

Exploring the Relationship between Learning Strategies Used in Language Learning

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Abstract

Learning a language has never been an easy task for most learners and students performance greater differ in a single classroom despite being taught by the same teacher and expose to the same materials. Therefore, the main issue for this could possibly be due to the students' own learning strategies that is causing them to excel or underperform in language learning. In the context of a Malaysian classroom, this needs to be understood as academicians are dealing with a multi-cultural group of students from various economical background that would definitely have an impact on how the learn a language. Therefore, this study aims to learn and answer the general question of how students' learning strategies affect the process of how they learn languages. More specifically, this quantitative study is done to explore motivation factors for learning among undergraduates students from Universities in Malaysia. A purposive sample of 129 participants responded to the survey which was distributed via Google form. The results indicate that metacognitive self-regulation can positively impact learning by helping individuals monitor and adjust their learning strategies, identify areas where they need to improve their understanding, and set goals to guide their study activities. This finding is important as it can assist academicians to understand why some students are not performing in language learning and design a more systematic checklist for the students to monitor their own learning process.

Keywords: Cognitive Components, Learning Strategies, Language Learning, Meta-Cognitive Self-Regulation

Introduction

Background of Study

Learning a language can be a daunting process and for most people, the process of learning and mastery of a second or foreign language has not been easy. The reason for this could possibly be one of these two; the students are not doing a very good job of learning, or, the teacher is not doing a very good job in teaching. However, the actual reason could very well be a mixture of the two. As pointed out by Oxford (1996), since every individual is unique in their own ways, their learning strategies would also be different from one person to the next. Oxford (1996) further elaborated by stating that in learning languages, one learner could learn a new vocabulary by breaking it down in components while another might learn a sentence by dividing it into smaller chunks. This implies that different students employ different strategies when learning a language.

Learning strategies, according to Cohen (2010), refers to the conscious as well as semi-conscious thoughts and behaviors that learners used to improve their knowledge and understanding of a target language. Tay (2013), on the other hand, defined learning strategies as the effort that all students need in order to process, comprehend and adopt the learning materials or content introduced within the teaching and learning processes which also includes the students individual preparation. By understanding the different learning strategies of students, educators would be able to adapt their teaching to suit the students' needs as learners individual characteristics and differences play a significant role in Second Language Acquisition (SLA) (Dörnyei, 2005).

From the various amount of research being done on the subject of learning strategies by experts of Second Language Acquisition (SLA), researches overall agree that individual learning strategies play principal roles in language learning (Amirbakzadeh, 2016). In line with this notion, it can be agreed that within the context of Malaysia, the understanding of students learning strategies is crucial to ensure the success of language learning as academicians are dealing with a multi-cultural, multi-racial society from different economic backgrounds that would definitely lead to various difficulties when it comes to learning languages.

Statement of Problem

Past studies revealed that language strategies applied tend to influence learners' language proficiency. According to Hapsari (2019), communicative competence serves as the goal in the principle of language teaching and learning.

It is undeniably challenging for language learners, especially the non-native speakers, to deal with different skills in learning language involving speaking, listening, reading and writing. Language learning strategies are not taught and thus, the effectiveness of one strategy for an individual might be ineffective for another. Indeed, some language learners are not aware of the learning strategy that is effective for them nor they apply any specific strategy in learning language. The study by Sani & Ismail (2021) reported that to become a successful learner, it is important to distinguish the influence of each strategy applied as it provides a practical direction.

Thus, exploring how the strategies used by language learners influence their learning process and discovering whether there is any significant relationship between the learning strategies could serve as the basis in directing the language learners to reach optimum learning outcomes.

Objective of the Study and Research Questions

This study is done to explore perception of learners on their use of learning strategies. Specifically, this study is done to answer the following questions;

- How do cognitive components influence learning?
- How metacognitive self-regulation influence learning?
- How resource management influence learning?
- Is there a relationship between learning strategies?

Literature Review

Learning Strategies

In language learning, the strategies used by learners are crucial in assisting them to successfully attain a second or foreign language. As cited by Montaño-González (2017); Selinker (1972) stated that there are five psycholinguistic process that shape interlanguage system which comprises “language transfer, overgeneralization of target language rules, transfer of training, strategies of communication and strategies of learning”. It is interesting to see how every learner employs preferred learning strategies to meet the objectives of language learning and the way they utilise these strategies to control the learning session as well as the use of the new language. Effective learning strategies hold the key to enhance language learning efficiency in mastering the learners’ target language (Lestari and Wahyudin, 2020). Among learning strategies commonly discussed include cognitive, metacognitive and affective strategies. Cognitive and metacognitive approaches involve mental manipulation of the language materials to be learned and the methods that allow the learners’ to have the control of their own learning process, respectively (Montaño-González, 2017), which will be the focus of this study. In addition, it is also vital for learners to enjoy the process of language learning, which is attainable not just through the learning strategies but also effective teacher-learner interpersonal relationship and learners’ psychological well-being and self-efficacy (Wang et al., 2021). This develops learners’ to be more resilient in language learning challenges and eventually, learners are able to overcome language stress and anxiety.

Past Studies on the Use of Learning Strategies

Many Studies have been done to investigate learning strategies. A study by Sukying (2021) investigated the language learning strategies used by a total of 1,523 first-year English as a Foreign Language (EFL) university students in Thailand using a questionnaire. In his study, the relationship and the difference in language learning strategies use across clusters of academic study were discovered. The findings revealed that the respondents reported a moderate use of language learning strategies in which affective strategies were used the most, followed by metacognitive, compensation, cognitive, social and memory strategies, respectively. The overall results also demonstrated that the use of learning strategies among the respondents varied based on their differences and contextual factors.

In another study, Alrashidi (2022) explored the frequency and type of language learning strategies employed by a total of 256 English major students enrolled in three universities in Saudi Arabia. In his study, the Strategy Inventory for Language Learning questionnaire (Oxford, 1990) was used to discover the impact of proficiency levels, gender and year of study on the use of language learning strategies. The findings reported that language learning strategies were used at a high level in which metacognitive strategies were the most commonly used, while memory strategies were the least commonly used. It was also discovered that the higher their proficiency levels, the more the students utilized language

learning strategies. In addition, his study also discovered the different in terms of memory use, cognitive, metacognitive, compensation and affective strategies with respect to gender in which female students were found to use them more frequently than did male students.

These past studies suggest that there are different frequency levels employed by learners in their learning strategies with respect to their discipline of studies, genders, and other contextual factors.

Conceptual Framework

This study is rooted from Wenden and Rubin's (1987) list of learning strategies. The strategies are (A) cognitive components, (B) metacognitive self-regulation and (C) resource management. When learners use cognitive strategies, they can improve their ability to better process information. They can then transfer and apply the information to other situations. When learners effectively use their cognitive components, they are therefore accommodating old information to fit into the new ones (Rahmat, 2022). Cognitive component includes the use of (i) rehearsal, (ii) organization, (iii) elaboration and (iv) critical thinking. Next, there are two main components in metacognition and they are knowledge about cognition and also regulation of cognition. Resource management involves the use of (i) environment management, (ii) effort management and (iii) help-seeking.

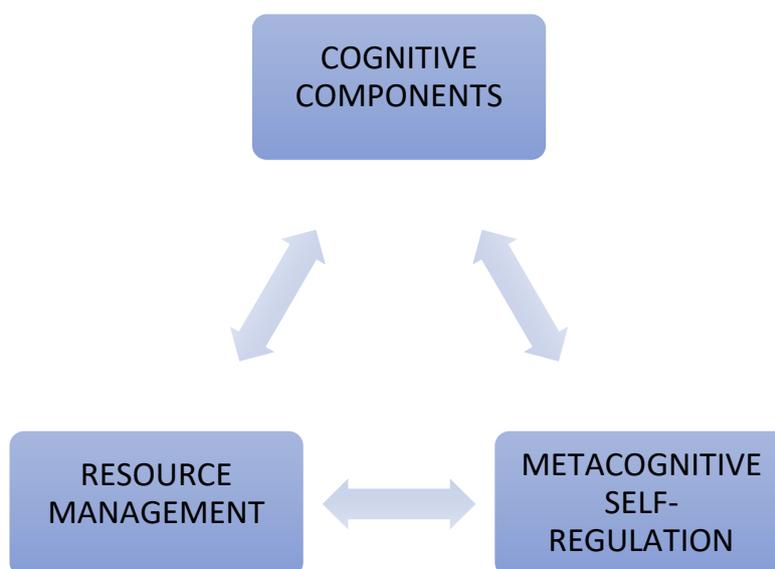


Figure 1-Conceptual Framework of the Study-
The Relationship between Learning Strategies

Methodology

This quantitative study is done to explore motivation factors for learning among undergraduates. A purposive sample of 129 participants responded to the survey. The instrument used is a 5 Likert-scale survey and is rooted from learning strategies by Wenden and Rubin (1987) to reveal the variables in table 1 below. The survey has 4 sections. Section A has items on demographic profile. Section B has 19 items on cognitive components. Section C has 11 items on metacognitive self-regulation and section D has 11 items on resource management.

Table 1

Distribution of Items in the Survey

SECT	LEARNING STRATEGIES (Wenden and Rubin ,1987)		Sub-components	No of Items	Total Item
B	COGNITIVE COMPONENTS	(a)	Rehearsal	4	19
		(b)	Organization	4	
		(c)	Elaboration	6	
		(d)	Critical Thinking	5	
C	METACOGNITIVE SELF-REGULATION				11
D	RESOURCE MANAGEMENT	(a)	Environment Management	5	11
		(b)	Effort Management	4	
		(c)	Help-Seeking	2	
					41

Table 2

Reliability of Survey

Reliability Statistics

Cronbach's Alpha	N of Items
.934	41

Table 2 shows the reliability of the survey. The analysis shows a Cronbach alpha of .934, thus, revealing a good reliability of the instrument chosen/used. Further analysis using SPSS is done to present findings to answer the research questions for this study.

Findings

Findings for Demographic Profile

Gender

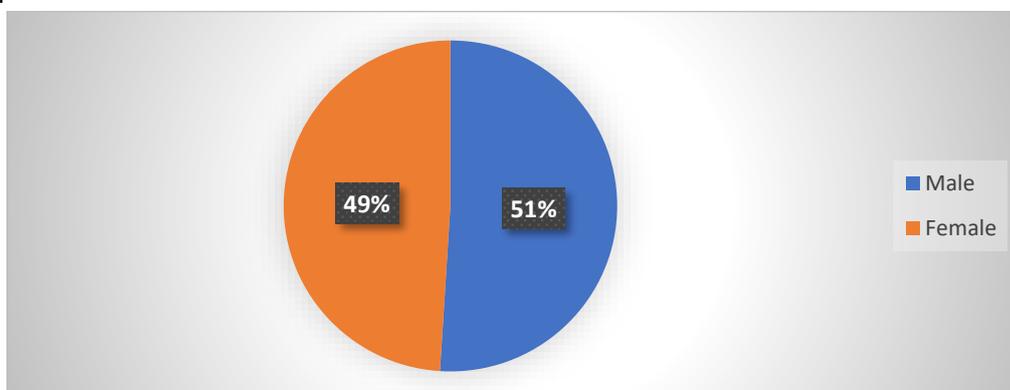


Figure 2- Percentage for Gender

The data collected through the questionnaire suggests the sample participants almost evenly split among males and females, with males comprising 51% of the group and females representing 49%. The finding suggest that gender may not be a significant factor in this study. However, it is important to note that this data alone cannot provide a complete picture of the population being studied and should be interpreted in the context of other relevant information.

Q2 Level of Study

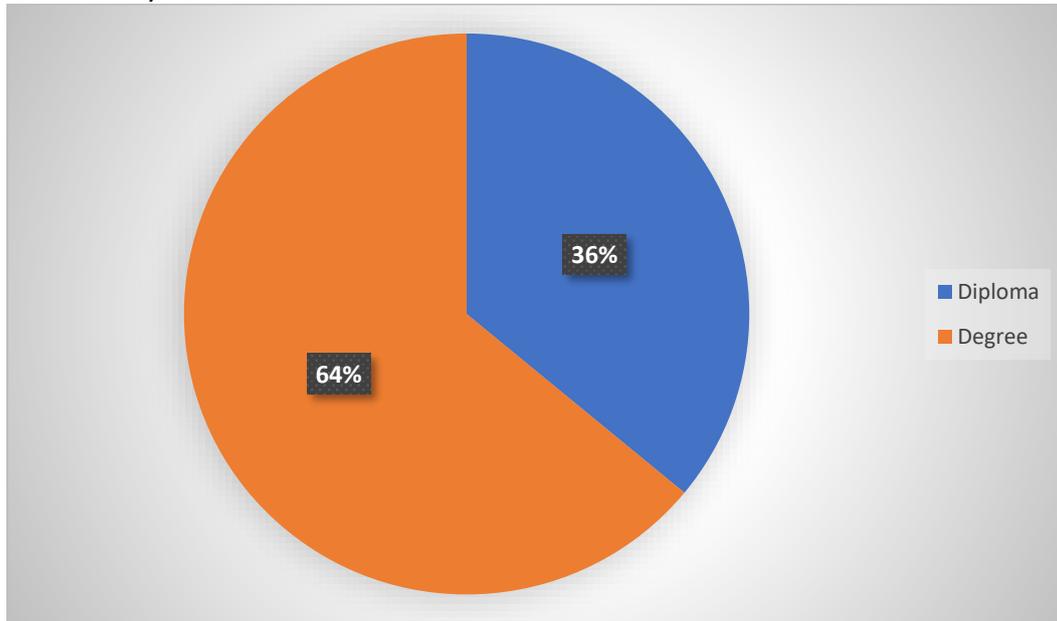


Figure 3- Percentage for Level of Study

The data collected indicates that the majority of participants are pursuing their degree, with 64% of respondent reporting are doing one. In contrast, 36% of the participants are currently pursuing their diploma. The findings may have implications in studying the respondents' attitude towards language learning. However, it is to be reminded that this data only reflects the respondents' self-reported educational background and may not accurately represent the larger population educational distribution.

Q3 Discipline

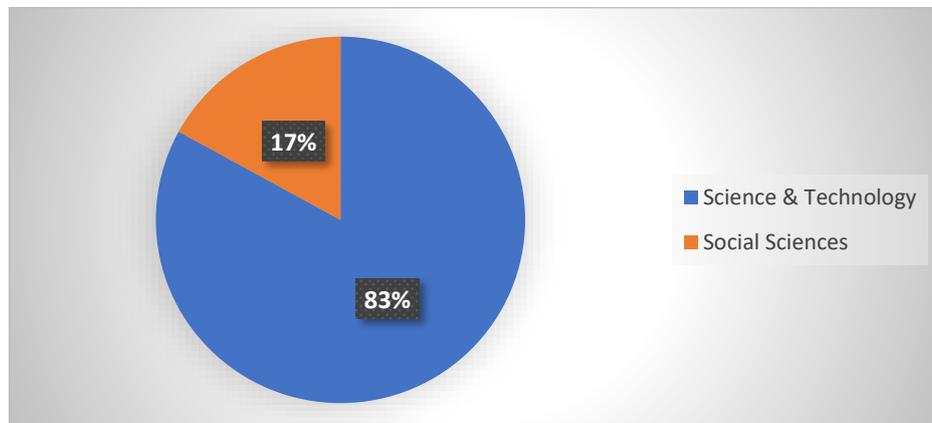


Figure 4- Percentage for Discipline

The data shows that there is a large margin between the discipline of the respondents. A significant proportion of the respondents, approximately 83% are taking Science and Technology as their learning discipline while a modest 17% of the respondents studying in the Social Sciences field. It is important to note that these data may be influenced by the respondents' cultural differences as well as other factors such as accessibility for certain disciplines.

Findings for Cognitive Components

This section presents findings to answer research question 1- How do cognitive components influence learning?

Cognitive components are further categorised into (i) rehearsal, (ii)organization,(iii)elaboration and (iv) critical thinking.

(i) Rehearsal (4 items)

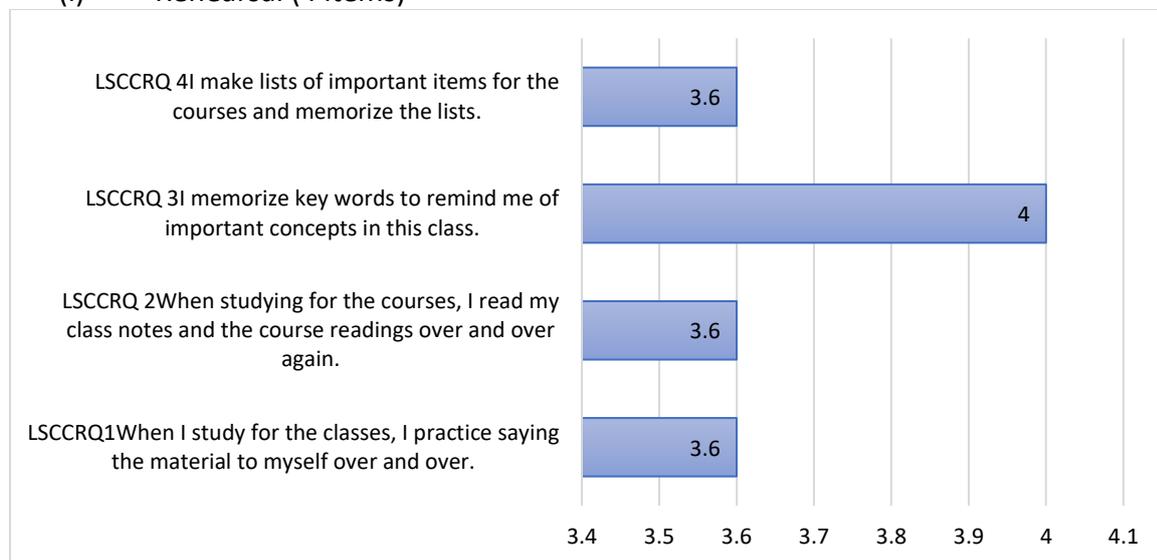


Figure 5 : Mean for Rehearsal

Figure 5 presents the mean scores for rehearsal in the cognitive components that influence learning. The highest mean is 4 with the statement 'I memorize key words to remind me of important concepts in this class.' The other three responses, 'When I study for the classes, I practice saying the material to myself over and over', 'When studying for the courses, I read my class notes and the course readings over and over again', and 'I make lists of important items for the courses and memorize the lists' all has the same mean score of 3.6.

(ii) Organization (4 items)

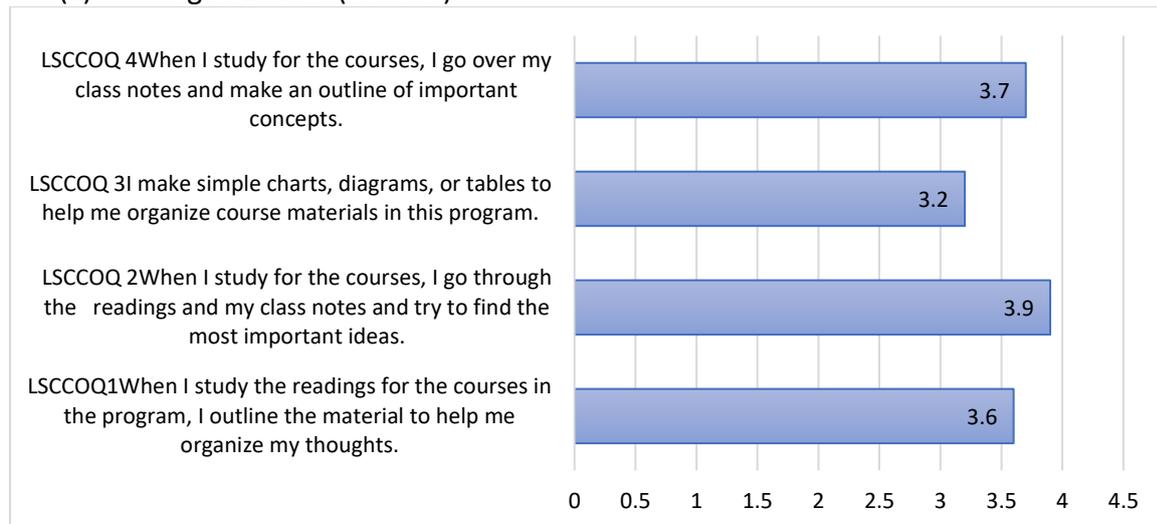


Figure 6 : Mean for Organization

Figure 6 presents the mean scores for organization in the cognitive components that influence learning. The highest mean is 3.9 with the statement ‘when I study for the courses, I go through the readings and my class notes and try to find the most important ideas’, followed by the statement ‘when I study for the courses, I go over my class notes and make an outline of important concepts’ with mean score 3.7. The lowest mean score is 3.2 for the statement ‘ I make simple charts, diagrams, or tables to help me organize course materials in this program.

(iii) Elaboration (6 items)

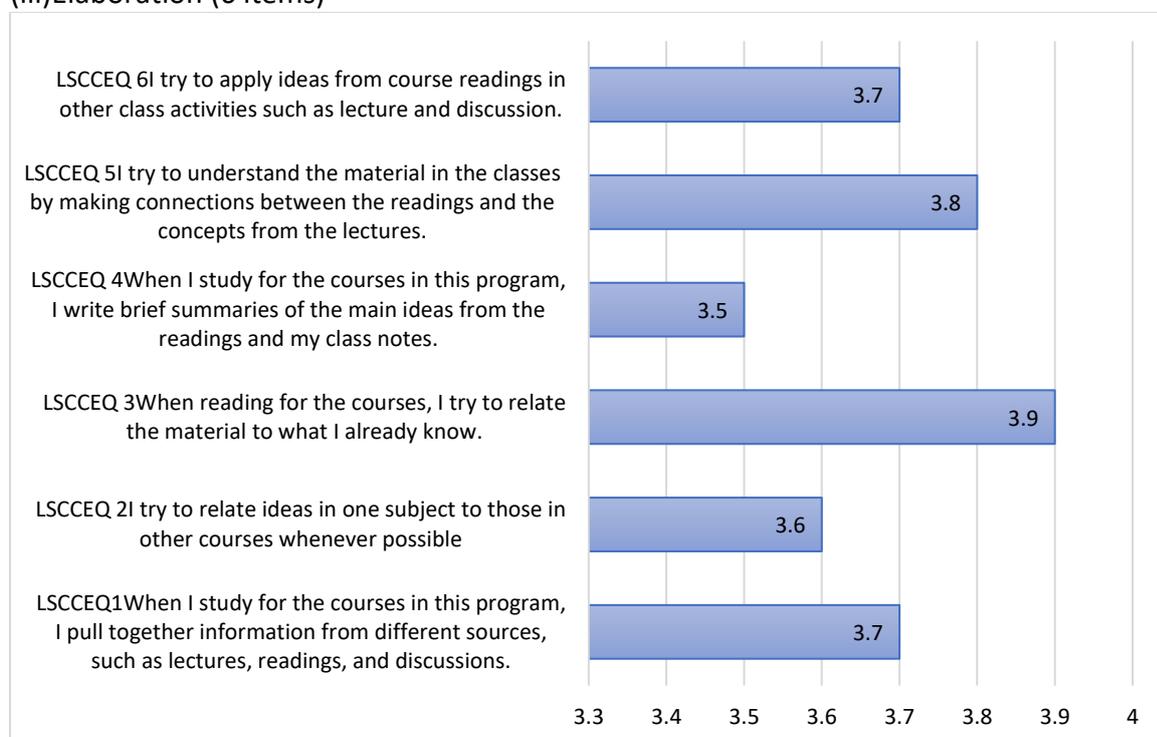


Figure 7 : Mean for Elaboration

The next cognitive component that influences language learning is categorized as 'Elaboration' which comprises six items. As shown in Figure 7, the highest mean recorded is 3.9 where respondents attempted to relate the reading materials to their background knowledge. The second highest mean of 3.8 is the fifth item in regard to making connections between the reading materials and the concepts from the lectures whenever respondents needed to understand the materials used during teaching and learning sessions. Item 4 recorded the lowest mean of 3.5 where summarizing of the reading materials and class notes is involved while studying the courses.

(iv)Critical Thinking (5 items)

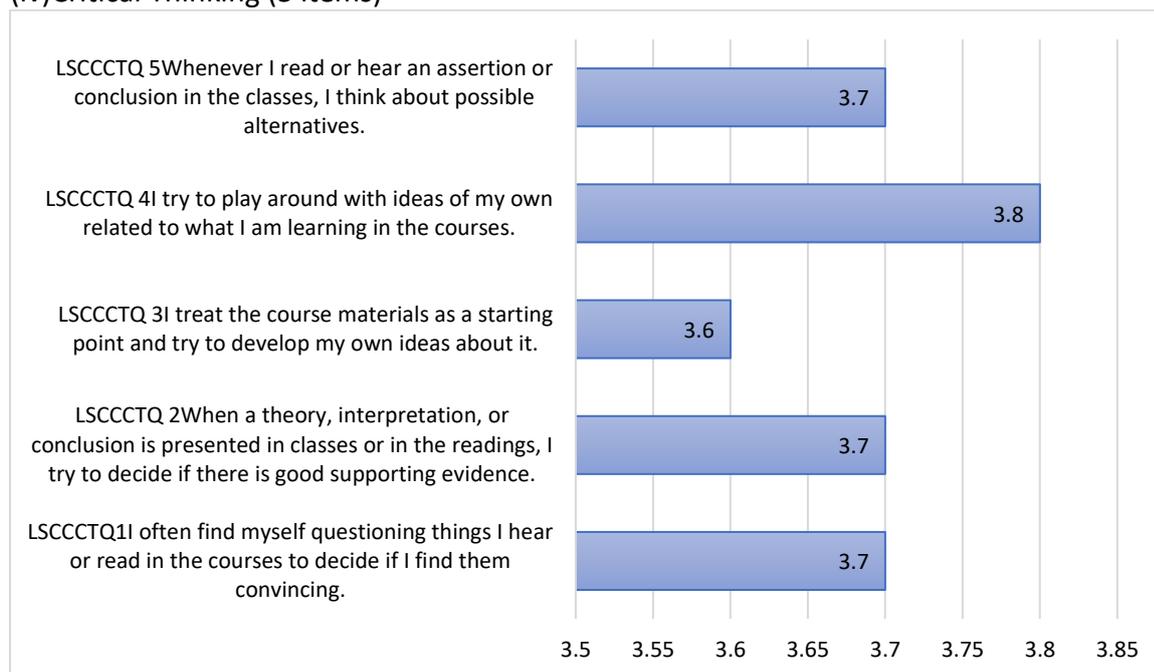


Figure 8 : Mean for Critical Thinking

Figure 8 depicts the next cognitive component that influences language learning which is categorized as 'Critical Thinking'. Out of five items under this category, the highest mean score is recorded by Item 4 in which the respondents made attempts to play around with their own ideas that are related to the learning. Interestingly, Items 1, 2, and 5 obtained a similar mean score of 3.7 which depict that the respondents made attempts to evaluate the knowledge learned as well as looking for possible alternatives before making any related decision or conclusion. Meanwhile, Item 3 recorded the lowest mean score where the course materials are used as a starting point for idea development.

Findings for Metacognitive Self-Regulation

This section presents findings to answer research question 2- How metacognitive self-regulation influence learning?

(iii) Metacognitive Self-Regulation (11 items)

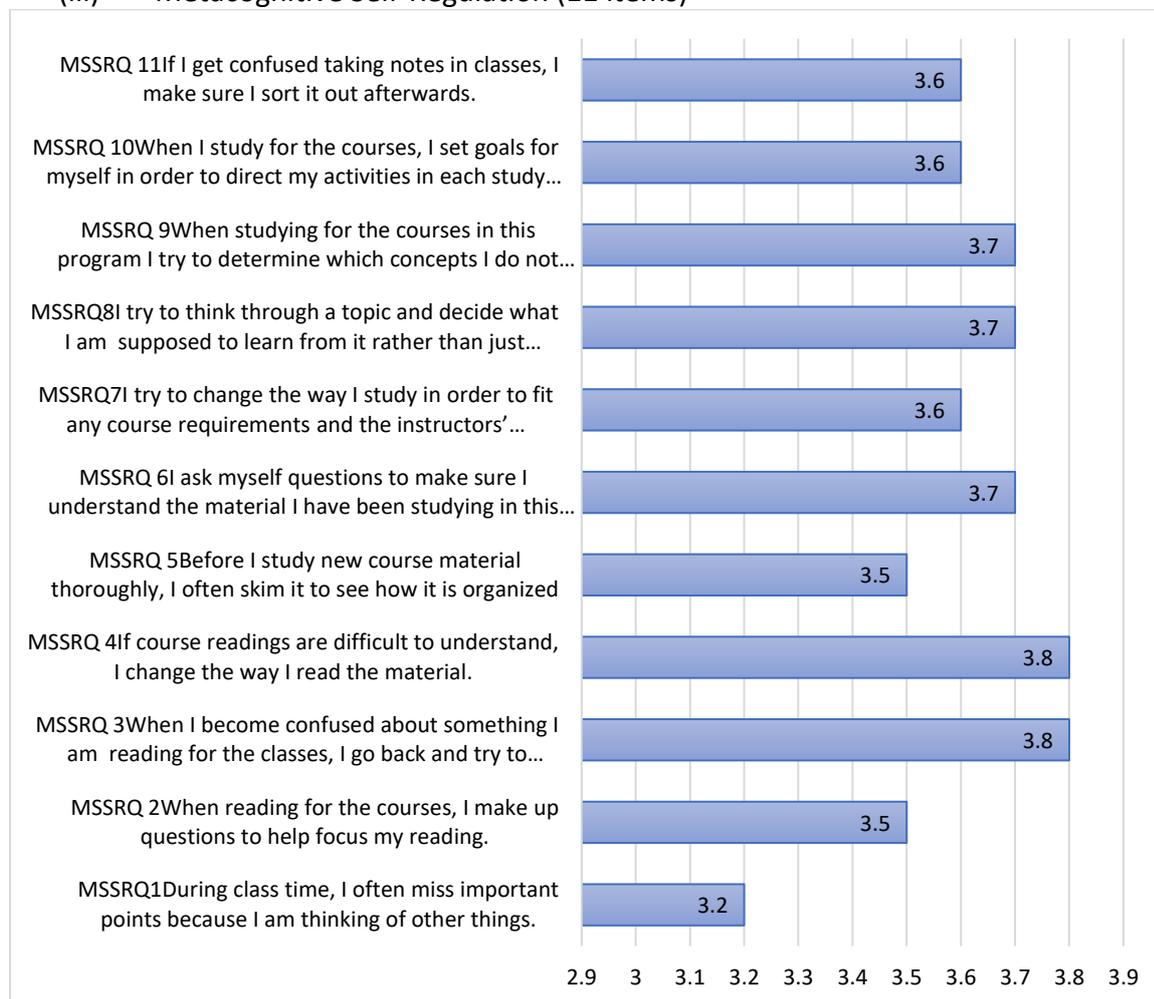


Figure 9 : Mean for Metacognitive Self- Regulation

Metacognitive self-regulation refers to the individuals' ability to monitor and control their own learning process. The data presented in figure 9 suggests that respondents who engage in metacognitive self-regulation are more likely to be effective learners. For example, respondents who make up questions to focus their reading, go back to figure out confusing material, and changing their reading strategies tend to have higher mean scores, indicating better meta cognitive self-regulation. Furthermore, respondents who set goals for themselves, ask questions to ensure understanding, and adapt their study strategies tend to have higher mean score on the questionnaire. These results suggest that metacognitive self-regulation can have a positive influence of learning by helping individuals to monitor and adjust their learning strategies, identify areas where they need to improve their understanding, and set goals to guide their study activities.

Findings for Resource Management

This section presents findings to answer research question 3- How resource management influence learning?

C. RESOURCE MANAGEMENT COMPONENT (11 items)

(a)Environment Management (5 items)

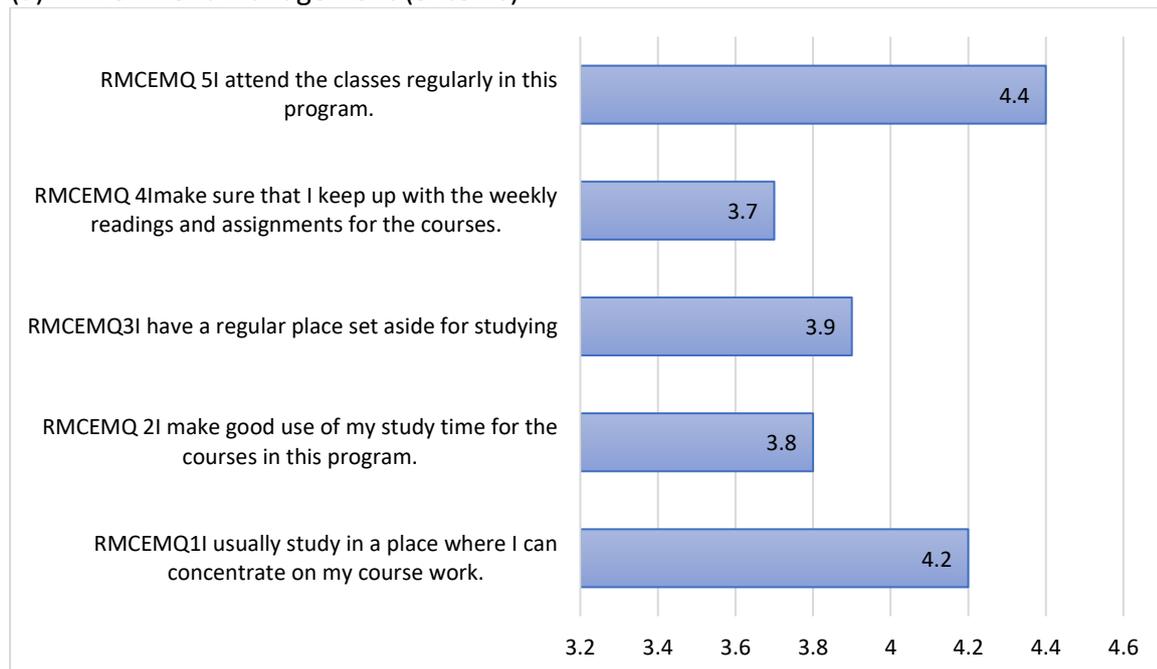


Figure 10 : Mean for Environment Management

Figure 10 shows the mean scores for environment management in the resource management component with the highest score 4.4 for the statement ‘I attend the classes regularly in this program, followed by 4.2 with the statement ‘I usually study in a place where I can concentrate on my coursework’. The lowest mean is 3.7 which represents the group of learners who keep up with the weekly readings and assignments for the courses.

(b)Effort Management (4 items)

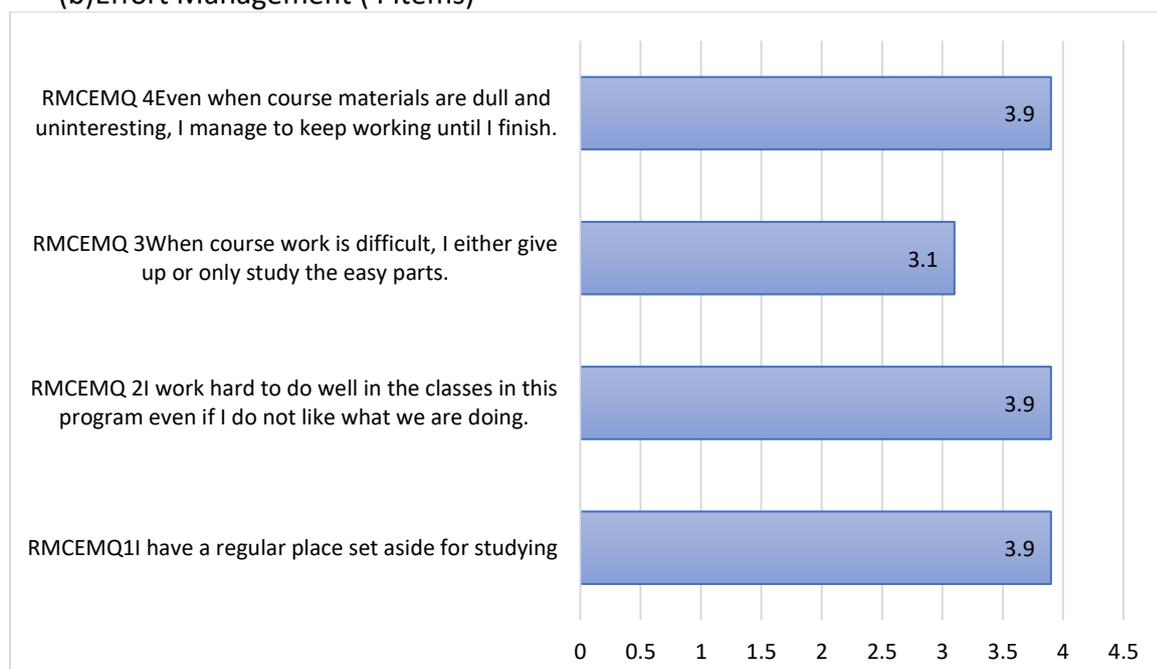


Figure 11 : Mean for Effort management

Four items are included under 'Effort Management' category and interestingly, three items (1, 2 and 4) recorded the same highest mean which is 3.9, as shown in Figure 11. Item 1 touches on having a regular studying environment, Item 2 is on working hard despite having less interest in the courses and Item 4 is similar to Item 3 where respondents managed to keep working to complete the course regardless of having less interest. The lowest mean recorded is 3.1 with the statement "when course work is difficult, I either give up or only study the easy parts".

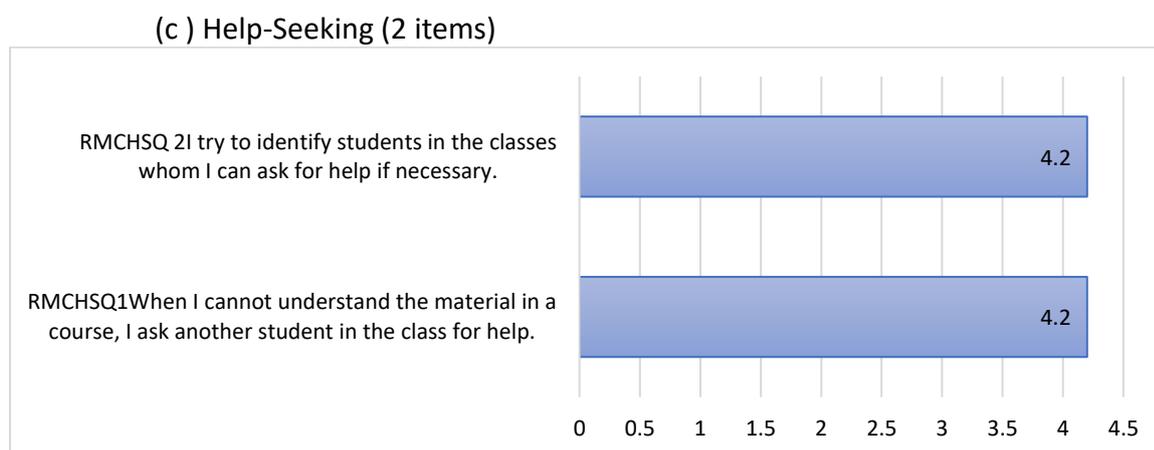


Figure 12 : Mean for Help-Seeking

As shown in Figure 12, there are two items included under 'Help Seeking' category, which obtained a similar mean score of 4.2. Item 1 depicts that the respondents preferred asking their peers whenever they are in need of assistance to understand classroom lessons, while Item 2 represents respondents' preference towards identifying peers who are able to assist them whenever an assistance is needed.

Findings for Relationship across Types of Learning Strategies

This section presents findings to answer research question 4- Is there a relationship between learning strategies?

To determine if there is a significant association in the mean scores between metacognitive, effort regulation, cognitive, social and affective strategies data is analysed using SPSS for correlations. Results are presented separately in table 3, 4, 5 and 6 below.

Table 3

*Correlation between Cognitive Components and Metacognitive Self-regulation***Correlations**

		TOTALMEAN COGNITIVE	TOTALMEAN METACOGNI TIVE
TOTALMEANCOGNITIVE	Pearson Correlation	1	.731**
	Sig. (2-tailed)		.000
	N	129	129
TOTALMEANMETACOGN ITIVE	Pearson Correlation	.731**	1
	Sig. (2-tailed)	.000	
	N	129	129

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows there is an association between cognitive components and metacognitive self-regulation. Correlation analysis shows that there is a high significant association between cognitive components and metacognitive self-regulation ($r=.731^{**}$) and ($p=.000$). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between cognitive components and metacognitive self-regulation.

Table 4-

*Correlation between Cognitive Components and Resource Management***Correlations**

		TOTALMEAN COGNITIVE	TOTALMEAN RESOURCEM ANAGEMENT
TOTALMEANCOGNITIVE	Pearson Correlation	1	.646**
	Sig. (2-tailed)		.000
	N	129	129
TOTALMEANRESOURCE MANAGEMENT	Pearson Correlation	.646**	1
	Sig. (2-tailed)	.000	
	N	129	129

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4 shows there is an association between cognitive components and resource management. Correlation analysis shows that there is a high significant association between cognitive components and resource management ($r=.646^{**}$) and ($p=.000$). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This

means that there is also a strong positive relationship between cognitive components and resource management.

Table 5

Correlation between Metacognitive Self-regulation and Resource Management

		TOTALMEAN METACOGNI TIVE	TOTALMEAN RESOURCEM ANAGEMENT
TOTALMEANMETACOGNI TIVE	Pearson Correlation	1	.653**
	Sig. (2-tailed)		.000
	N	129	129
TOTALMEANRESOURCE MANAGEMENT	Pearson Correlation	.653**	1
	Sig. (2-tailed)	.000	
	N	129	129

** . Correlation is significant at the 0.01 level (2-tailed).

Table 4 shows there is an association between metacognitive self-regulation and resource management. Correlation analysis shows that there is a high significant association between metacognitive self-regulation and resource management ($r=.653^{**}$) and ($p=.000$). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between metacognitive self-regulation and resource management.

Conclusion

Summary of Findings and Discussions

The study presents findings based on a questionnaire that was administered to a sample of respondents which was almost evenly split among males and females, and the majority of respondents were pursuing their bachelor degree in science and technology programs. The study also examined cognitive components that influence language learning, such as rehearsal, organization, elaboration, critical thinking, and meta-cognitive self-regulation. The results indicate that meta-cognitive self-regulation can positively impact learning by helping individuals monitor and adjust their learning strategies, identify areas where they need to improve their understanding, and set goals to guide their study activities. For instance, most respondents opted for memorising keywords of the important concepts they have learned and often relate the theories or concepts to their background knowledge. In any cases where confusion weigh in during the learning session, they would attempt in re-reading the materials or even change their learning environment by setting a comfortable place to study as well as ensuring to attend classes regularly. It was also found that the respondents would make effort to complete the courses despite the lack of interest in topics learned in classes and approach their coursemates to seek help in understand the learning materials more effectively. In a study by Chamot and O'Malley (1994), they found that learners who were able to effectively use meta-cognitive strategies such as planning, monitoring, and evaluating

their own learning were more successful in second language learning. In addition, the study also highlights the importance of environment and effort management, as well as help seeking behaviours in language learning. Hence, this also supports the positive correlation between cognitive components and metacognitive self-regulation reported in this study.

(Pedagogical) Implications and Suggestions for Future Research

The study suggests several implications for future research. Focusing on developing and encouraging metacognitive self-regulation skills in language learners, as this can help learners monitor and adjust their learning strategies. Secondly, future study should create a conducive learning environment that supports language learning and fosters help-seeking behaviors among learners. Future research could explore the relationship between metacognitive self-regulation and language proficiency through longitudinal studies and investigate the effectiveness of interventions aimed at improving metacognitive self-regulation skills in language learners by targeting specific aspects of metacognitive self-regulation.

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