A Structural Equation Model of Writing Skills: Mixed Method

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ABSTRACT

The study's general objective is to determine the students' stance on the most appropriate model of writing skills, using Structural Equation Modeling (SEM) as a basic design in the relationship of self-regulated learning strategies, communicative learning strategies, learning grammatical strategies, and writing skills. This study used a mixed-method sequential explanatory design, in which quantitative design is more widely used than qualitative Creswell, J., & Creswell, D. (2017). The researcher used the stratified random sampling technique for selecting respondents and, by using the Raosoft sample size calculator, identified 390 respondents using a four-part questionnaire to collect data. Purposive sampling is the method for determining participants in a qualitative design using a guided questionnaire to obtain data from In-Depth Interviews and Focus Group Discussions. Model 5 was the best-fitting model for writing skills, showing significant correlations with the exogenous variables: self-regulated learning strategies, communicative learning strategies, learning grammatical strategies, and writing skills as endogenous variables. Both the exogenous and endogenous variables obtained a high level of overall description, meaning that students often practiced strategies to cultivate writing skills. The participants' stance on the most appropriate model is essential for tertiary students to have different strategies for developing writing skills. It is necessary to reach the full description of the highest level by using different strategies to build writing skills.

Keywords: self-regulated learning strategies, communicative strategies, grammatical strategies, writing skills, structural models

INTRODUCTION

It is vital to have fluency in writing skills because, besides being able to express knowledge, ideas, thoughts, and feelings, it also helps the development of each individual. Barredo and Cadapan (865) found that students have low Filipino writing skills in the first year of college, so the continuous development of writing skills is necessary. Failure to acquire writing skills causes unemployment among recent college graduates (Er & Ganapathy, 2021). Writing is difficult for students, such as using wrong grammar and connecting details in the paragraph in the wrong order (Queroda, 2018; Hikmah et al., 2019). Based on Bruma and Marbella (46), 61 percent of teachers said their students could write up to five pages. It is necessary to address the problem of the student's writing skills so that a suitable solution can be immediately given.
The current research is vital to tertiary students because they will be given knowledge on enriching and growing their writing skills. Writing is considered an essential skill for a successful life because, given an opportunity, it is often a requirement to have a good job and profession Johari, (2018); Queroda, (2020). Learning the skill of writing is more beneficial because it is one of the instruments used for effective communication and presentation of ideas (Fareed et al., 2016; (Saavedra and Barredo, 2020). Therefore, the researcher wants to discover the relationship between the exogenous and endogenous variables through analysis using Structural Equation Modeling.

The study of writing skills significantly influences the efficiency of the student’s learning (Fukuda, 2018). According to Woottipong (2019) and Bai and Gou (2019), students’ writing efficiency depends on self-regulated learning strategies. The role played by teachers is significant in helping the student who will become a writer develop self-regulated learning strategies (Abadikah et al., 2018; Umamah & Cahyono, 2020). This relationship between self-regulated learning strategies and writing skills is essential (Farsani & Mohebbi, 2014; Emagnaw, 2019). Communication strategies help students overcome language difficulties (Masithoh et al., 2018). According to Abadikah (2018), the students had difficulties in writing because they did not learn to have a strategy for their writing skills. Gifted students often use communication strategies more than less talented students (Ting et al., 2017; Metcalfe & Ura 2023). However, learning grammar strategies are also crucial in developing academic writing skills. According to Omar (2019), grammar helps enrich writing skills. Teaching grammar strategies is very important because, together with the knowledge of grammar, they promote the growth of writing skills (Al-Jarf, 2022).

Therefore, Zimmerman and Martinez-Pons's (1992) theory implied self-regulated elements that proved effective for tasks such as writing. Their model explains the learning approach process, which will be the basis for cultivating students’ self-regulated learning strategies in writing. Students gain self-confidence when using self-regulated learning strategies for developing writing skills (Zimmerman, 2000; Graham et al., 2002; Graham et al., 2005). Communicative strategy can occur in three main categories: planning, translation, and reflection (Flower and Hayes, 1981). Aliakbari and Allvar (2009) believe that communicative strategies are essential in written communication, which is excellent. Grauberg (1997) emphasized the importance of learning grammar to achieve effective communication and interaction because the wrong use of words can cause confusion and misinterpretation of the intended message.

Research Questions
1. What is the level of self-regulatory learning strategies, learning communication strategies, grammar learning strategies as an exogenous variable, and writing skills as an endogenous variable?
2. What are the significant relationships between exogenous variables and endogenous variables?
3. What is the most appropriate model for writing skills?
4. What are the perspectives of research participants on the levels of exogenous and endogenous variables?
RESEARCH METHODOLOGY

Research Design
This study used a Quan-Qual sequential explanatory design, where quantitative study is more widely used than qualitative study Creswell, J., & Creswell, D. (2017). According to Hastjarjo’s sequential explanatory design model (2015), there are two stages of data collection. The first phase involves collecting and analyzing data through quantitative methods, followed by the second phase using qualitative methods. Data collection and analysis are done separately in each phase but in a continuous manner. The data analyzed in the quantitative study were described before the analysis of the data collected in the qualitative research. The initial results of the quantitative survey were linked to the results of the qualitative study so that the explanation of the overall results of the analysis could be expanded Edmonds and Kennedy, (2016).

On the other hand, the researcher conducted a qualitative study method through face-to-face interviews with selected tertiary student participants. According to Maxwell and Reybold (2015), data gathering in qualitative studies is often done through interviews, observations, and documents. It seeks to understand and assess the contexts related to the participants' experiences and perspectives. However, the researcher ensured adherence to ethical procedures, such as keeping the information gathered from the interview confidential. Nevertheless, the researcher will strictly follow the ethical considerations outlined in the Ethics Review of the University of Mindanao (UMERC). Following the requirements, the researcher obtained a certificate from UMERC with protocol number UMERC-2023-133.

Research Respondents
There are two stages to the selection of respondents. First, the total population of respondents in the study was taken, which reached 2,315 from four public tertiary schools included in the Mindanao Association of Tertiary Schools Incorporated (MASTS) covered by Region XIII, or Caraga. MASTS is an association of public tertiary schools throughout Mindanao that conducts annual sports and socio-cultural competitions. Using the Raosoft Sample Size Calculator, samples were quickly obtained from different strata, reaching 390 actual respondents to the study. In determining respondents who are appropriate to the structural model, by following the rule of thumb, the researcher used the method as a basis for stratified random sampling Parsons (2014). Santos and Magracia (2010) state that stratified random sampling involves selecting participants by grouping individuals based on their characteristics before selecting representative study participants.

The second stage is the qualitative study, where purposive sampling is used to recruit participants for face-to-face interviews. Bernard, H. R. (2017) explained that the selection of participants was purposive sampling by the nature and rules of the study. Hence, the researcher sought 10 participants from four universities who were willing to share the information needed to meet the study objective. According to Creswell and Poth (2018), three to ten participants is the recommended number of individuals for an In-Depth Interview (IDI). There was also a Focus Group Discussion (FGD) with three to seven members per group to collect the participants' experiences, views, ideas, and feelings about the topic (Cotini et al., 2019).

Research Instrument
This study used downloaded questionnaires from web sources. The instrument used in the self-regulation strategy study evaluation was adopted from EFL Students' attitudes towards self-regulated learning strategies in academic writing by Abadikhah et al. (2018) of the University of Mazandaran, Iran. Communication strategies are adopted from Use of Communicative Strategies in L2 Learning: An Intercultural Study by Zambrana (2019) of the University of Málaga (Spain). Grammar learning strategies...
are adopted from the Grammar Learning Strategy Inventory (GLSI): Another Look Pawlak, (2018), Adam Mickiewicz University, Kalisz, Poland. Writing skills are adopted from A Community of Writers by (Elbow and Belanoff 1999). Use the 5-point Likert Scale to analyze and interpret the data that will be gathered in the four variables of the study. 5- strongly agree, 4-agree, 3-not sure, 2-disagree, 1-strongly disagree.

The four questionnaires for four variables went through the validation process. It was validated by six internal and one external expert in the field of research who obtained a total score of 4.5 with a corresponding description of excellent. The efficiency of the questionnaires was proven by the statistical results: the exogenous variables’ self-regulated learning strategies obtained Cronbach’s alpha, which .868 described well in internal consistency; the communication strategy gained Cronbach’s alpha, which .886 told well in internal consistency; the grammatical strategy gained Cronbach’s alpha, which .817 described well in internal consistency, and the endogenous variable's writing skills gained Cronbach's alpha, which .905 told best in internal consistency.

However, the guide questionnaire in the qualitative study is the researcher's work. It was validated by internal and external experts in the field of research to ensure that it is suitable for the current study. From the criteria based on the validators, the guide questionnaire scored 8–9 with an excellent descriptive interpretation.

Data Analysis
The statistics used to analyze and interpret the collected data are as follows: mean, which is used to determine the level of self-regulated learning strategies, communication strategies, and learning strategies in grammar and writing skills; Pearson product-moment correlation, which is used to determine the self-regulated learning strategies, communication strategies, and learning strategies in grammar and writing skills; multiple regression, which was used to identify significant predictors of writing skills; and the use of the Structural Equation Modeling (SEM) in determining the appropriateness of the study model.

RESULTS AND DISCUSSION

Level of Self-Regulated Learning Strategies among Students
Table 1 shows the level of self-regulated learning strategies of tertiary students, with a mean of 3.93 and SD=0.58, and already described as high on the descriptive level, meaning that students are good at self-regulated learning strategies in cultivating their writing skills.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>SD</th>
<th>Mean</th>
<th>Descriptive Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods Dimension</td>
<td>0.51</td>
<td>3.81</td>
<td>High</td>
</tr>
<tr>
<td>Social Environment</td>
<td>0.56</td>
<td>4.04</td>
<td>High</td>
</tr>
<tr>
<td>Performance Dimension</td>
<td>0.52</td>
<td>4.04</td>
<td>High</td>
</tr>
<tr>
<td>Physical Environment Dimension</td>
<td>0.59</td>
<td>3.74</td>
<td>High</td>
</tr>
<tr>
<td>Motive Dimension</td>
<td>0.50</td>
<td>3.72</td>
<td>High</td>
</tr>
<tr>
<td>Time Dimension</td>
<td>0.83</td>
<td>4.20</td>
<td>High</td>
</tr>
<tr>
<td>Total</td>
<td>0.58</td>
<td>3.93</td>
<td>High</td>
</tr>
</tbody>
</table>

It is clearly shown in the table that all indicators have a high descriptive level. It means that the students agree that self-regulated learning strategies effectively cultivate writing skills in Filipino. This is consistent with what Totoy Freire (2023), Pioera et al. (2020), and Türkben (2021) stated: that the self-regulated learning strategies produced good results in the development of the student’s writing skills.
and were effective in increasing learning outcomes in writing. Additionally, students gain self-confidence in writing when they use self-regulation learning strategies (Zimmerman, 2000; Harris et al., 2002; Graham et al., 2005).

The leading indicator is Time Dimension, which means that students have self-regulated learning strategies for managing time to cultivate their writing skills. Tertiary students have many related tasks, so it is essential to have a strategy for managing their time because writing an excellent academic paper is often a requirement that students must fulfill (Abadikah et al., 2018). The Motive Dimension has the lowest mean score, which means most respondent students have difficulties writing on the subjects assigned to them. This is in line with what Bruma and Marbella (2019) stated: 61 percent of teachers said their students could write up to five pages because writing is not easy for them (Queroda, 2018; Hikmah et al., 2019).

Level of Learning in Strategies Communicative with Students
Table 2 shows the level of learning in communicative strategies among tertiary students, with a total mean of 3.82, SD=0.53, and an equivalent descriptive level already high. It means that the students agree that having a communicative strategy helps develop writing skills.

Table 2. Level of Learning in Communicative Strategies

<table>
<thead>
<tr>
<th>Indicator</th>
<th>SD</th>
<th>Mean</th>
<th>Descriptive Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit Strategies</td>
<td>0.54</td>
<td>3.74</td>
<td>High</td>
</tr>
<tr>
<td>Indirect Strategies</td>
<td>0.59</td>
<td>3.91</td>
<td>High</td>
</tr>
<tr>
<td>Total</td>
<td>0.53</td>
<td>3.82</td>
<td>High</td>
</tr>
</tbody>
</table>

Table 2 shows that students agree with the indicator that Explicit Strategies and Indirect Strategies are both described high on the descriptive level. Students often demonstrate memorizing, cognitive, compensatory, metacognitive, emotional, and social strategies. The leading indicator is Indirect Strategies, where students try to learn new information using appropriate words to be good at communicating in the Filipino language. This agrees with Masithoh et al. (2018), who say that communicative strategies help students avoid language difficulties.

The Explicit Strategies are described as high on the descriptive level, meaning that the students know effective communication in the Filipino language. They learned to plan activities to help their communication growth, such as watching television programs and movies that use the Filipino language. Through this, the students look back at the new words they hear by learning the correct pronunciation and memorizing what they have learned in the Filipino language. The respondent students are a good group of students with the awareness to fill the communication problem. According to Flower and Hayes (2021), communicative strategies can occur in three main categories: planning, translation, and reflection.

Level of Grammar Learning Strategies among Students
Table 3 presents the Grammar Learning Strategies level, with a mean = 3.92 and SD = 0.53, and it is already described as high on the descriptive level. This indicates that the students agree on the strategies for learning Filipino grammar to present ideas in writing effectively.
Table 3. Level of Grammar Learning Strategies

<table>
<thead>
<tr>
<th>Indicator</th>
<th>SD</th>
<th>Mean</th>
<th>Descriptive Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metacognitive Strategies</td>
<td>0.62</td>
<td>3.97</td>
<td>High</td>
</tr>
<tr>
<td>Cognitive Strategies</td>
<td>0.55</td>
<td>3.89</td>
<td>High</td>
</tr>
<tr>
<td>Cognitive Strategies in Learning Grammar</td>
<td>0.66</td>
<td>3.87</td>
<td>High</td>
</tr>
<tr>
<td>Social Strategies in Learning Grammar</td>
<td>0.68</td>
<td>3.95</td>
<td>High</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.53</td>
<td>3.92</td>
<td>High</td>
</tr>
</tbody>
</table>

Table 3 presents the levels of Grammar Learning Strategies that describe the high-descriptive level. Indicates that students agree on all indicators: metacognitive strategy, cognitive strategies, sensory strategies in learning grammar, and social strategies in learning grammar. Students need to know grammatical strategies because they are related to effective writing. According to Omar (2019), grammar helps enrich writing skills. Al-Jarf (2022) added to Fterawari and Safitri that the strategy in teaching grammar is important because, at the same time as knowing grammar, the growth in writing skills.

Even so, the description is the same at the descriptive level of the indicators, leading among them to metacognitive strategy, which means that students are aware of their grammar weaknesses and strengths, so they try to find a method to grow their grammar knowledge. Next to the high level of learning grammar strategies is the social strategy. Students learn grammar learning strategies with the help of classmates, friends, and teachers. Teachers are among the most critical factors in motivating students to use grammar in writing contexts (Omar, 2019). The emotional strategy in learning grammar is the one with the lowest mean score, but it is still described as high on a descriptive level. It means that students are good at sensing if they have poor grammar while rewarding themselves when they do well in writing.

Level of Writing Skills among Students

Table 4 shows the level of writing skills in total Mean=3.80 and equivalent SD=0.56, already described as high on the descriptive level. Each indicator already has a high descriptive level, but there are different mean scores at the standard deviation. Leading here is Feedback with Mean=3.89 and an equivalent SD=0.62, followed by Awareness and Control of the Writing Process with Mean=3.86 and SD=0.64. The two indicators have the same minimum mean score Generating has Mean=3.70 and equivalent SD=0.65 while the Collaboration has Mean=3.70 at SD=0.86, both described as high on the descriptive level.

Table 4. Level of Writing Skills

<table>
<thead>
<tr>
<th>Indicator</th>
<th>SD</th>
<th>Mean</th>
<th>Descriptive Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude towards Writing</td>
<td>0.74</td>
<td>3.84</td>
<td>High</td>
</tr>
<tr>
<td>Generating</td>
<td>0.65</td>
<td>3.70</td>
<td>High</td>
</tr>
<tr>
<td>Revising</td>
<td>0.60</td>
<td>3.79</td>
<td>High</td>
</tr>
<tr>
<td>Feedback</td>
<td>0.62</td>
<td>3.89</td>
<td>High</td>
</tr>
<tr>
<td>Collaboration</td>
<td>0.86</td>
<td>3.70</td>
<td>High</td>
</tr>
<tr>
<td>Awareness and Control of the Writing Process</td>
<td>0.64</td>
<td>3.86</td>
<td>High</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.56</td>
<td>3.80</td>
<td>High</td>
</tr>
</tbody>
</table>

Table 4 shows the level of writing skills that scored a full description high on the descriptive level. This indicates that the students agreed with the indicators of Attitude Toward Writing, Generating, Revising, Feedback, Collaboration, and Awareness and Control of the Writing Process. This is contrary to the study.
by Barredo and Cadapan (2022), who found a low level of writing skills in Filipinos in the first year of college, so continuous development of writing skills is necessary. However, no indicator gets the highest description at the \textit{descriptive level}, meaning that tertiary students still need to cultivate and develop writing skills.

The leading indicator level is \textit{Feedback}, meaning that students can comment on the texts that have been read and listened to. It was followed by \textit{Awareness and Control of the Writing Process}, meaning students know the writing process, can make changes in how they write and can present a detailed account of the events they want to share through writing. According to Fareed et al. (2016), learning the skill of writing is more beneficial because it is one of the instruments used for effective communication and the presentation of ideas.

**Significant Relationship Between Learning on Self-Control Strategies and Writing Skills**

Table 5.1 shows the significant correlation between the exogenous variable \textit{Self-Regulated Learning Strategies} and the endogenous variable \textit{Writing Skills}. When the indicators of \textit{Self-Regulated Learning Strategies} have a substantial relationship with \textit{Writing Skills}, it can be seen that all the indicators also have a significant relationship at the 0.05 significance level.

<table>
<thead>
<tr>
<th>Learning Self-Control Strategies</th>
<th>Writing Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STP</td>
</tr>
<tr>
<td><strong>Methods Dimension</strong></td>
<td>.425**</td>
</tr>
<tr>
<td></td>
<td>.000</td>
</tr>
<tr>
<td><strong>Social Environment</strong></td>
<td>.304**</td>
</tr>
<tr>
<td></td>
<td>.000</td>
</tr>
<tr>
<td><strong>Performance Dimension</strong></td>
<td>.437**</td>
</tr>
<tr>
<td></td>
<td>.000</td>
</tr>
<tr>
<td><strong>Physical Environment Dimension</strong></td>
<td>.280**</td>
</tr>
<tr>
<td></td>
<td>.000</td>
</tr>
<tr>
<td><strong>Motive Dimension</strong></td>
<td>.579**</td>
</tr>
<tr>
<td></td>
<td>.000</td>
</tr>
<tr>
<td><strong>Time Dimension</strong></td>
<td>.472**</td>
</tr>
<tr>
<td></td>
<td>.000</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>.510**</td>
</tr>
<tr>
<td></td>
<td>.000</td>
</tr>
</tbody>
</table>

Legend:
- \textit{Attitude towards writing} \textit{PAP- feedback}
- \textit{PAG-generating} \textit{PAK-collaboration}
- \textit{PAW-revising} \textit{KPP-awareness and control of the writing process}

Table 5.1 presents the significant correlation between \textit{Self-Regulated Learning Strategies} and \textit{Writing Skills} with a total r-value of .567 and an equivalent p-value of .000, less than the level of significance set in this study. If so, reject the hypothesis and accept the alternative hypothesis that there is a significant relationship between \textit{Self-Regulated Learning Strategies} and \textit{Writing Skills}. It indicates that when tertiary students are good at learning \textit{Self-Regulated Learning Strategies}, they also develop their writing skills. This result was confirmed by Zimmerman (2000), Harris et al. (2002), Graham, Harris, and Mason (2005), who found that students gain self-confidence when they use self-control strategies. Therefore, the relationship between \textit{Self-Regulated Learning Strategies} and \textit{Writing Skills} is essential, according to (Farsani and Mohebbi, 2014; Emagnaw, 2019).
**Significant Relationship Between Learning Strategies Communicative and Writing Skills**

Table 5.2 shows the relationship between the exogenous variable *Learning Communicative Strategies* and the endogenous variable *Writing Skills* of tertiary students, with a total $R$-value of 0.600 and a $p$-value of .000, which is well below the .05 level of significance set in this study. If so, reject the hypothesis and agree with the alternative hypothesis that the study has a significant relationship with those communicative strategies and *writing skills*.

**Table 5.2. Significant Relationship Between Learning Communicative Strategies and Writing Skills**

<table>
<thead>
<tr>
<th>Learning Communicative Strategies</th>
<th>Writing Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STP</td>
</tr>
<tr>
<td><strong>Explicit Strategy</strong></td>
<td></td>
</tr>
<tr>
<td>.445**</td>
<td>.459**</td>
</tr>
<tr>
<td><strong>Indirect Strategies</strong></td>
<td></td>
</tr>
<tr>
<td>.390**</td>
<td>.388**</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>.444**</td>
</tr>
</tbody>
</table>

**Legend:**

- Attitude towards writing
  - PAP- feedback
- PAG-generating
  - PAK-collaboration
- PAW-revising
  - KPP-awareness and control of the writing process

Table 5.2 shows that *Learning Communicative Strategies* significantly correlates with the *Writing Skills* of tertiary students. That means having variety is an essential communicative strategy because it plays a vital role in developing *writing skills*. Meliyani and Tiasari (2023) discovered that students used a variety of strategies while writing a personal letter. Tertiary students use the communicative strategy in writing the Filipino language.

The findings support the belief of Aliakbari and Allvar (2009) about the importance of those communicative strategies in written communication. It cannot be denied that the contribution of writing skills towards effective communication is vital because, in the current era, having the ability to communicate plays an essential role in the world Masithoh et al., (2018). Therefore, it is crucial to cultivate further teaching of communicative strategies among tertiary students because they have a significant relationship with writing skills.

**Significant Relationship Between Grammar Learning Strategies and Writing Skills**

Table 5.3 presents the significant relationship between the exogenous variable of *Grammar Learning Strategies* and the endogenous variable of *Writing Skills* of tertiary students with a full $r$-value of .693 and a $p$-value of .000, well below the .05 significance level set in this study. If so, the hypothesis is rejected and conforms to the alternative hypothesis that a significant relationship exists between grammar learning strategies and the student’s writing skills.

**Table 5.3. Significant Relationship Between Strategy in Learning Grammar and Writing Skills**

<table>
<thead>
<tr>
<th>Grammar Learning Strategies</th>
<th>Writing Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STP</td>
</tr>
<tr>
<td><strong>Metacognitive Strategies</strong></td>
<td></td>
</tr>
<tr>
<td>.449**</td>
<td>.469**</td>
</tr>
<tr>
<td><strong>Cognitive Strategies</strong></td>
<td></td>
</tr>
<tr>
<td>.505**</td>
<td>.515**</td>
</tr>
</tbody>
</table>

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The results of Table 5.3 show a significant correlation between Grammar Learning Strategies and Writing Skills. It means that when students’ knowledge of using grammar strategies is high, their knowledge of writing skills also becomes high. It indicates that the grammar learning strategy is vital in the development of the writing skills of students, particularly in their attitude towards writing, development, correction, feedback, collaboration, and awareness of controlling the writing process. Good writing skills significantly correlate with metacognitive strategies, cognitive strategies, affective strategies in learning grammar, and social strategies in learning grammar.

Therefore, students must cultivate grammar strategies to express concepts and ideas clearly in writing. According to Grauberg (1997), Learning grammar is essential because it will lead to effective communication and interaction. Grammar helps enrich writing skills because the wrong use of words can cause confusion and misinterpretation of the intended message (Omar, 2019).

**Significant Influence of the Study of Self-Control Strategies, Learning Communicative Strategies, and Strategies for Learning Grammar in Writing Skills**

Table 6 shows the significant influence of Self-Regulated Learning Strategies, Communicative Strategies, and Strategies for Learning Grammar on students’ Writing Skills.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Writing Skills</strong></td>
<td><strong>Exogenous Variables</strong></td>
<td><strong>B</strong></td>
<td><strong>b</strong></td>
<td><strong>t</strong></td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td>0.665</td>
<td>3.709</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td><strong>Learning Self-Regulated Learning Strategies</strong></td>
<td>0.189</td>
<td>0.150</td>
<td>2.737</td>
<td>0.006</td>
</tr>
<tr>
<td><strong>Learning Communicative Strategies</strong></td>
<td>-0.007</td>
<td>-0.007</td>
<td>-0.093</td>
<td>0.926</td>
</tr>
<tr>
<td><strong>Grammar Learning Strategies</strong></td>
<td>0.622</td>
<td>0.591</td>
<td>8.493</td>
<td>0.000</td>
</tr>
<tr>
<td><strong>R</strong></td>
<td>0.701</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>R^2</strong></td>
<td>0.491</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ΔR</strong></td>
<td>0.487</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>124.100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>r</strong></td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result can be checked through *regression analysis* in Table 6, showing that the exogenous variables significantly influence *Learning Strategies, Grammar Learning Strategies, and the endogenous variable, the Writing Skills of tertiary students. Whereas the exogenous variable has no significant influence on *Learning Communicative Strategies*, the endogenous variable is the *Writing Skills*. 
of tertiary students. We can see the F-value at 124.100, which has an equivalent p-value of .000, meaning the regression model is significant, which leads to the rejection of the null hypothesis. It adds the R-value .701 at R² of .491, which means that 49.1 percent of the variance in writing skills is explained by the predictor variables studied among self-regulated learning strategies, communicative learning strategies, and grammar learning strategies. Then, 50.9 percent of the variance can be attributed to other factors besides the three mentioned variables.

From the deep analysis of the data, the following specific details can be seen in the study results of students’ self-regulated learning strategies in standardized and unstandardized coefficients: 189 at .150, t-value of 2.737, and p-value of .006 have significant influence. The study of communicative strategies with standardized and unstandardized coefficients of -.007 and -.007, a t-value of .093, at a p-value of already .926 had no significant influence, and the grammar learning strategy with standardized and unstandardized coefficients of .622 and .591, t-value of 8.493, and a p-value of already .000 had considerable influence.

The presented results are related to what Fukuda (2018) stated: that the study on writing skills significantly influences the efficiency of student learning. Through writing skills, they also improve their learning efficiency through self-regulated learning strategies and communicative strategies in learning grammar. However, Woottipong (2019) stated that the student’s writing proficiency will vary depending on using those self-regulated learning strategies. Therefore, the students’ learning to write needs the guidance of the teachers. The role played by teachers is essential to help the student who will become a writer develop self-control Abadikah et al., (2018); Umamah and Cahyono, (2020).

The stance of research participants at the level of exogenous and endogenous variables
By interviewing the participants, their stances on exogenous and endogenous variables were shared. From the general response, the following themes emerged: listening to music in a calm place helps ignite many ideas; making use of an outline and observing time management to achieve goals; watching and reading help expand the vocabulary in the Filipino language; listing and memorizing new words in Filipino can help keep them in mind; make use of a book and a website to understand grammatical rules better. Details can be found in Table 8.

**Table 8. Tertiary Students’ Attitudes about Exogenous and Endogenous Variables.**

<table>
<thead>
<tr>
<th>Themes</th>
<th>Significant Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>listening to music in a calm place helps ignite many ideas</td>
<td>...I like to listen to music so that no noise can be heard. IDI P2</td>
</tr>
<tr>
<td></td>
<td>...when I hear music, my emotions are brought into writing IDI P3</td>
</tr>
<tr>
<td></td>
<td>...when there is music, I do not become bored or asleep while writing. IDI P5</td>
</tr>
<tr>
<td></td>
<td>...I listened to music to become motivated to write IDI P9</td>
</tr>
<tr>
<td></td>
<td>...I like listening to music while writing FGD2 P1</td>
</tr>
<tr>
<td></td>
<td>...I listen to music to get inspired to write FGD2 P5</td>
</tr>
<tr>
<td></td>
<td>...when there was no more noise, I started to write down my exact ideas IDI P1</td>
</tr>
<tr>
<td></td>
<td>...when everyone is asleep, I write because my imagination works. IDI P5</td>
</tr>
<tr>
<td></td>
<td>...I can generate many ideas when the environment is quiet FGD2 P2</td>
</tr>
<tr>
<td></td>
<td>...in the early morning because my mind is fresh and subtle FGD2 P3</td>
</tr>
<tr>
<td></td>
<td>...I cannot concentrate when it is too noisy and cluttered FGD3 P2</td>
</tr>
<tr>
<td></td>
<td>... I make sure I am in a calm place when writing FDG3 P5</td>
</tr>
</tbody>
</table>
| making use of an outline and observing time management to achieve goals | ... it is easier for me to come up with a short story if I outline first IDI P3  
... I created an outline to ensure that my writing was going to be good IDI P8  
... I prioritize outlining to see the weaknesses and strengths of what I am going to write FGD3 P3  
... I set a time when I would write IDI P7  
... I create a timetable and schedule as to when I am going to write FGD1 P1  
... I am making a timetable of what time I will do the assignment FGD1 P4  
... I will make a timeline of when I plan to do the writing of FGD2 P1  
... I am making a planner to organize my writing FGD P4 |
|---|---|
| watching and reading to develop vocabulary in the Filipino language | ... I learned to watch a documentary that uses the Filipino language IDI P7  
... I am watching a video on YouTube where the narrator uses Tagalog IDI P9  
... I keep track of "teleserye," and the actors are fluent in Filipino. IDI P10  
... I am watching the Filipino movie FGD1 P5  
... I like to watch Vlogs that use Filipino FGD2 P1  
... I watched the news on television FGD2 P5  
... I am reading a book in Filipino to learn new words IDI P8  
... reading Filipino history and literature inspired me to write IDI P5  
... I need to read the book written in Filipino FGD1 P1 |
| listing and mastering new words in the Filipino language | ... In order for me to memorize the new word, I say it over and over again. IDI P1  
... I write the new word on the Flashcard that's the way I can easily remember IDI P4  
... rather than just listening, I write down the new words IDI P5  
... recited many times to memorize IDI P6  
... I remember the word by rhyme IDI P7  
... while listening to the teacher, I listed the deep word after I Googled the meaning IDI P8  
... I have a notebook for new words, and I also put the meaning on it IDI P9  
... some words are new to me, I am writing them and looking for the meaning to familiarize myself with FGD2 P5  
... I used the new words in my writing so that I can easily remember FGD3 P2 |
| using books and websites to understand grammar rules better | ... what I did was read Filipino books at the library IDI P2  
... reading, especially if I am unfamiliar with the studied grammar IDI P5  
... I am reading a book on how to use the word in sentences IDI P7  
... I searched the internet for more knowledge on grammar IDI P8  
... I constantly research grammar on Google or YouTube IDI P10  
... to improve my knowledge of Filipino grammar, I am reading the book FGD1 P1  
... I use different websites to get information about grammar FGD3 P2  
... using sites, like Google, to correct my grammar FGD2 P4 |
Listening to music in a calm place helps ignite many ideas

It can be seen in the first theme that the participants revealed their mutual belief that listening to music helps them to be focused and generate many ideas for writing. By listening to music, they do not hear other noises around them so they can develop broad concepts related to their writing topic. According to the participants,

…I listened to music to become motivated to write IDI P9
…I like to listen to music so that no noise can be heard. IDI P2
…When I hear music, my emotions are brought into writing IDI P3 IDI P3

It is evident from what the participants stated that listening to different music genres helps them avoid what becomes an obstacle in their concentration in writing; even their emotions give them joy and a peaceful mood while writing. That means music gives them motivation to work on writing. According to what the participant stated,

…I listened to music to become motivated to write IDI P9
…I listen to music to get inspired to write FGD2 P5

This means that the participants are aware of themselves and how they can improve their writing skills. Tertiary students have learned self-regulated strategies to enhance and develop their writing skills. Fukuda (2018) proved that having a self-regulated learning strategy is vital to successful learning. It means that the students make ways to learn and manage themselves to concentrate on the tasks that need attention.

However, the quiet environment allows participants to generate more ideas. They are looking for a way to focus on writing so that it is easier to do writing tasks and pass them on time. According to the participants,

…I can generate many ideas when the environment is quiet FGD2 P2
…in the early morning because my mind is calm and fresh FGD2 P3
…I cannot concentrate when it is too noisy and cluttered FGD3 P2
…I make sure I am in a quiet place when writing FDG3 P5

The participants are aware of their strengths in writing; they have proven that when their surroundings are noisy and messy, they cannot concentrate on writing, so they first make sure the place is clean. Nothing can interfere with the writing concentration. Through this, the researcher determined that it is essential for tertiary students to have a self-regulated learning strategy to monitor their development, such as practicing and developing writing skills. It is connected to the view of Farsani and Mohebbi (2014) and Emagnaw (2019) that the relationship between self-regulated learning strategies and writing skills is essential. If this is the case, tertiary students can avoid difficulties with writing tasks. Related to the view of Zimmerman (2000), Harris et al. (2002), and Graham et al. (2005) that students develop self-confidence when they use self-regulated learning strategies to the development of writing skills.

Making use of an outline and observing time management to achieve goals

As seen in the second theme, the participants described their consistent belief that using an outline and watching time management helped them achieve their writing goals. The participants presented;

…it is easier for me to come up with a short story if I outline first IDI P3
…I created an outline to ensure that my writing was going to be good IDI P8
... I prioritize outlining to see the weaknesses and strengths of what I am going to write FGD3 P3

From the participants’ statements, it was proven that outlining is essential to the participants so that the outcome of their writing will be good. Their work is more accessible because the outline guides them on starting and makes the writing process exciting until the end. Undoubtedly, their motive in using the outline was to achieve the goal of having a good outcome of what they wrote. If so, this fits with what Bai and Gou (2019) said: self-regulated learning strategies can improve students’ writing skills through a motivated method. In addition to creating an outline, participants manage their time to achieve the goals of their writing assignments. Agree with the participants;

... I set a time when I would write IDI P7
... I created a timetable and schedule as to when I am going to write FGD1 P1
... I am making a timetable of what time I will do the assignment FGD1 P4
... I will make a timeline of when I plan to do the writing of FGD2 P1
... I am making a planner to organize my writing FGD3 P4

The concepts presented by the participants are almost consistent. They clearly describe that time management is an effective self-regulated learning strategy for developing writing skills, such as setting a time to write, writing at night because there is no other task in mind, and writing in the early morning because since the mind has rested, more ideas may be written down. As Abadikah et al. (2018) and Emagnaw (2019) said, students need time management skills to overcome each level in the writing process.

In addition, tertiary students revealed that planning and making a timetable in written work is essential because, apart from the number of needs that must be passed in various courses, they still have chores to be done. They use their spare time to write, usually at night, because they are done with work and have nothing else to think about. It is also often early in the morning because the mind is fresh and focused on writing, so many concepts and ideas can be written. If so, this is related to what Totoy and Dayana (2023) found, that self-regulated learning strategies develop positive characteristics of students toward writing skills. It is affirmed by the belief of Harris, Graham, Mason, and Saddler, mentioned in the study by Farsani et al. (2014), that having a self-regulated learning strategy shapes students’ writing skills and develops the perspective and skill in the writing process helps to have self-confidence as a good writer.

Watching and Reading to Develop Vocabulary in the Filipino Language

As seen in the third theme, the participants described their par-both affirm that watching and reading help enrich Filipino language vocabulary. That means if Tertiary students are rich in vocabulary, their communication becomes successful because they can use appropriate words to express what they want to convey to the readers. According to the participants,

...I learned to watch a documentary that uses the Filipino language IDI P7
... I keep track of “teleserye,” and the actors are fluent in Filipino. IDI P10
...I am watching the Filipino movies FGD1 P5
...I watched the news on television PGD2 P5

The participants’ statements proved that watching television programs, such as “teleserye,” documentaries, and news, is a way for them to discover new words and use them to communicate in
the Filipino language. They watch Filipino movies to enhance their comprehension of Filipino culture and knowledge of the Filipino language that may be used for writing. The participants further stated;

...I like to watch Vlogs that use the Filipino language FGD2 P1
... I am watching a video on YouTube where the narrator uses Tagalog IDI P9

They also choose to watch videos or vlogs on YouTube that use the Filipino language; in that way, they get ideas and information and increase their knowledge of the use of words in the Filipino language, which will help to cultivate their writing skills. According to the belief of Aliakbari and Allvar (2009), communicative strategies are crucial in written communication. In addition, they use the dictionary and the internet to find the appropriate and precise meaning of the words and phrases they get from watching. The participants believe that through their study of communicative strategies, they can express their feelings, opinions, and thoughts in writing to the world. In agreement with what was stated by Masithoh et al. (2018), communication plays a significant role in the global trend because successful communication is considered the most important of all life skills. Jimenez confirmed, and Lopez mentioned in Zambrana (2019) that a communication strategy is the key to a person’s ability to communicate the idea he desires to the listeners properly.

Meanwhile, participants also learned to read books written in the Filipino language, such as history and literature. According to them, literary writers are inspiring and admire poets’ skill in creating poems and writers of short stories and novels. They want to become good writers when the time comes, so they believe they can achieve their goals by enriching their vocabulary in the Filipino language. According to the participants,

... I am reading a book in Filipino to learn new words IDI P8
... reading Filipino history and literature inspired me to write IDI P5
... I need to read the book written in Filipino FGD1 P1

From the statements above, the participants described that the communication strategy is effective in developing writing skills, such as reading books and other reading materials written in the Filipino language, that help the participants to develop communication skills. From the tools mentioned above, which students are using to build their communication skills, they are allowed to choose an easier way to learn, according to Alawamleh et al. (2020). In addition to what Pentury et al. (2020) said, when students develop their critical thinking and communication skills, they also develop language use and creative and innovative writing strategies.

**Listing and Memorizing to Remember New Words in the Filipino Language**

As seen in the fourth theme, the participants described their consistent stance that listing and memorizing new words in the Filipino language is an effective communicative strategy for writing skills. The participants list new words they have read or heard, which can often be difficult or figurative; some are placed on flashcards for easy recall, others have a notebook reserved for newly learned words, and others are written on the paper they used that day. Presented by the participants;

... In order for me to memorize the new word, I say it over and over again. IDI P1
... I write the new word on the Flashcard; that’s the way I can easily remember IDI P4
... rather than just listening, I write down the new words IDI P5
...while listening to the teacher, I listed the deep word after, I Googled the meaning IDI P8
... I have a notebook for new words, and I also put the meaning on it IDI P9
From what the participants expressed, they listed difficult words to gain more knowledge in the discussed lesson. It is easier to review learned words when written on flashcards. Listening carefully to the teacher on how words are pronounced and used helps to become proficient in using words, especially in cultivating writing skills. Concerning what Alawamleh et al. (2020) said, having students’ communication skills provides a positive relationship with classmates and teachers, bringing inspiration and making learning easy. On the other hand, students’ memorization of new words helps to increase vocabulary in the Filipino language and to express concepts clearly through writing. According to the participants,

...I recited many times to memorize IDI P6
... I remember the word by rhyme IDI P7
... I use the new words in my writing so that I can easily remember FGD3 P2

The participants described that memorizing words in the Filipino language is effective in the communication strategy towards the cultivation of writing skills. When the new word heard is pronounced over and over again, they will remember it easily. In addition, to avoid forgetting the latest words in the Filipino language, the participants use them in writing, especially if it is a suitable word to express the thoughts they want to convey to the readers. Participants also memorize new words by sound, as well as word rhymes. They believe that because of this, they will not forget the words they have learned, and it will be a way to improve their communication through writing skills. Having the ability to communicate effectively is considered the most important in human life, especially for students, because it helps them avoid difficulties in using language so they can say what they want to say because they are fluent in using words in a particular language Masithoh et al., (2018). It has been observed that the participants are among the best students because they presented different communicative strategies for improving their writing skills. It was proved by Ting et al. (2017) and Metcalfe & Ura (2012) that gifted students are likelier to use communication strategies than less talented students. So, the view of Yaseen et al. (2021) is appropriate; there is a good effect on a student’s success when he acquires communication skills. The difficulty of finding a job is avoided when graduate students possess communication strategies because they gain self-confidence, especially when answering interview questions.

**Using Books and Websites to Understand Grammar Guidelines Better**

From the fifth theme, the participants described their consistent belief that the grammatical strategy effectively develops their writing skills. They believe that reading books about grammar helps to increase their knowledge of the principles of Filipino grammar. Some also say it is easier to find factual information in the book. According to the participants,

... what I did was read Filipino books at the library IDI P2
... reading especially if I do not know the studied grammar IDI P5
... I am reading a book on how to use the word in sentences IDI P7
... to improve my knowledge of Filipino grammar I am reading the book FGD1 P1

The participants revealed that they go to the library to read grammar books to find more information on the grammar they are studying. The participants believed reading the books helped them immensely because they learned to use appropriate words to form sentences and paragraphs. It will be noted that the participants have strategies for learning grammar because they believe their writing improves when knowledge of grammar is developed. This is related to what Nurhayati (2020) stated, that an individual with grammatical ability can quickly produce a sentence with a clear meaning.
Reading the rules and structure of grammar in the Filipino language is a strategy that the participants believe helped them better understand correctly using words in writing. In order to prepare students’ writing skills for academic and professional tasks, they must learn grammar Atashian and Al-Bahri, (2018). However, apart from reading books, the participants also use websites such as Google and YouTube to expand their understanding of grammar. According to them,

... I am looking on the internet for more grammar knowledge IDI P8
... I constantly research grammar on Google or YouTube IDI P10
... I use different websites to get information about grammar FGD3 P2
... using sites like Google to correct my grammar FGD2 P4

According to the participants, there are times when they need help comprehending the discussion in the classroom about the rules and structure of grammar in the Filipino language. Hence, they research more information on the internet to remember and understand it thoroughly. They use multiple websites but often discover straightforward answers on Google and YouTube. According to Alova Lana and Chard Alov (2022), learning grammar is essential in writing because it helps language use. Nurhayati (2020) affirmed that an individual with grammatical ability can easily create a sentence with a clear meaning.

CONCLUSION

The use of the theoretical structural model reinforces this study because the data analysis is consistent with the sequential process of the specific model. The study results showed that the learning level of self-control, communication, and grammar learning strategy, as an exogenous variable, and writing skills, as an endogenous variable, scored high at the descriptive level. It indicates that the respondents agreed and frequently expressed the referred items in the exogenous and endogenous variables.

Self-regulation strategy learning was found to have a significant relationship with writing skills. It indicates that when tertiary students are good at learning self-regulation strategies, they also develop their writing skills. It was also found that learning is significantly related to communicative strategy and writing skills. It means that when tertiary students have high learning in communicative strategies, their writing skills are also high. It is known that there is a significant relationship between Grammar Learning Strategies and Writing Skills. It means that when students’ knowledge of using grammar strategies is high, their knowledge of writing skills also becomes high. However, the researcher proved that the results are related to quantitative study in qualitative research because the attitudes expressed by the participants at the level of exogenous and endogenous variables can be seen in the indicators in each variable.

It was found that the most appropriate model for writing skills is related to learning self-control strategies, learning communicative strategies, and grammar learning strategies in writing skills. The three exogenous variables directly relate to the endogenous variable of writing skills. Studies on self-regulated learning strategies, communicative strategies, and grammar learning strategies help develop writing skills.

The participants confirmed their conviction from their experience that every tertiary student must learn self-regulated communication and grammar strategies to cultivate writing skills. The participants demonstrated their experience in learning different self-regulated learning strategies, communicative strategies, and grammatical strategies that effectively boost their writing skills. This means that the
level of the participants is high in having different strategies that are exogenous variables and endogenous variables.

The researcher proved that the result of the qualitative study in obtaining participants’ stances at the level of exogenous and endogenous variables has a significant relationship with the result in the quantitative research. It is indicated that there is a substantial relationship between the presented experiences of the study participants in self-regulated learning strategies and writing skills, thus accepting the theory of Zimmerman and Martinez-Pons (1992) indicating that self-regulated learning strategies have proven themselves effective for tasks such as writing. So is Zimmerman’s theory (2000), Harris et al. (2002), and Graham et al. (2005), that students gain self-confidence and become good at writing when using self-regulated learning strategies because they manage the writing practice and develop their knowledge of the writing process.

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