# Exploring Factors for Learning Through Social Cognitive Theory

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**Abstract**
This quantitative study is done to explore factors for learning Mandarin among undergraduates. A purposive sample of 168 participants responded to the survey. The participants are non-native speakers who were learning Mandarin language as a foreign language. They consisted of 48% diploma students and 52 % of degree students in a Malaysian public university. The instrument used is a 5 Likert-scale survey and is rooted from learning strategies by (Wenden and Rubin, 1987). The survey has 4 sections which include items on participants' demographic profile, cognitive components, metacognitive self-regulation component and resource management component. Findings of the studies show that factors for language learning for instance attention, reproduction, retention and motivation show significant correlation among each others which indicated that these factors have significant influence on Mandarin language learning among learners. However, help-seeking in motivation factor is the strategies most preferred by learners to improve language learning.
**Keywords**: Mandarin Language, Learning Strategies, Social Cognitive Theory

**Introduction**
*Background of Study*
In the first part of the twentieth century, behaviorism became the dominant learning theory. According to behaviourists, all learning is the outcome of associations made via conditioning, which occurs through environmental interaction. Environmental stimuli, according to behaviourists, shape human actions (Krapfl, 2016). Bandura agrees with classical and operant conditioning behaviourist learning theories, but he believes that external and environmental conditioning cannot explain all types of learning. Bandura claimed that learning can also take

place through observation. People can learn through seeing another person's actions as a model. According to Bandura's social cognitive theory, learning is a cognitive activity that occurs in a social context (Harare, 2016).

In the context of language learning in Malaysia, particularly in learning a foreign language, numerous research has been done based on Oxford taxonomy of Language Learning Strategies to determined how students learn a new language successfully (Gan et al., 2022; Tan et al., 2019; Habók & Magyar, 2018). Another study has been conducted by Min et al (2022) to explore how the learning strategies components in Weden and Rubin (1987) namely cognitive components, metacognitive self- regulation and resource management can help the learners to learn Mandarin as a foreign language. However, many studies have not research on the social cognitive aspects of foreign language learners through other factors proposed by Bandura (1977b, 1986) such as learners' attention, retention, reproduction, and motivation as a whole. Most researchers tend to view second and foreign language learning as a cognitive process (Davis, 1995; Long, 1997). The cognitive theories acknowledge that learning is an internal process that calls for the processing of information and ideas (O'Malley & Chamot, 1990). Atkinson believes that language learning is not merely cognitive, it is also "a social practice, a social accomplishment, a social tool. Research from the social cognitive approach has significant benefits for language learners. Teachers can use their understanding of social cognitive learning strategies to support their students' language development and communicative ability. Cohen (1998) stresses the significance of the teacher's role in providing students with learning strategies training. He claims that this training can help students become more fluent in their target language and pinpoint their learning strengths and weaknesses. Students may be better equipped to handle any language activity and related scenario after various learning strategies are taught to them.

**Statement of Problem**
Since the COVID-19 epidemic has greatly affected the teaching and learning environment in Malaysia, Malaysia Higher Education Institutions changed the education delivery from face to face to online learning mode. On the positive side, education in Malaysia has undergone a tremendous transformation which learners had never experienced before by incorporating technology into the learning process (Siron, et al., 2020). While the world is recovering from COVID-19 outbreak, Malaysia Higher Institutions currently implementing hybrid learning mode by combining both face to face and online delivery modes. Drastic change caused educators and students to struggle adapting with the teaching and learning challenges that existed during the post COVID-19 epidemic. Studies mentioned that educators lacked online teaching experience, online content preparation, technology literacy (Bao, 2020; Zizka & Probst, 2022). Meanwhile, students were emotionally affected by high levels of technological anxiety (Siron, et al., 2020) and learning anxiety (Abdul et al., 2021; García-González, 2021). Futhermore, environment factors such as home, meeting with peers and disruption of live stream with lecturers have caused poor academic performance among students (Nassr et al.,2020). Instead of stating external factors, learners themselves felt stressed and low self-efficacy with the quantity of assessment because they were not ready to perform in their academic assessments (Adi, 2020). Chien et. al (2021) revealed that learners were more oriented towards attitudinal motivation in learning Mandarin as a foreign language. Previous studies emphasize social influence and its emphasis on external and internal social. However, lack researchers investigate the extent to which the factors of language learning into actual

behavior of the learners have and if one is more influential than another. Sokman et al (2022) stated that the learner-to-instructor and the learner-to-content interaction are considered significant elements that may make or break the learning environment.

By adapting Social Cognitive Theory, there are three factors that could affect how the learners perceive the learning and teaching process differently in this post COVID-19 outbreak as a way of ensuring learning Chinese effectively. Hence, this study aims to investigate the factors that influence learners in learning Mandarin in a hybrid learning environment. Specifically, this study aims to answer how social cognitive theory is portrayed while learners learn Mandarin by the following research questions.
RQ1: How does attention and reproduction influence learners learning Mandarin?
RQ2: How does retention influence learners learning Mandarin?
RQ3: How does motivation affect learners learning Mandarin?

**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 attention and reproduction influence language learning?

● How does retention influence language learning?

● How does motivation influence language learning?

● Is there a relationship between all factors in language learning?

**Literature Review**
Language Learning Strategies
Language learning strategies (LLSs) is defined as an essential step taken by learners to have a better language learning experience (Gan, 2022). However, every learner has an unique learning style, and differs from one individual to another. In order to determine students' LLSs, a number of models and tools for measuring learning strategies have been developed. O'Malley, Chamot and their colleagues (Chamot & O'Malley, 1987; O'Malley et al., 1985a) were devoted to studying the use of learning strategies by ESL learners in the US Chien (2010). According to the point of view of O'Malley & Chamot, Learning strategies are special thoughts or behaviours that individuals use to understand, learn or retain new information Božinović (2017). O'Malley, Chamot and their colleagues divided language learning strategies into three main categories : metacognitive, cognitive, and social affective. Metacognitive strategies refer to learners' planning their learning, thinking about the learning process, monitoring their own production and evaluating outcomes of their own learning Chien (2010). Cognitive strategies are more limited to specific learning tasks and involve more direct manipulation of the learning material itself (Brown, 2007). Socio Affective strategies have to do with social-mediating activity and interacting with others (Brown, 2007). LLS was established by Rubin and Naiman (1975) and later was extended by (Oxford, 1990; Gan, 2022). Oxford (1990) classified language learning strategies into two groups, that is direct learning strategies and indirect learning strategies. Direct Learning Strategies consist of memory, cognitive and compensation. Direct strategies require mental processing of the target language, and learners can use those specific procedures to improve their language skills (Cheng, 2019). Indirect Learning Strategies consist of metacognitive, affective, and social strategies. These

strategies include factors such as planning and evaluating one's learning, self-encouragement and cooperating with others (Cheng, 2019). Oxford's LLSs classification can be considered the most famous and widely used because it is detailed and she comes up with a very useful survey which is Strategy Inventory Language Learning (SILL) that is fundamental for teachers and educators in determining and identifying the students preferred LLSs (Adan, 2021).

*Past Studies on the Use of  Language Learning Strategies*
There have been numerous studies conducted to study the use of language learning methodologies on foreign languages, including Mandarin. Thamlin (2021); Yip (2021) did a study, specifically on learning strategies for Mandarin vocabulary and the New Hanyu Shuiping Kaoshi Standard at Level 3.

The study by Thamrin (2021) is being conducted to investigate the language learning strategies used by college students in studying Mandarin as a foreign language in order to achieve the New HSK (Hanyu Shuiping Kaoshi) standard at level 3, specifically what tactics students employed in the learning. The study used a qualitative method using a descriptive case study method, with 30 students participating. According to the research findings, two techniques were frequently used by students: direct learning strategies consisting of memory, cognition, and compensatory, and indirect learning strategies comprising of meta-cognitive, affective, and social.

Next, the study by Yip et al (2021) carried out the study  to examine Mandarin vocabulary size and vocabulary learning strategies of University Science Islam Malaysia's (USIM) Level 3 learners. The researcher used a questionnaire method to perform an investigation with 196 respondents. The finding revealed that learners used cognitive techniques the most and metacognitive methods the least. The result of this study strongly recommend that systematic vocabulary acquisition methodologies should be extensively used to help learners increase the amount of their Mandarin vocabulary.

**Conceptual Framework**
The framework of this study is rooted from Bandura's (1977) social learning theory. The theory states that learning takes place through four main conditions and they are attention & reproduction, retention and motivation. Bandura's (1977) theory is then scaffolded onto Wenden & Rubin's (1987) learning strategies comprising of cognitive components, metacognitive self-regulation and resource management to reveal the conceptual framework shown in figure 1. In the context of this study, the Bandura's (1077) theory is used to explain how learners learn a language. According to Rahmat et.al (2022), the language learning strategies that learners use is influence by many factors such as learners' use of strategies, and also the surrounding environment.  In the context of this study, attention and reproduction in learning is measured by cognitive components such as (i) rehearsal, (ii) organisation, (ii) elaboration and (iv) critical thinking, Next, retention is measured by metacognitve self-regulation. Finally, motivation is measured by resource management through (i) environment management, (ii)effort management, (iii) help-seeking, and (iv) help-seeking.
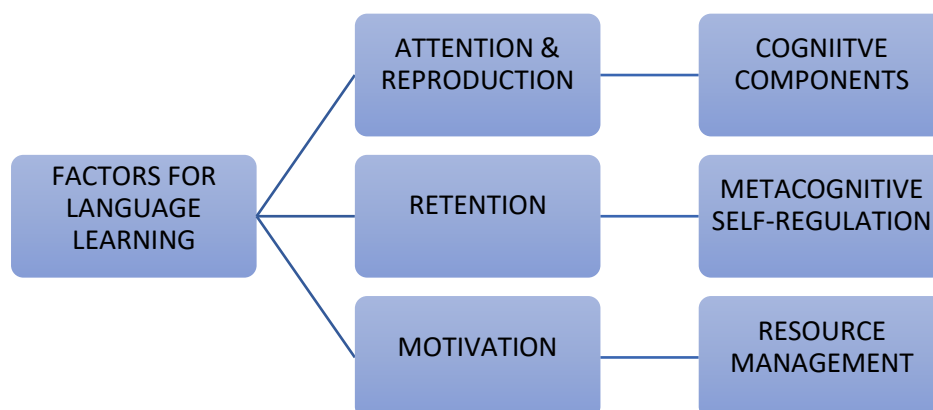
Figure 1- Conceptual Framework of the Study-
Exploring Factors for Learning through Social Cognitive theory

**Methodology**

This quantitative study is done to explore motivation factors for learning among undergraduates. A purposive sample of 168 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*

|  | SOCIAL LEARNING THEORY (Bandura,1977) | LEARNING STRATEGIES (Wenden & Rubin, 1987) |  | SUB-COMPONENTS |  |  |
|---|---|---|---|---|---|---|
| A | ATTENTION & REPRODUCTION | COGNITIVE COMPONENTS | (a) | Rehearsal | 4 | 19 |
|  |  |  | (b) | Organization | 4 |  |
|  |  |  | (c) | Elaboration | 6 |  |
|  |  |  | (d) | Critical Thinking | 5 |  |
|  |  |  |  |  |  |  |
| B | RETENTION | METACOGNITIVE SELF-REGULATION |  |  |  | 11 |
|  |  |  |  |  |  |  |
| C | MOTIVATION | 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 |
|---|---|
| .959 | 41 |

Table 2 shows the reliability of the survey. The analysis shows a Cronbach alpha of .959, 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*
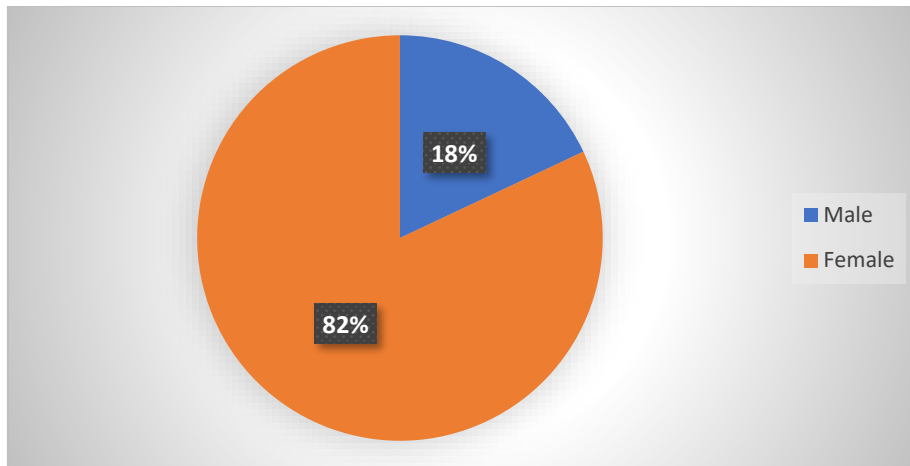Findings for Demographic Profile
Q1.Gender



Figure 2- Percentage for Gender

Figure 2 shows the gender of the participants of the research. There were 168 participants who responded to the survey, 138 responses were female and 30 responses were male.
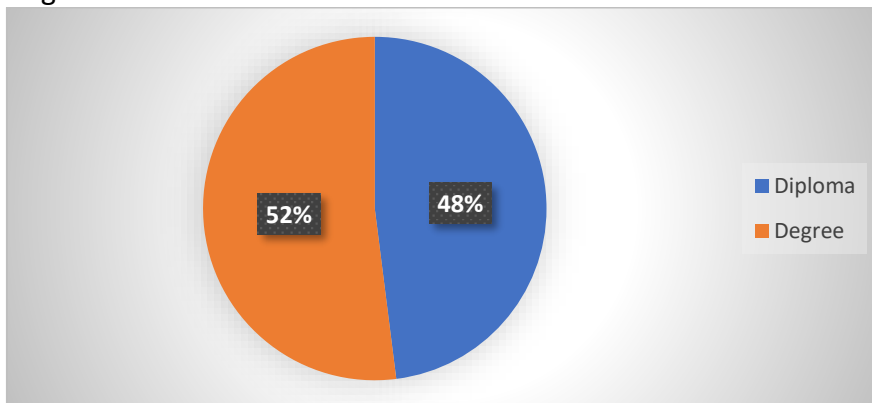
Q2 Level of Program



Figure 3- Percentage for Level of program

Figure 3 shows the level of programme of the participants. 48% of participants were diploma students and 52% of participants were degree students.

*Findings for Attention & Reproduction*
This section presents data to answer research question 1- How do attention and reproduction influence language learning? In the context of this study, attention and reproduction is measured by the cognitive components through (i) rehearsal, (ii)organization, (iii) elaboration and (iv) critical thinking.

*Cognitive Components* (19 items)
Following the respondents' feedback pertaining to the factors for learning through factors for learning through social cognitive theory. 19 items from the components in social cognitive theory such as rehearsal, organization, elaboration and critical thinking were listed to examine the factors of learning Mandarin.
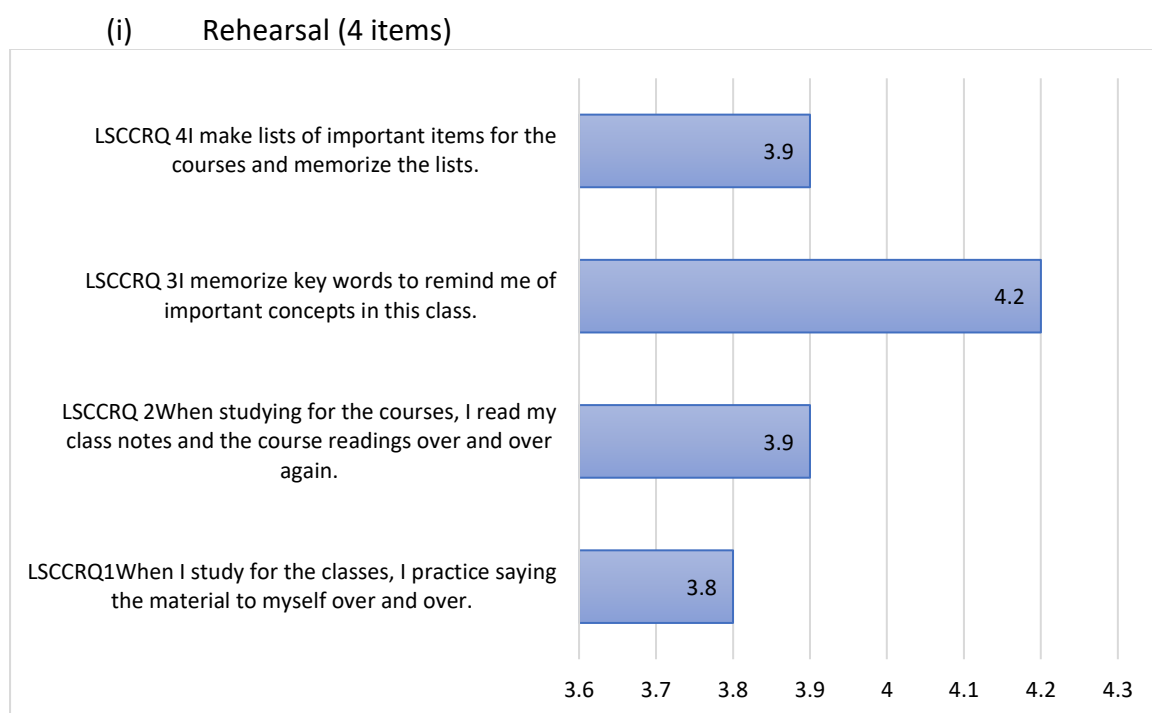
(i)      Rehearsal (4 items)



Figure 4-  Mean for Rehearsal

In figure 4, it is reported that LSCCRQ 3-gained the highest mean (M=4.3), followed by LSCCRQ 2 and LSCCRQ 4 have achieved (M=3.9) respectively. LSCCRQ1 has the lowest mean (M=3.8). This result shows that learning Mandarin could become more easier if learners revise what they have learned before again and again.
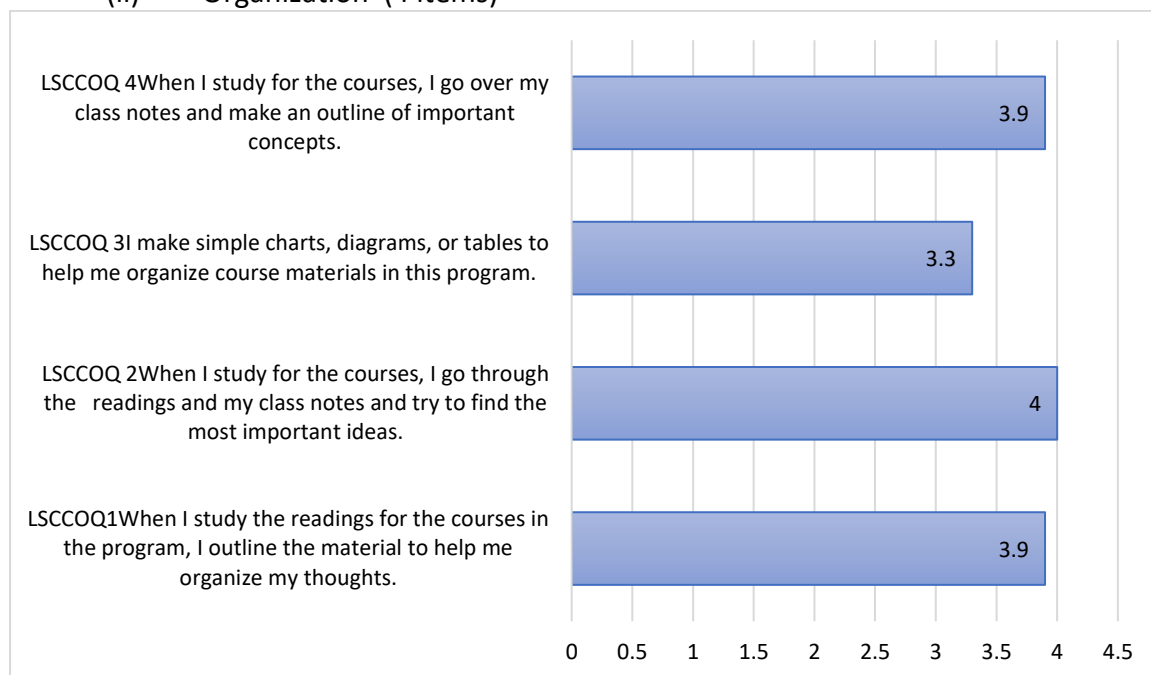
(ii)    Organization  (4 items)



Figure 5 -Mean for Organization

As shown in Figure 5 Organization, the mean value of all the items are above 3.00. LSCCOQ2 has the highest mean(M= 4.00), followed by item labelled  LSCCOQ1 and LSCCOQ 4 with (M=3.90), and LSCCOQ3 has the lowest mean (M=3.30) . Respondents who master organization skill could enable them to learn Mandarin. The result revealed that most of the respondents are the medium user of organization skill.

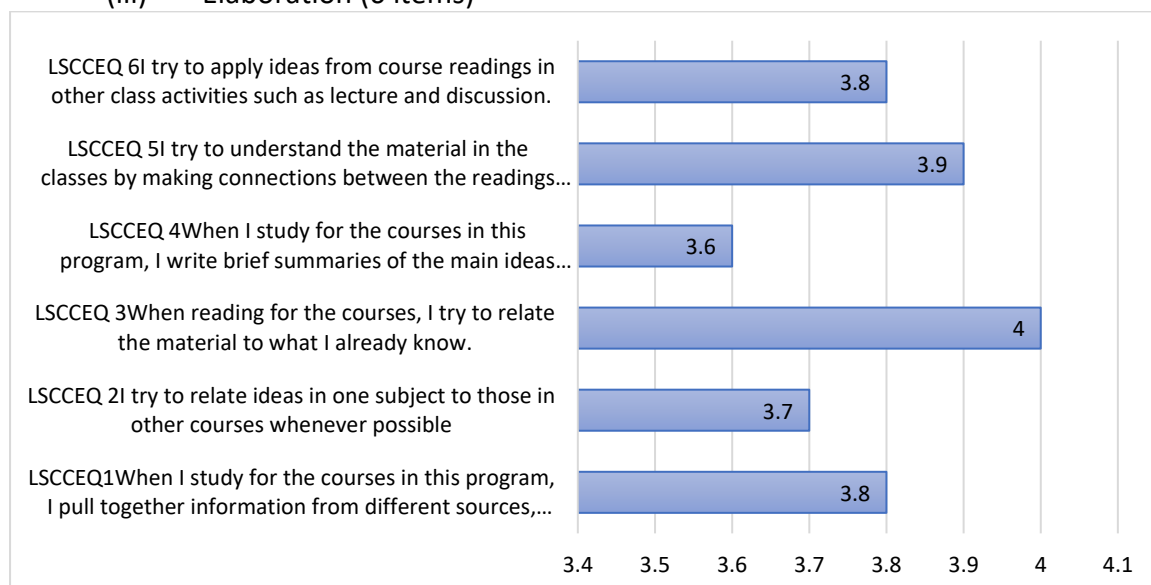(iii)    Elaboration (6 items)



Figure 6 -Mean for Elaboration

Figure 6 displays the mean for Elaboration of  cognitive components . The study's findings, undergraduates choose LSCCEQ3 (M=4) for learning Mandarin. The LSCCEQ 5

(M=3.9) came next. Yet, learning Mandarin is indicated by LSCCEQ 4 (M=3.6). However, it can be claimed that the overall responses lean toward Agree because all of the means for the 6 items of Elaboration are higher than 3.

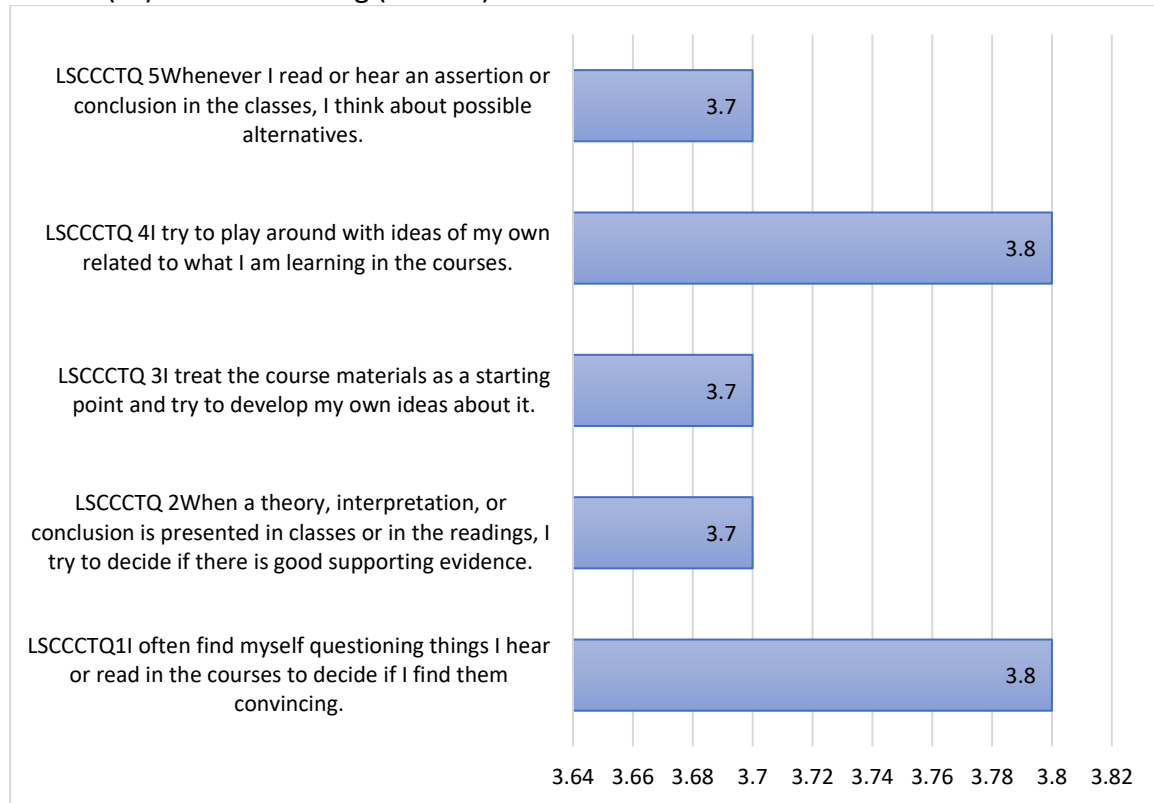### (iv ) Critical Thinking (5 items)



Figure 7 -Mean for Critical Thinking

The mean for critical thinking is shown in Figure 7. The findings indicate that students consider LSCCCTQ1 and LSCCCTQ4 (M=3.8) as the best resources for learning Mandarin. LSCCCTQ 2, LSCCCTQ 3, and LSCCCTQ 5 (M=3.7) came after it.

*Findings for Retention*
In the context of this study, retention is measured by metacognitive self-regulation.
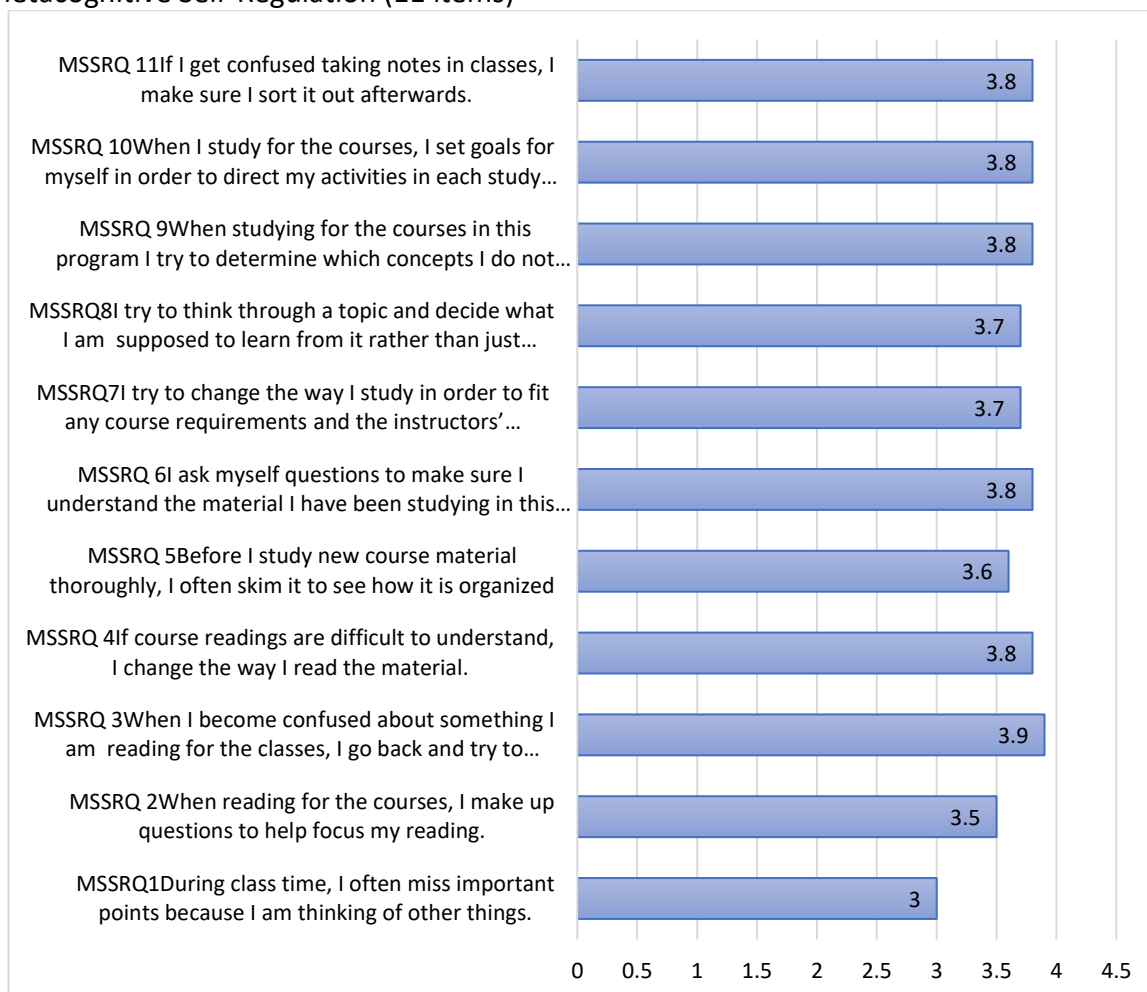
Metacognitive Self-Regulation (11 items)



Figure 8 -Mean for Metacognitive Self-Regulation

According to Figure 8, MSSRQ 3 has the highest mean (M= 3.90), followed by 5 items labelled MSSRQ 4, MSSRQ 6, MSSRQ 9, MSSRQ 10 and MSSRQ 11 with (M=3.980), and MSSRQ 1 has the lowest mean (M=3.00).

*Findings for Motivation*
In the context of this study, motivation is measured by resource management through (i) environment management, (ii) effort management, and (iii)help-seeking.
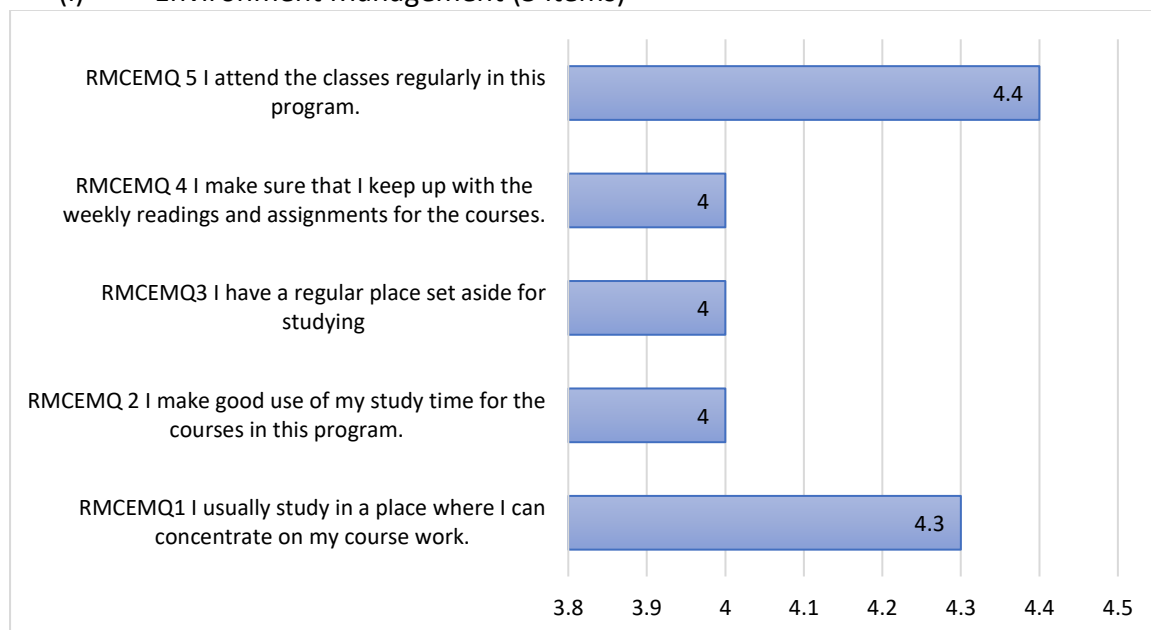
(i)      Environment Management (5 items)



Figure 9 -Mean for Environment Management

In  Figure 9, it is reported that RMCEMQ5 gained the highest mean (M=4.4), followed by RMCEMQ1 has achieved (M=4.3) respectively. RMCEMQ, RMCEMQ3 and RMCEMQ4 have the lowest mean (M=4).

(ii)Effort Management (4 items)



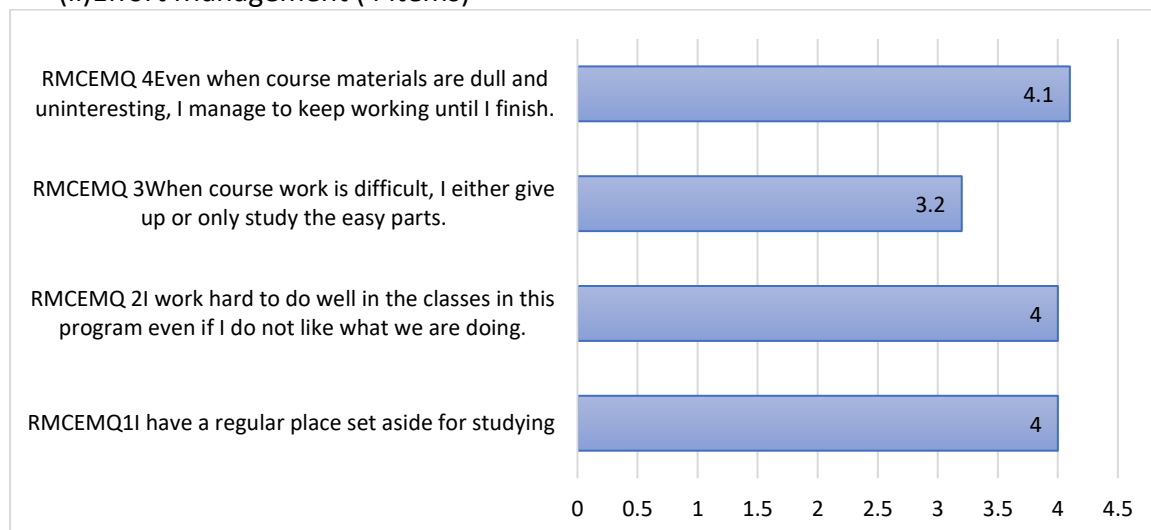Figure 10 -Mean for Effort Management4.3

Figure 10 revealed the elements of effort management ranging from 3.00 to 5.00. The mean score of both items labelled RMCEMQ1 and RMCEMQ2 has (M=4.00) respectively. The item labelled RMCEMQ has the highest mean (M=4.1) which is most preferred by respondents in learning Mandarin. However, RMCEMQ1 has the lowest mean (M=3.2).
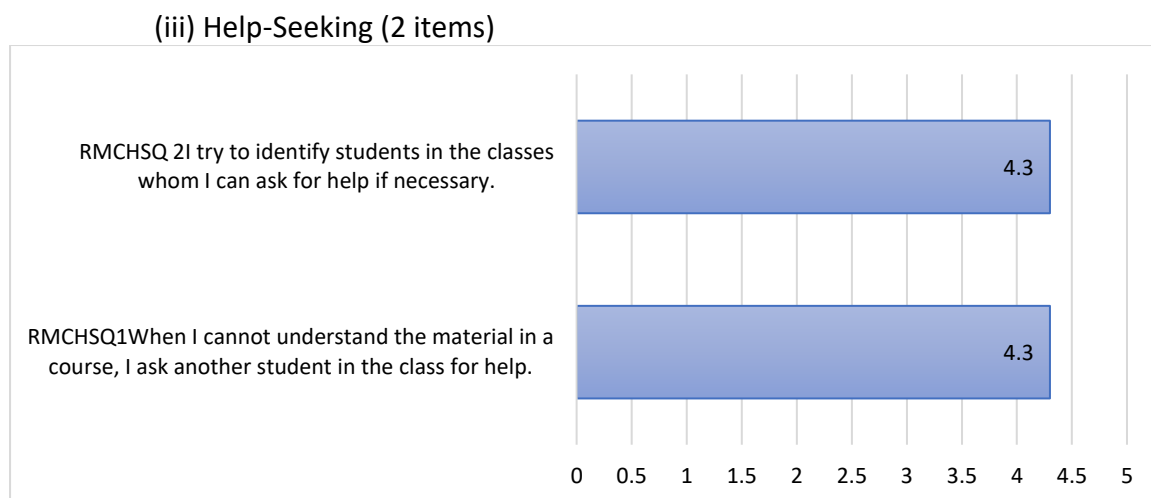
(iii) Help-Seeking (2 items)



Figure 11 -Mean for Help-Seeking

Figure 11 reported the mean score of help-seeking. Both items labelled RMCHSQ1 and RMCHSQ2 have the same mean score (M=4.3). The findings have demonstrated that help-seeking elements could assist learners to learn Mandarin.

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

Table 3
*Correlation between Attention & Reproduction with Retention*

### Correlations

| | | TOTALMEAN ATTENTIONR EPRO | TOTALMEAN RETENTION |
|---|---|---|---|
| TOTALMEANATTENTIO NREPRO | Pearson Correlation | 1 | .776$^{**}$ |
| | Sig. (2-tailed) | | .000 |
| | N | 168 | 168 |
| TOTALMEANRETENTION | Pearson Correlation | .776$^{**}$ | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 168 | 168 |

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

Table 3 shows there is an association between attention & reproduction with retention. Correlation analysis shows that there is a high significant association between attention & reproduction with retention. (r=.776**) 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 attention & reproduction with retention.

Table 4
*Correlation between Attention & Reproduction with Motivation*

## Correlations

| | | TOTALMEAN ATTENTIONR EPRO | TOTALMEAN MOTIVATION |
|---|---|---|---|
| TOTALMEANATTENTIO NREPRO | Pearson Correlation | 1 | .701** |
| | Sig. (2-tailed) | | .000 |
| | N | 168 | 168 |
| TOTALMEANMOTIVATIO N | Pearson Correlation | .701** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 168 | 168 |

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

Table 4 shows there is an association between attention & reproduction with motivation. Correlation analysis shows that there is a high significant association between attention & reproduction with motivation (r=.701**) 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 attention & reproduction with motivation.

Table 5
*Correlation between Retention and Motivation*

## Correlations

| | | TOTALMEAN RETENTION | TOTALMEAN MOTIVATION |
|---|---|---|---|
| TOTALMEANRETENTION | Pearson Correlation | 1 | .685** |
| | Sig. (2-tailed) | | .000 |
| | N | 168 | 168 |
| TOTALMEANMOTIVATIO N | Pearson Correlation | .685** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 168 | 168 |

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

Table 5 shows there is an association between retention and motivation. Correlation analysis shows that there is a high significant association between retention and motivation (r=.685**) 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 retention and motivation.

## Conclusion

*Summary of Findings and Discussions*

The results of this study indicate that the four factors for language learning, attention and reproduction, retention and motivation are closely associated with one another in the process of learning Mandarin language. In other words, these three factors are very crucial to create a better space for learners to learn Mandarin more effectively as these three factors are in compliance with one another. The results revealed that the mean scores of all the sub-components from attention and reproduction, retention and motivation are generally ranging from three to four point five. This could be interpreted as Mandarin learners applied all the sub-components from the four learning factors while learning Mandarin where every sub-component cannot be missed out from the learning process. This is because after learners have received knowledge, they repeated what they have learned, then they started to organise knowledge according to their preference. In order to foster their learning, learners do elaboration and critical thinking. Furthermore, learners also applied metacognitive self-regulation strategies to have better learning experiences. Undoubtedly, sub-components of motivation factor for instance environment management, effort management and help-seeking are the actions which keep them motivated in the learning process. It is obvious that help-seeking in motivation factor has the highest scores among all the sub-components. For learners, Help-seeking may be the fastest way to solve their learning problems.

*Implications and Suggestions for Future Research*

The pedagogical implications of this study could help the language instructors and teachers to develop language lessons that are suitable to the learners' learning styles. At the same time learners could identify which factors have the most influence in one language learning to improve their language learning skill. Teachers can make use of the components in the framework to strategised learning activities and lesson plans in the classroom. Attention is required in order to observe a behaviour, hence it is recommended that teachers present to the students relevant and engaging classroom activities to mantain students' attention. Reproduction of learning behaviors require the ability to repeat a behaviour depends on whether the observer was able to maintain it after being observed. Hence, teacher may expose to students various learning strategies to assist them on how to remember the information effectively.

Another strategy for incorporating social learning is peer modelling. This can be done by implementing collaborative learning among peers. Long lectures can be divided into small-group discussions and activities so that each group member can be a role model for the others, and by observing how their peers act and think, the group as a whole can learn new abilities. Giving students the chance to practise is essential for promoting the intended learning outcome and inspiring them to apply and reproduce what they have learnt in class. Last but not least, motivation is crucial for students to be willing to begin and continue behaviour towards a goal. Teachers can extrinsically motivate their pupils by offering incentives and constructive criticism. Teachers may also assist with increasing a student's internal motivation and sense of self-efficacy by providing supportive reinforcement, and offering feedback.

For future research, it is recommended that studies can be conducted with larger samples that can be generalised to Mandarin language learners across Malaysian higher learning institutions. This study used questionnaires to determine the factors that influence

Mandarin learning. Perhaps future studies could conduct the research by using interviews or case studies to have an in-depth view on how these factors affect the learning of Mandarin.

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