' attitudes toward learning English were far above the expected level.

A mean score ranging from 3.40 to 4.19 was classified under the High category, suggesting that students’ attitudes are above the expected level. Meanwhile, scores between 2.60 and 3.39 were classified as Moderate, meaning that students' attitudes were within the expected level. A mean score ranging from 1.80 to 2.59 was considered Low, reflecting attitudes below the expected level. Lastly, a score between 1.00 and 1.79 indicated a Very Low level, suggesting that students' attitudes toward learning English were far below the expected level.

On the other hand, the questionnaire for academic motivation was adapted from the study of Njiru (78-80). To interpret the mean, the following range of means was used. The range of means provided a structured interpretation of students' levels of academic motivation. A mean score between

4.20 and 5.00 was categorized as Very High, indicating that students' academic motivation was far above the expected level. Scores ranging from 3.40 to 4.19

were classified under the High category, suggesting that students exhibited motivation above the expected level.

Meanwhile, a mean score between 2.60 and 3.39 was classified as Moderate, meaning that students' academic motivation was within the expected level. Scores ranging from 1.80 to 2.59 were considered Low, reflecting academic motivation below the expected level. Lastly, a mean score between

1.00 and 1.79 was categorized as Very Low, indicating that students' academic motivation was 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. The overall validation resulted yielded a mean score of 4.23, indicating excellent validity.

To test the reliability of the research instrument, the validated questionnaire was answered by 60 nonrespondents during a pilot test. After retrieving the questionnaires and tallying the responses, the researcher forwarded the results to an expert statistician. The instrument demonstrated an excellent internal consistence, as evidenced by the McDonald’s Omega of 0.959 and Cronbach’s Alpha of 0.959, both well above the accepted threshold of 0.70 for reliability (Kenny 17-29). This high reliability coefficients indicate that the items are consistent when capturing the intended constructs. The overall mean score (M=3.893, SD=0.664) suggests a generally strong agreement among the

respondents, with relatively low dispersion among their responses. After the validity and reliability tests, the instrument was reviewed and approved by the University of Mindanao’s Ethics Review Committee for administration.

## Design and Procedure

This study utilized a 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).

Additionally, this study employed a mediation analysis, which aimed to determine the mediating role of academic motivation on the relationship between grammar learning strategies and attitudes towards learning English language. In a mediation study, instead of simply observing a direct relationship between two variables, a third variable, called the mediator or mediating variable, is introduced to explain the process through which that effect occurs. If including the mediator significantly reduces or eliminates the original relationship between the IV and DV, then mediation is supported (Jung 167).

To interpret the data, several statistical tools were employed, particularly Mean, Pearson’s r, regression analysis, and mediation analysis. The mean was used to determine the levels of academic motivation, grammar learning strategies, and attitudes towards learning English language. Pearson correlation

coefficient was applied to measure the relationships between the variables, particularly: grammar learning strategies and attitudes towards learning English language; academic motivation and grammar learning strategies; and academic motivation and attitudes towards learning English language. Additionally,

regression analysis was conducted to test data validity for mediation. Lastly, an

online computational tool called Medgraph, mainly relying on Sobel test, was

used to calculate the statistical significance of the indirect effect of grammar

learning strategies on the attitudes towards learning English language that

passed through the mediating variable- academic motivation.

To ensure a systematic and ethical data collection process, this study strictly and properly observed the Data Privacy Act of 2012 and the IATF guidelines. First, 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. Upon approval of the school principals, the researcher requested a list of Grade 9 students enrolled in the academic year 2021-2022 from the school registrar. Student lists were handled with the highest degree of confidentiality to prevent any unauthorized data leak.

Afterward, each school’s guidance counselors and class advisers were asked to review the minor assent form, parent’s consent form, and study’s instrument before administration. Ensuring no adverse impact on student learning or well-being, they carefully assessed participants' emotional and mental readiness

before participating in the study. For this critical aspect, the school's guidance counselors were brought in to manage both the preparatory briefing and the concluding debriefing sessions for all involved students.

Then, the researcher sent a minor assent form to the participants and a separate parent’s consent form to their parents or legally authorized guardians. All participants and their parents or guardians were thoroughly briefed on the nature, benefits, and risks of the research and were made fully aware of their rights as individuals contributing to the study. To ensure the safety of both the participants and the researcher, the data collection was done via online means- using Google Forms. The study did not expose respondents to high-risk situations, whether physical, psychological, or socioeconomic. In cases where respondents had concerns about potential risks, the researcher sought guidance on health and safety policies to ensure their well-being.

Despite the online means of data collection, the researcher secured a certificate of appearance from each school to confirm that the data collection was indeed conducted. Upon recording all responses, the data were tallied and sent to the expert statistician. Then, results were analyzed in relation to the objectives of the study. After the study has been completed, all collected data were properly disposed of to ensure that there will be more unauthorized access.

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. Moreover, the researcher also ensured that there were only minimal risks involved in the study, and the participants were free to withdraw their participation should they feel uncomfortable at any point of the research.

To ensure research integrity, this study underwent a thorough evaluation by the University of Mindanao’s Professional Schools and Ethics Review Committee, with UMERC-2022-119 as the certification number, indicating compliance to 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 Schools Division Superintendent and school heads. Once approved, the researcher made sure to comply with the ethical principles of voluntary participation, privacy and confidentiality, and informed consent. Particularly, the recruitment process

followed ethical standards. The researcher ensured that the assent and consent forms given to the participants and parents clearly outlined the participants’ rights and the study’s nature, procedures, benefits and risks. Both students and parents were made aware that the child’s participation is purely voluntary, and all data obtained are treated with utmost confidentiality.

Additionally, technological considerations were considered due to COVID- 19 risks. Online data collection methods, particularly Google Forms, were used, with respondents receiving clear instructions on the process, procedures, and nature of the study. 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. With this, the research adviser is recognized as the co-author of this paper upon publication.

# RESULTS AND DISCUSSION

## Grammar Learning Strategies

Shown in Table 1 is the perceived level of Grammar Learning Strategies. All indicators fall under the “high” descriptive category, with Social-Affective Strategies (M=3.89, SD=0.792) registering the highest mean score. This indicates that learners frequently rely on emotional regulations and social interactions to enhance grammar acquisition.

## Table 1. *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 |
| **Overall** | **3.76** | **.756** | **High** |

\**Each grammar learning strategy is treated as unique.*

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.

## Academic Motivation

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 2. *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 high results across all indicators reflect intrinsic motivational factors, suggesting that learners are highly driven by personal goals, satisfaction of mastery rather than solely by external incentives, and even by curiosity (Fan et. al 489; Lin et al. 723; Malone and Lepper 223-254). This intrinsic orientation is

particularly reflected in the high scores for *Desire to Learn* and *Striving for Excellence*, which indicate a learning environment where learners pursue knowledge for their own sake and are committed to exceed academic standards. These findings confirm that academic motivation is present and constant, implying that conditions in class are favorable for academic achievement, perseverance, and sustained engagement.

Additionally, the presence of Personal Incentives aligns with the Expectancy-Value Theory of Eccles and Wigfield, as cited in the work of Mahnaz, Mehmood, and Umar (659-665), where they posit that students are motivated when they value the outcome and believe in their ability of achieving it. In this context, students’ motivation is not only supported by their internal desire to improve, but also by the belief that tangible benefits and personal relevance of academic success can lead them to further improvement.

## Attitudes toward Learning English

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.

## Table 3. *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** |

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).

These findings imply that the learner’s motivation and internal drive, as well as positive orientation towards the English Language learning are mutually reinforcing (Wannas and Alshaye 4), indicating an abundancy when it comes to second language acquisition and academic success. Anokoye (86), Chun and Abdullah (115), Tai and Zhao (611), and Zhi and Wang (124) agreed and even unanimously added that the consistency of the presented results across all domains solidifies the theoretical expectation that attitude and motivation serve as

a key enabler in effective language development and development amongst high school learners.

## Relationship between Grammar Learning Strategies and Attitudes towards Learning English Language, Grammar Learning Strategies and Academic Motivation, and Academic Motivation and Attitudes towards Learning English Language

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 pvalue of <0.000, further confirming a significant positive relationship.

In connection to this, this result supports Bandura’s Social Cognitive Theory, given that the positive correlation between Grammar Learning Strategies and Attitude towards learning English indicates that students exhibit that they actively engage in strategic learning, which has developed their stronger sense of control and agency when it comes to their learning process. This has led to more favorable attitudes towards learning English.

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).

## Table 4. *Correlation Matrix of the Variables*

DV towards learning English

|  |  |  |
| --- | --- | --- |
| **Pair Variables** 𝒓𝒙𝒚 | ***p*-value** | **Decision on Ho** |
| IV and memory strategies and attitude 0.689 | <0.000\* | Rejected |
| metacognitive strategies and 0.750 | <0.000\* | Rejected |
| cognitive strategies and attitude 0.660 | <0.000\* | Rejected |
| social-affective strategies and 0.739 | <0.000\* | Rejected |
| IV and memory strategies and academic 0.700 | <0.000 | Rejected |

attitude towards learning English

towards learning English

attitude towards learning English

MV motivation

academic motivation motivation academic motivation

|  |  |  |
| --- | --- | --- |
| metacognitive strategies and 0.739 | <0.000\* | Rejected |
| cognitive strategies and academic 0.655 | <0.000\* | Rejected |
| social-affective strategies and 0.714 | <0.000\* | Rejected |
| MV and academic motivation and attitude 0.847 | <0.000\* | Rejected |

DV towards learning English

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 cited that 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).

This result also aligns with Zimmerman’s Self-Regulated Learning Theory, since the result suggests that the use of cognitive and metacognitive strategies has enhanced the learner’s intrinsic motivation by fostering autonomy, goal-setting, and self-efficacy amongst learners in their English learning tasks.

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 pvalue 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).

This result also confirms the alignment of Expectancy-Value Theory by Eccles and Wigfield, since the result revealed that student’s motivations, which is clearly rooted in their belief in their ability and the value they place on their English learning tasks, has significantly predicted their engagement and attitudes.

## Mediating Effect of Academic Motivation on the Relationship between Grammar Learning Strategies and Attitude towards Learning English

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.

## Table 5. *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 |  |  |  |  |

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.

The partial mediation observed in all four models is supported by existing literature. Santangelo, Cadieux, & Zapata (2) and Acosta-Gonzaga & Ramirez- Arellano (11) discussed that the learning strategies, especially related to memory and metacognition, promote active engagement and enhances motivation among learners. Sugano and Mamolo (827) emphasized that motivated learners tend to develop a more positive outlook towards learning the English Language. Guo and Bai (117) also noted that strategic learners tend to be more motivated and self- regulated. All of this goes back to the alignment with Ajzen’s Theory of Planned Behavior, where motivation connects attitude formation and strategy use.

## Partial Mediation of Academic Motivation on the Relationship between Grammar Learning Strategies and Attitudes toward Learning English

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 socialaffective 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.

## 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

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.

The findings that the relationship between Grammar learning strategies and attitude towards learning English is partially mediated by academic motivation are well supported by existing literature. First, grammatical learning strategies are designed to facilitate language acquisition and enhance learner autonomy (Tsai 979). These strategies enable learners to personalize, regulate, and manage their learning process. García-López, Acosta-Gonzaga, & Ruiz-Ledesma (813) added that this contributes to a positive sense of competence and control, which are both major parts of makeup Academic Motivation.

First, when it comes to Grammar Learning Strategies towards Attitudes, Celik found that metacognitive and cognitive strategies were significantly correlated with positive learner attitudes, as these strategies enhance learner’s sense of progress and success (37-55). This is agreed by García-López, Acosta- Gonzaga, & Ruiz-Ledesma (813), where they added that strategic learners are often more optimistic about the learning outcomes. Next, when it comes to Grammar Learning Strategies and Academic Motivation, Esparragoza (1) and Soodmand Afshar & Jamshidi (133-160) found that learners who employ self- regulation strategies found that both metacognitive and cognitive strategies positively predicted both intrinsic and extrinsic motivations among English learners, supporting the notion that strategy fuels motivation. Lastly, Academic motivation has consistently been linked with positive learner attitudes. Wang and

Liu (1) proposed that learners with high motivation not only continue longer but also develop more positive and resilient attitudes towards the English Language.

The result presented is consistent with Ajzen’s Theory of Planned Behavior, which posits that student’s attitudes towards a behavior are molded by their underlying beliefs and motivations, including perceived control and intention. In the presented model, Grammar Learning Strategies serves as a behavioral and cognitive tool that enables students to enhance their perceived competence (self- efficacy). On the other hand, Academic Motivation serves as an internal driver that converts strategic learning into favorable attitudes toward learning the English Language. This significant interceding role of Academic Motivation validates the theoretical underpinning that motivation bridges cognitive strategy uses and attitudinal outcomes. This emphasizes the importance of taking care of both effective strategy use and motivation to improve learner’s engagement with the English Language and outlook.

# CONCLUSION AND RECOMMENDATIONS

The data obtained for this study was analyzed and found to be adequate to

support the following conclusions. The level of grammar learning strategies,

attitudes toward learning English, and academic motivation are high. This means

the Grade 9 students from the public schools in Davao City- Cluster 2 exceeded

the average level in these aspects. Furthermore, 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. Grammar learning strategies also revealed a significant relationship with academic motivation. In addition, academic motivation is significantly 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 was found to be statistically significant, indicating that the indirect pathway through motivation strengthens the impact of grammar learning strategies on students’ attitudes. These results supported the hypothesized idea of the minor theoretical underpinnings of this study: Social Cognitive Theory, Self-Regulated Learning Theory, and Expectancy-Value Theory. Since partial mediation has been found, the idea proposed by the study’s major theoretical underpinning, the Theory of Planned Behavior, has been confirmed.

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 may be adopted to address diverse learning needs, ensuring that all students benefit from an inclusive and engaging classroom environment. Additionally, teachers may 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 may also expand the scope to include other grade levels or private schools, allowing for a more comprehensive understanding of the topic.

**Ethical Approval and Consent**:

To ensure research integrity, this study underwent a thorough evaluation by the University of Mindanao’s Professional Schools and Ethics Review Committee, with UMERC-2022-119 as the certification number, indicating compliance to ethical standards.

They also had to fully give their consent to participate in the study, without any forms of coercion, through an assent form. Since the study’s population mostly included students of minor age, their parent or legal guardian also had to give their written consent.

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Details of the AI usage are given below:

1.

2.

3.

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