

Reengineering Learning: Examining Metacognitive Strategies of ESL Students

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Received: April 1, 2019; **Accepted:** April 8, 2019; **Published:** April 12, 2019

Abstract: This study described the metacognitive strategies in learning English employed by Grade 7 students at Bernardo Lirio Memorial National High School along with the intention of proposing course of actions that will encourage the students to use metacognitive strategies in learning English. The research determined the following: respondents' personal variables such as sex, socio-economic status, and academic performance in English, their metacognitive strategies, its relationship to the profile, and the course of action to encourage students to employ metacognitive strategies in learning English. The researcher used questionnaire as the main instrument to gather necessary data. With the use of proper statistical tools, the gathered input were grouped according to their responses guided by descriptive-correlational method as the research design. The results showed that female students were greater in number than male students. Most of the respondents were in the middle income group and had a Developing academic performance in English. When the respondents' employed metacognitive strategies in English was paired with some personal variables such as socio-economic status and academic performance in English, the results revealed significant relationship. In contrast, the variable sex was found to be not significantly related with the respondents employed metacognitive strategies. The results also showed that the respondents employed all the metacognitive strategies in learning English with Making Predictions as the most used strategy and Relating Ideas as the least among the five categories. The aforementioned findings recommend that the students must be given classroom practices that would bring out, unfold and enhance their metacognitive strategies in learning English. In addition, the assurance that the students should be involved on the learning process to exercise actively the use of their metacognitive strategies. Also, it makes the students aware of their metacognitive strategies specifically in learning English so they would improve orally or in written and might help in enhancing their academic performance.

Keywords: metacognitive strategies, academic performance, making predictions, relating ideas, classroom practices.

Citation: Liwanag C. Rubico. 2019. Reengineering Learning: Examining Metacognitive Strategies of ESL Students. International Journal of Recent Innovations in Academic Research, 3(4): 75-85.

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1. Introduction

Today, people live in a generation characterized by the explosion of information and rapid changes. One consequence of this is the growing demand on education to help all learners

acquire higher-level skills that allow them to be more proactive participants in learning. They seek ways to analyze, make decisions and solve complex real-world problems. As these increase, students are required to know beyond the content knowledge. They must know how to learn, and examine its underlying processes. This will dictate changes in the way teachers interact with students. Moreover, these changes must be grounded in an understanding of diversity of learning.

According to Shannon (2008), learning styles referred to the concepts of individualism, in processing and perceiving of information. There are many different factors that can lead to the differences that arise within learning styles. These factors include personality, ability to process information, self-efficacy, sensory intake processes or some complex combination of these and other differences. Using a variety of assessment tools, individuals can gauge their own interest levels for a set of criteria to help establish the methods in which they obtain much of their information about the world around them.

Learning styles denote the variation in one's ability to accumulate as well as to assimilate information. Basically it is the method that best allows students to gather and use knowledge in a specific manner. In most cases, the characteristics of a learning style can be observed at a relatively young age. In order to apply metacognition in the classroom, a teacher is ought to be familiar with learning styles. This way the teacher will have a deeper understanding of the type of metacognitive skill that will fit the student's learning style.

Among the commonly employed learning styles, metacognition appears to be one of the most powerful predictors of learning. It regulates cognitive activity, but at the same time it needs cognitive activity as a vehicle. Metacognition is thinking about thinking, knowing what an individual knows and how he learns (Bernardo, 2009). It is important for both teachers and students to realize that learners always encounter many situations that are not adapted to their own preferences. What teachers need to do is to help students develop the skills and strategies needed for learning effectively from teachers who do not match the students' preferred learning style. Subsequently, metacognitive strategies have promising roles in addressing these needs.

Veenman *et al.*, (2005) stressed that metacognitive strategies may become powerful tools of learning for they help individuals to find information, evaluate when in need of additional resources, and understand when to apply different approaches to problems. When students begin to master these strategies and learn when, how, and why to use them, they are able to learn more effectively and intentionally.

Metacognitive strategies therefore, are designed to monitor cognitive progress. These strategies are ordered processes used to control one's own cognitive activities and to ensure that a cognitive goals have been met. A person with good metacognitive skills and awareness uses these processes to oversee his own learning process, plan and monitor ongoing cognitive activities, and to compare cognitive outcomes with internal or external standards. Metacognition can be defined as an approach that goes beyond cognition. It is an approach that makes students think about their thinking. It encourages students to monitor their own cognitive processes as they are engaged in their cognitive tasks. It enables them to be conscious of their thought processes while they are thinking (Corpuz *et al.*, 2007).

In simpler terms, metacognition is viewed as the higher level of mental processes that one learns and uses to control one's thoughts or knowledge. It involves an awareness of one's

knowing about cognitive states and activities, and affective states, and control over this knowledge in order to achieve a specific goal. Garcia (2007) emphasized that metacognition is concerned with knowledge about cognition in general and knowledge about one's own cognition. Researchers with varying theoretical persuasions from neoPiagetian, Cognitive and Information-processing models, to Vygotsky and culture-situated models agree on the importance of developing students' responsibility for their own knowledge and thought. Students can learn better by acting on such metacognitive knowledge which is also known as metacognitive awareness, self-awareness, self-reflection and self-regulation. A person's knowledge about the cognitive processes is seen necessary for understanding and learning. It is not only about the strategies that students use but also their skills on how to use them. Metacognition can be taught as a set of basic or general skills through which learners develop an awareness of how to optimize metacognition and related processes.

Basic skills instruction is a field where the importance of metacognition is widely recognized and promoted. One of the main struggles that students face in trying to understand the way they learn is to develop strategies that would enable them to be of their own learning process. They might have some basic understanding of their own knowledge and thinking, but unconsciously deficit in understanding the approaches as to cultivate their own sense of knowledge.

These questions raised for solution can help students become more cognizant as well as to provide instruction linking to real world connections to the information they are currently learning. As indicated, this study can provoke the awareness of students to the possibility of mismatch between metacognitive strategy linear to academic study which not only causes them to feel trapped within a variety of complicated tasks or might as well creating obstacles to develop the ability to learn by themselves. Given the nature of the study, and the researchers' determination on which effective metacognitive strategies that would empower students' performance allowing them in taking ownership on what they are learning and move from a passive role in the classroom to an active role. Thus, significantly prompts metacognition in learning across domains. This research journey sought to define and frame the elements of metacognition, and to understand their relationships. It also looked at how metacognition was seen to function in learning scenarios applicable to the context of independent learning. The aforementioned facts served as the rationale for this research work. Congruent with this, the present study determined the employed metacognitive strategies of grade seven students at Bernardo Lirio Memorial National High School, S.Y. 2014-2015.

Therefore, the enhancement of the transfer of learning acquired in school settings covers knowledge about the necessary skills to select appropriate choices. This enabled the researcher to devise a course of action that may encourage students to utilize their metacognitive strategies. Furthermore, it empowered the students to think critically and be competitive students—a big leap for being productive members of the society.

1.1 Objectives of the Study

This study described the metacognitive strategies in learning English employed by grade seven students at Bernardo Lirio Memorial National High School. Specifically, this study sought answer to the following questions: What is the profile of the respondents in terms of sex, socio-economic status and academic performance in English?; How do the respondents employ the following metacognitive strategies in learning English in terms of monitoring learning and thinking, making predictions, relating ideas, developing questions, and resolving to scaffold?; Is there a significant relationship between the respondents' profile and their

employed metacognitive strategies? Lastly, what course of action may be proposed to encourage students to utilize metacognitive strategies in learning English?

2. Methodology

The researcher used the descriptive correlational method of research to answer the questions posed in this endeavour. She also correlated the respondents' profile and the metacognitive strategies employed by the respondents. This determined if there exists significant relationship between the two variables. This method rendered richer examination of metacognition congruent for the correlation of the variables under study. The researcher's self-made questionnaire was given to the grade seven students at Bernardo Lirio Memorial National High School, enrolled during the school year 2014-2015. To generate the information needed by this study, sampling of the entire population of the respondents was used with the aid of Slovin's Formula. It consisted of 220 students who are taking English as one of their academic requirements in their curriculum.

When the needed information for the study had been gathered, the researcher tabulated, interpreted and analyzed the results. This, in turn, gave way to the researcher to come up with recommendations that improved the teaching and learning of English. In line with the metacognitive strategies emerged from the respondents' answers were identified, the computed weighted mean and composite mean with the following ranges and corresponding interpretations was used. As shown with the figures below, the numerical values ranged from 4 to 1 indicates the level of agreement on the actual use of strategies by the respondents, while the mean ranges of 4.00–1.00 denotes the computed weight of the individual results when combined and ranked accordingly. Lastly, the same interpretation as to Always or Highly Employed and Never or Not Employed determines to measure the existing metacognitive strategies prevalent within the group.

Numerical Value	Mean Ranges	Interpretation
4	3.25-4.00	Always/Highly Employed
3	2.50-3.24	Often/Employed
2	1.75-2.49	Sometimes/Slightly Employed
1	1.00-1.74	Never/Not Employed

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3. Results and Discussions

This chapter reports on the overall results of the data obtained by the researcher. The following presentations resembling the problems posted in the study are expounded in tables.

A brief overview of the analyzed data is also provided to clarify the assumptions on how the selected personal variables relate to the employed metacognitive strategies in studying English. Finally, the results of the conducted correlational analyses among the variables under study are tested with the hypothesis of the research.

3.1. Profile of the Respondents

The succeeding tables present the profile of the grade seven students at Bernardo Lirio Memorial National High School. This was grouped according sex, socio-economic status and academic performance in English.

Table 1. Profile of the Respondents

Profile	Frequency	Percentage
Sex		
Male	85	39.00
Female	135	61.00
Total	220	100.00
Socio-economic Status		
High Income (P37,001.00 and above)	7	3.00
Middle Income (P10,000.00-P37,000.00)	123	56.00
Low Income (P9,999.00 and below)	90	41.00
Total	220	100.00
Academic Performance in English		
Proficient (85%-90%)	31	14.00
Approaching Proficiency (80%-84%)	74	34.00
Developing (75%-79%)	77	35.00
Beginning (74 below)	38	17.00
Total	220	100.00

Most of the respondents were female and belonged to socio-economic status of Middle Income. In terms of academic performance in English, most of them are on the Developing level. Further, the result showing that female students dominated could be traced to the notion that when it comes to studies, female are more dedicated, however male are more active in other things. In studies, male are more passive, and into physical things, like sports or doing things with their hands like spending more time playing video games and the result showing that majority of the respondents belong to middle income group could be attributed to economic reasons as relevant. The wage and income gap is widespread among the students' profile. It could be gleaned from the table that majority of the respondents had developing to approaching proficiency level of academic performance in English. The result affirms that the students are still in major academic adjustment first, from their elementary-secondary transition; and second, in the new K to 12 curriculum.

3.2. Metacognitive Strategies Employed in Learning English

The succeeding tables present the data of the respondents' metacognitive strategies employed in learning English in terms of monitoring learning and thinking, making predictions, relating ideas, developing question and resolving to scaffold.

Table 2. Monitoring Learning and Thinking

Item Statements	Weighted Mean	Verbal Interpretation
I easily learn English when I ...		
1. prepare a concept map of a newly learned English word to understand its various meanings.	2.58	Often
2. use new English words in a sentence so I can remember them.	2.72	Often
3. summarize what I read to reflect on important information in a story.	3.10	Often

4. adjust my reading speed according to what I am reading.	3.12	Often
5. underline or circle information in the text to help me remember it.	2.70	Often
Composite Mean	2.84	Employed

The respondents employed metacognitive strategies in learning English in terms of monitoring learning and thinking obtained a composite mean of 2.84. The result affirms how reading materials shall be interesting enough to attract students' interest. The faster a reader browses over a material, the more interesting the literary piece is.

Table 3. Making Predictions

Item Statements	Weighted Mean	Verbal Interpretation
I easily learn English when I ...		
1. foresee the events that might happen in a short story by simply analyzing its title.	2.68	Often
2. can assume the grammar governing a set of sentences by examining their patterns and structure.	2.62	Often
3. imagine the nature of my audience and take it into consideration whenever I am preparing a speech.	2.59	Often
4. preview the texts to see what it is about and which may be of help to me before reading it.	2.95	Often
5. practice pronouncing unfamiliar words during spelling drill.	3.02	Often
Composite Mean	2.77	Employed

The respondents employed metacognitive strategies in learning English in terms of Making Predictions obtained a composite mean of 2.77.

The respondents practice pronouncing unfamiliar words in English which they find as a potentially useful strategy during a spelling drill. A logical interpretation would be that they pay attention to their pronunciation which signifies improvement on their vocabulary.

Table 4. Relating Ideas

Item Statements	Weighted Mean	Verbal Interpretation
I easily learn English when I ...		
1. paraphrase or use synonymous words to better understand what I read.	2.78	Often
2. critically analyze and evaluate the information presented in a text.	2.64	Often
3. go back and forth in a story to find relationships among ideas in it.	2.80	Often
4. memorize grammar rules and apply them in speaking and writing.	3.10	Often

5. find out whether the content of the text fits my reading purpose.	2.54	Often
Composite Mean	2.77	Employed

The respondents' answers accumulated a composite mean of 2.77 for the relating ideas strategy. Thus, it can be inferred that the respondents organized their knowledge by following grammar rules in a unified manner and use it in time of speaking and writing.

Table 5. Developing Question

Item Statements	Weighted Mean	Verbal Interpretation
I easily learn English when I ...		
1. see to it that I understand the information which is important to remember in a story.	3.03	Often
2. write down my feelings in English on a diary/journal.	2.72	Often
3. frequently check back to the title after reading my written essay.	2.85	Often
4. try to guess the meaning of a new word or unknown phrases in a selection.	2.74	Often
5. repeat what I read more than once to enhance my comprehension.	2.99	Often
Composite Mean	2.87	Employed

The items under Developing Questions category accumulated a composite mean of 2.87. Thamraksa (2006) conducted a research on activities that enhance language skills.

The study showed that the wide aide of reflective journals shows students understand that the more they write, the more they can develop fluency in writing English. It also increased their awareness of tacit knowledge, promoted the development of reflective judgment and metacognition, and enhanced self-exploration and personal growth.

Table 6. Resolving to Scaffold

Item Statements	Weighted Mean	Verbal Interpretation
I easily learn English when I ...		
1. request someone else to look at possible spelling mistakes with some troublesome words before finalizing a written work.	2.74	Often
2. look for people I can talk to in English.	2.69	Often
3. discuss what I read with others to check my understanding.	2.81	Often
4. try to reply in English if asked by our teacher in English.	2.95	Often
5. approach more advanced peers to correct my grammar when speaking.	2.79	Often
Composite Mean	2.80	Employed

It could be gleaned from the table that the respondents often employed scaffolding strategy for this obtained a composite mean of 2.80. The results proved that the respondents continuously monitor their progress towards a goal, examine outcomes and redirect unsuccessful efforts in own learning processes by resolving to scaffold. The teacher guides and supports the students in the application of the strategies and gradually passes over more responsibility to them with the students acting as the teacher as they develop the ability to perform the strategies on their own. Thus, student at the same cognitive level in relevant aspects work together to develop a particular strategy that positive influences themselves in an overall lack of awareness to their own learning processes.

3.3. Relationship between the Respondents' Profile and their Employed Metacognitive Strategies

The table shows the relationship between the respondents' profile and their employed metacognitive strategies. The correlation of the variables was tested using the Chi-square formula.

Table 7. Relationship between the Respondents Profile and their Employed Metacognitive Strategies

Variables	Computed Value	Tabular Value	Decision (H ₀)	Interpretation
Sex and Metacognitive Strategies	5.677	7.815	Accept	Not Significant
Socio-economic Status and Metacognitive Strategies	14.329	12.592	Reject	Significant
Academic Performance in English and Metacognitive Strategies	21.155	16.919	Reject	Significant

As illustrated in Table 10, the result of chi-square test is grouped accordingly. The first one, which concerns sex and its relationship with metacognitive strategies acquired the computed value of 5.677. This is lower than the tabular value of 7.815 and interpreted as not significant. The increasing quantity and quality of metacognitive strategies through systematic training may be feasible as well as desirable. Meanwhile, Danuwong (2006) evaluated the differences in metacognition among females and males were not statistically significant. His research found out that boys and girls were equal in the use of metacognitive knowledge. In addition, as age increases so does the amount of knowledge stored in memory and accuracy in monitoring this knowledge, implying that the knowledge and metacognitive skills develop with age.

By looking at the data, the second variable pertaining to socio-economic status and metacognitive strategies garnered a computed value of 14.329, exceeding its tabular value of 12.592 and with an interpretation of having a significant relationship. Based on the result, it can be concluded that income distribution is a relevant factor to this study.

One of the main problems of school systems in developing countries can be due to lack of financial resources which some students find harder to progress. In homes where education is not a priority, high standards need to be set for students from birth where language skills, language exposure, reading expectations, a love of learning, and a connection can be made between academic success and future success. According to EFA Global Monitoring Report (2005), it is well established that the distribution of personal incomes in society is strongly

related to the amount of education people have had. Since, academic challenges are often deep-seeded and begin in primary and secondary school, which when left unaddressed, often leads to remediation at the postsecondary level.

Lastly, the third variable relating to the academic performance in English with metacognitive strategies, the computed value of 21.155 was determined which is greater than its tabular value of 16.919 with also a significant relationship on interpretation. This means that academics should be a top priority of freshman students, therefore learners with poor performance likely lead to academic failure.

Coutinho (2007) mentioned that metacognition as related to academic success and students, with good metacognition have good Grade Point Average. Mastery goals influence Grade Point Average through metacognition as students with mastery goals may have superior metacognitive skills and strategies that they use to mastery information. The use of superior metacognition eventually leads to enhanced Grade Point Average.

3.4. Course of Action to Encourage Students to Use Metacognitive Strategies in Learning English

Table 8. Course of Action to Encourage Students to Use Metacognitive Strategies in Learning English

Objectives	Strategies	Persons Involved	Target Date	Expected Outcome/Output
To elevate students' academic performance in line with the K to 12 learning competencies	Conducting remedial classes and regular learning monitoring strategies through providing activities and evaluative tests.	Teachers, Students Subject Coordinators and Organizations' Presidents.	At the beginning and end of the school year.	Students under Developing bracket will alleviate from the said category and have their averages improve from the previous year.
To adjust academic projects and activities to students coming from middle income family in terms of socio-economic status	Designing and promoting effective yet economical projects.	Teachers and Students.	All throughout the school year.	Students, despite their socio-economic background, will be able to submit projects which show-off their skills.
To establish awareness towards the students' metacognitive	Conducting inventory delving in students' metacognitive	Students and English Teachers.	At the beginning of the school year.	95 % of the students plan on what is to be done and how it is to be carried out.

strategies	strategies.			
To discover students' employed metacognitive strategies	Conducting workshops about metacognitive strategies.	English Division Coordinator, Teachers and Students.	Before the first grading period of instruction until fourth grading period.	95% of students who joined the seminar will be enlightened with their employed metacognitive strategies.

4. Conclusions and Recommendations

This study revealed majority of the respondents are female, belong to middle income family, have a Developing Level of academic performance in English and the respondents often employed the following metacognitive strategies. That socio-economic status and academic performance in English of the respondents are significantly related to their employed metacognitive strategies in learning English.

That pedagogical proposals set to have implications for the design of educational programs, exploring the effect of metacognitive strategies that train students' performance in different basic skills. Therefore, the learners were free to choose those strategies that they, along with their teachers, had identified as relevant to the English language. In this manner, the students should be better able to transfers consciously specific strategies into new contexts.

Based on the findings of the study with the preferred metacognitive strategy, the following recommendations are hereby given. This study shows that, the respondents use a wide range of metacognitive strategies. However, the results confirm they are not exposed to a technique that requires them to be precise in how they organize their knowledge and express it as succinctly as possible. Concept maps can be useful tools in this respect, this type of strategy particularly support pupils who have difficulties with reading or writing large amounts of text once, they have developed familiarity with them they become better practiced at organizing their conceptual understanding.

As suggested by the findings of this research, there is a need to monitor set of strategies for language learning across skills. Some of these skills are general in nature, like self-evaluative checklists which can facilitate before and during the use of language arts and self-reflect afterwards. Moreover, journals are written forms of retrospection that can provide valuable data about the learners' thought processes and performances significant to language learning use. Lastly, discussions which can give the students opportunity to pour ideas, listen to each other and build their own understanding. This will enable learners to achieve their communicative goal likewise, less support they require from the teacher. For a typical English class, teachers may endorse integrating strategy training directly into daily instructional plan and embedding strategies in various tasks whenever it seems appropriate. In this way, students can get accustomed to hone their self-questioning, conduct discussions after strategies practice, make use of learning logs wherein they can record the results of their learning strategies applications and have open-ended questionnaires in which students expressed their opinions about the usefulness of particular strategies.

The course of action proposed by the researcher may be implemented, monitored and evaluated to ensure its effectiveness in the development of metacognitive strategies of the students. Future researches could expand on the study to examine other aspects of metacognitive interventions in other disciplines.

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