

Exploring The Use of Cognitive and Metacognitive Learning Strategies Across Gender: The Case for French as A Foreign Language

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Abstract

Most studies have distinguished gender differences in language learning strategies (LLS) use. In the numerous studies in which gender variables were investigated, the result demonstrated that female learners reported using language learning strategies more frequently than male learners but the average of strategy use was in the moderate range. Therefore, the purpose of this study was to examine whether or not differences exist between male and female learners in the use of cognitive and metacognitive learning strategies in French as a foreign language. A total of 189 undergraduates participated in the study. Data was collected using a questionnaire adapted and modified from Wenden and Rubin (1987). The survey used has three main sections with 19 items. The findings of the study showed that female learners use cognitive and metacognitive learning strategies more than male learners. They also tend to use these strategies more often than male learners. The main implication of this study is that additional opportunities to use language learning strategies focusing on cognitive and metacognitive strategies need to be made available to learners. Teachers' role is deemed predominant in identifying the range of factors influencing strategy uses and choices of learners. Hence, the study further demonstrated the importance of strategy training. More research on the effect of strategy training on LLS use and the effectiveness of LLS between genders would be helpful.

Keywords: French as a Foreign Language, Cognitive Strategies, Metacognitive Strategies, Gender and Language Learning Strategies (LLS)

Introduction

Background of Study

According to Moeller and Catalano (2015), the teaching or learning of nonnative language outside of the setting where it is usually spoken is referring to foreign language. They added that it is considered foreign when it is not spoken in the community where the instruction happens and it is acquired mostly in the classroom environment. The study of another language, in this context French language, permits the individual to play a part in real-life scenarios through the language of the realistic culture itself. In addition to that, it enables learners to converse effectively and creatively.

Vital key areas of individual differences which can affect the choice of LLS and the frequency of the use have been acknowledged by researchers in numerous studies (see, Macaro, 2001; O'Malley & Chamot, 1990; Oxford, 1990). There are numerous contributing factors to the use of learning strategies and those are gender, age, level of language proficiency, motivation, cultural upbringing, socioeconomic status, learning period, and language learnt. Thus, it is essential to investigate how learners from different genders

use the learning strategies knowing that these strategies can develop language performance and that awareness about these strategies may enhance learning.

Statement of Problem

The study by Idris et al., 2022, investigated the learning strategies used in learning French. Findings showed that students adopted both cognitive and metacognitive strategies harmoniously in their learning process. Cognitive strategies were used for rehearsal, elaboration and critical thinking and metacognitive strategies were used in planning, self-evaluation and monitoring. Similar findings by Yusri et al., 2013, students with previous knowledge of Arabic scored significantly higher than beginners in all five components of cognitive and metacognitive strategies in learning Arabic as a foreign language.

Nonetheless, past studies have shown that there are significant differences in the use of learning strategies according to gender. Ho & Ng (2016), revealed that female students used more strategies than male. The result of their study showed that metacognitive strategies were highly used by female students, whereas affective strategies were the least used. Likewise, another study by Ariyani, Rusminto & Setiyadi, 2018, also found that female students used mostly metacognitive strategies compared to male students who preferred cognitive strategies, which are characterized by memorisation or rote learning.

Nevertheless, the role of gender is still "underestimated and neglected in research for a long period of time" (Michońska-Stadnik, 2018). Past studies have shown there are significant differences in the use of metacognitive strategies (Ho & Ng, 2016).

Hence, this study is done to explore the differences in the use of language cognitive and metacognitive strategies across gender. Specifically, this study is done to answer the following questions;

1. How does the use of cognitive strategies differ across gender?
2. How does the use of metacognitive strategies across gender?

Literature Review

Introduction

This section discusses primarily regarding learning foreign language across gender, past studies and the conceptual framework of the study.

Learning Language across Gender

Learning foreign languages across gender differences has been one of the analyzed topics in numerous areas of human social and cognitive development. In most of the studies in which gender differences were involved, the result proved that language learning strategies (LLS) are mostly utilized by a female rather than males. However, certain studies portray that the difference between these two genders is not significantly visible in terms of utilizing LLS. Others indicate that males tend to opt more for LLS than females in certain categories. In a study led by Teh et al (2009), the objective is to examine whether or not there is the presence of differences between female and male Arabic students (in which Arabic is the foreign language) in the use of LLS. To conduct this study, 457 students at thirteen secondary schools in Terengganu, Malaysia participated. Data was collected using a questionnaire adapted and modified from SILL (Oxford, 1990). Results from this study indicated that there was a significant gender difference in the use of LLS as a whole. Female students are more inclined toward employing LLS than males. For categories of LLS, there are significant differences between genders in the use of effective and metaphysic strategies with females using them more often.

In another study concerning gender differences developed by Glowka (2014) in which English portrays a role as a foreign language in Poland, it examined the impact of gender on students' achievement in learning the English language in secondary and higher vocational schools. Based on the collective findings from this study, it proved that girls achieved significantly better results than boys. Such results support the socio-linguistic finding that showed female students outperform males as they are more open to learning new linguistic forms in the target language and eradicate interlanguage forms that deviate from target-language norms more readily than their male counterparts (Ellis, 2012). However, these results were not reflected in the opinions of the student and teacher participants. Both parties held a strong conviction that gender played no major role in learning English.

A study led by Aslan (2009), aims to analyze the difference in strategy use between genders and its impact on their achievement in English, in which English is a foreign language. A total of 257 (153 male, 104 female) students from Atilim University English Preparatory School participated in the study. All the students are from the same proficiency level. The data are collected via strategy inventory for language learning (SILL) of Oxford (1990), which are translated to Turkish by Cesur and Fer (2007). To reveal the relationship between these factors, an independent t-test and an ANOVA test, along with post hoc procedures were performed on gathered data. From these findings, it is proven that the utilization of language learning strategies is positively effective in success in English. Females were more successful than males in terms of excelling in tests and also, they employed more language learning

strategies in learning English. The findings proved that there is a solid link between gender, language learning strategies and achievement in English.

Past Studies

Past Studies in how learners use metacognitive language learning strategies

Many studies have been done to investigate how learners use metacognitive language learning strategies. In one study to investigate the use of metacognitive reading strategies involved 240 fourth-year students majoring in English Language and Literature or French Language and Literature at Jordanian universities done by Rabad, R.I, Al-Muhaisen, B & Al-Bataineh, M (2020). In this study, it can be concluded that language learners' knowledge of metacognitive reading strategies might not indicate their actual use of reading strategies when they read texts as stated. On the other hand, metacognitive reading strategies enable language learners to control their reading by planning, coordinating, and assessing their learning process. In order to facilitate successful reading, language learners need to know how to use reading strategies correctly not only to know which strategies to employ.

Ho & Ng (2016) conducted a study to look at the relationship between language learning strategies across gender. 535 male and 1173 female respondents responded to a survey. Data obtained were analysed using descriptive statistics, t-test, One-way ANOVA and chi-square test. The finding showed that females used more language learning strategies compared to their males counterparts. The research result also showed that metacognitive strategies were highly employed by these undergraduates whereas affective strategies were least used among them.

Past Studies in How Learners use Cognitive Language Strategies

Many studies have been done in the past years to investigate the learning of foreign languages. One study particularly by Ayirir (2011) is done to investigate cognitive processes and cognitive strategies in French as a foreign language learning. 88 students from 4 separate class years participated in this study. The research was carried out by procuring data from surveys answered by the students which later were analyzed by statistical analysis, statistical calculations and applied to one-way ANOVA. This research outcome shows that there is no major difference in cognitive strategies usage by these 4 different class years. The study also shows that the participants appear to be favoring some cognitive strategies more than others. However, it was stressed in the study that teachers are encouraged to let students explore different strategies in learning foreign language.

Another study by Mahmud and Nur (2018) was carried out to explore students' learning strategies and gender differences in English as a foreign language teaching. 36 female students and 36 male students participated in this study. Data extracted from both quantitative and qualitative were then analysed through QUAN-Qual, one-way ANOVA and descriptive statistics. The study found that female students preferred and used cognitive strategies regularly compared to male students. Besides that, the study shows that both genders have different learning strategies that they are comfortable due to the concept of gender differences in communication.

Past Studies in Language Learning Language Strategies Across Gender

Numerous studies have been done to investigate the use of LLS between genders in the learning of foreign language (see, Zeynali, 2012; Alhasony, 2017). The study by Zeynali (2012) is done to investigate whether or not differences exist between genders in the use of learners' learning strategies in Iran. A total of 149 EFL learners participated in the study. Data were collected using a questionnaire adapted and modified from SILL (Oxford, 1990). It has concluded that there is a substantial gender difference in the use of language learning strategies as a whole. The study pointed out that female learners tend to employ overall language learning strategies more frequently than male learners. In addition to that, it is demonstrated that female learners use more often social/affective strategies and the differences were significant. The research also stressed the significance of providing learners with opportunities to employ LLS more often. Hence, teachers' role in strategy training was also highlighted in the study.

Another study entitled Language Learning Strategies Use by Saudi EFL Students: The Effect of Duration of English Language Study and Gender by Alhaysony (2017) is carried out to examine language learning strategies employed by Saudi EFL students at Aljouf University. The purpose of the study was to better comprehend the connection between the use of LLS and gender and duration of English language study. A total of 134 learners completed a questionnaire adapted from Oxford's (1990) Strategy Inventory for Language Learning (SILL). It is shown that the average of strategy use was in the low to medium range and the most often used were cognitive, metacognitive and compensation strategies. The differences across gender was not significant but it was found that female learners employed more LLS than male learners. The study also emphasized the importance of identification of learners' language strategies by teachers, the shift of teachers' role to facilitator, the integration of strategy training in the curriculum, the analysis of textbooks used and further opportunities in communicative tasks for learners.

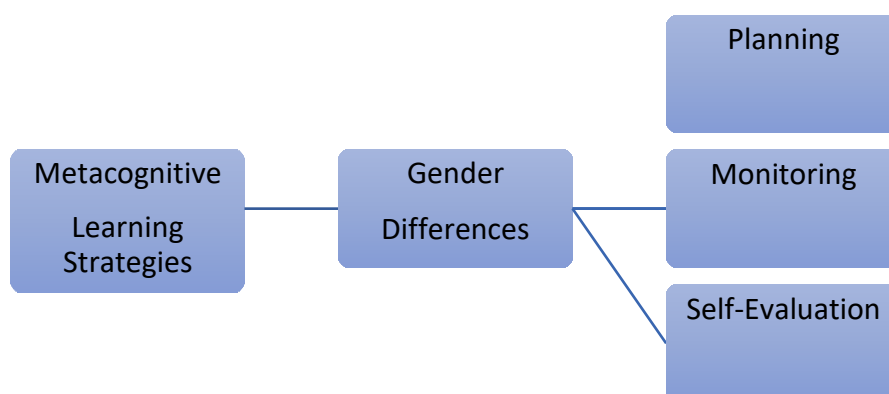
Conceptual Framework

Figure 1- Conceptual Framework of the Study

Methodology

This quantitative research is done to investigate how learners use cognitive and metacognitive strategies when they learn French as a foreign language. The instrument used is a survey adapted from Wenden & Rubin (1987). 189 respondents were purposively chosen to answer the survey. The survey has 3 main sections. With reference to Table 1, section A has items on the demographic profile. Section B has 19 items on Cognitive components and section C has 11 items on the use of Metacognitive self-regulation.

Table 1-Distribution of Items in the Survey

Section	STRATEGY		SUB-STRATEGY	NO OF ITEM	
A	COGNITIVE COMPONENTS	(a)	Rehearsal	4	19
		(b)	Organization	4	
		(c)	Elaboration	6	
		(d)	Critical Thinking	5	
B	METACOGNITIVE SELF-REGULATION	(a)	Planning	4	11
		(b)	Monitoring	4	
		(c)	Self-Evaluation	3	
	TOTAL NO OF ITEMS				30

Table 2

Reliability Statistics

Cronbach's Alpha	N of Items
.937	30

Table 2 presents the reliability statistics for the instrument. SPSS analysis revealed a Cronbach alpha of .937 thus showing a high internal reliability of the instrument used. Data is collected online via goggle form. Data is then analysed using SPSS version 26. Analysed data is presented in the form of percentages and mean scores to answer the 2 research questions.

Findings

Findings for Demographic Profile

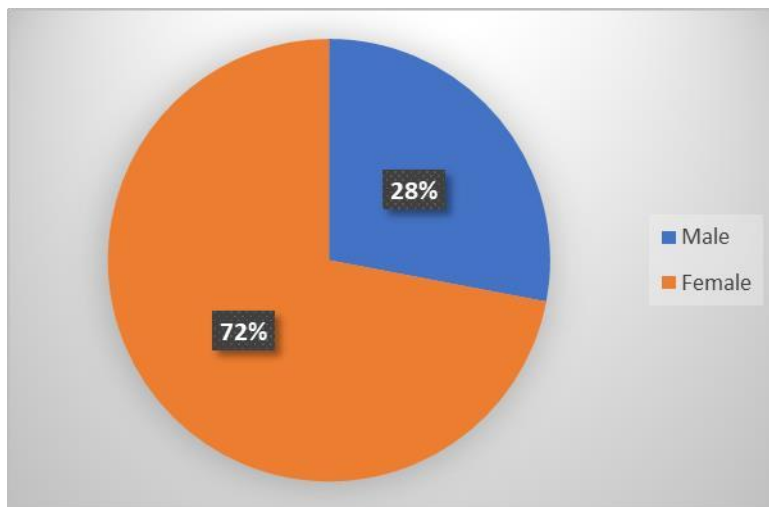


Figure 2-Percentage for Demographic Profile

Figure 2 shows that out of 189 respondents, 72% of them are female and 28% are male.

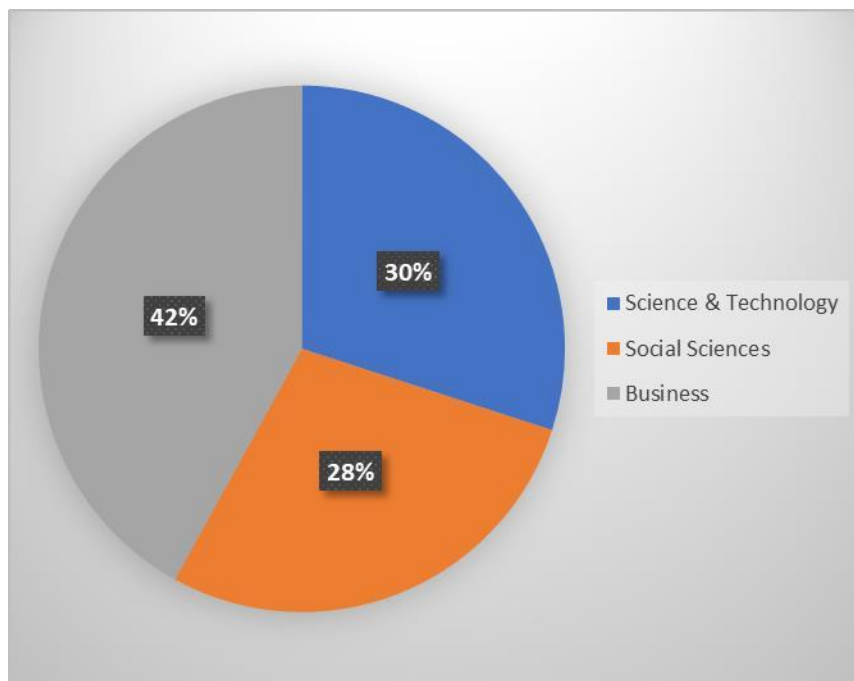


Figure 3- Percentage for Discipline

Figure 3 shows that, majority of the respondents are from business discipline 42% while science & technology takes up 30% and social sciences 28%.

Findings for Cognitive Strategies

This section presents data to answer research question1: How does the use of cognitive strategies differ across gender? There are 19 sub-strategies for cognitive component. The sub-strategies are categorized as (a) rehearsal with 4 items, (b) organization with 4 strategies, (c) elaboration with 6 strategies, and (d) critical thinking with 5 strategies,

(a) Rehearsal

Figure 4-Mean for Rehearsal

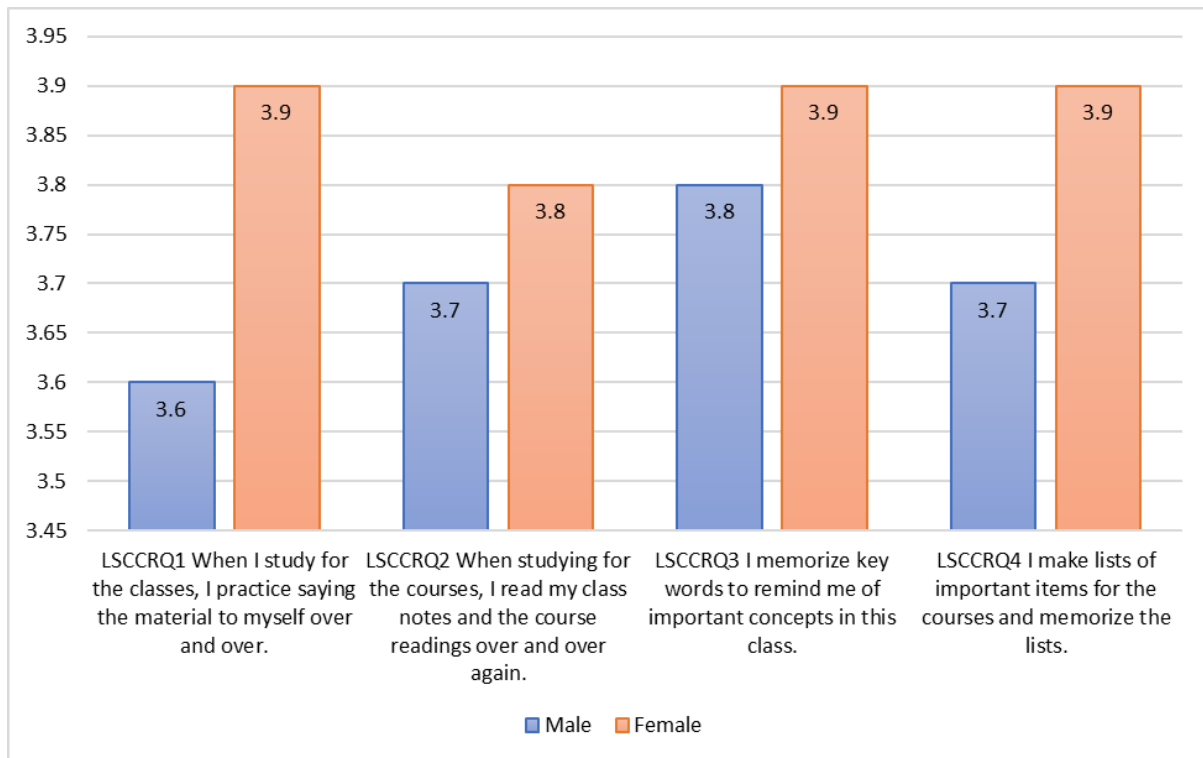


Figure 4 shows that female respondents find that all rehearsal cognitive components fairly important (3.8) with practicing saying the material over and over to themselves topping the list (3.9). Meanwhile, male respondents are in favor of memorizing key words to remind them of important concepts in the class (3.8). And contrary to female, male respondents are not likely to practice saying material over and over (3.6).

(b) Organization

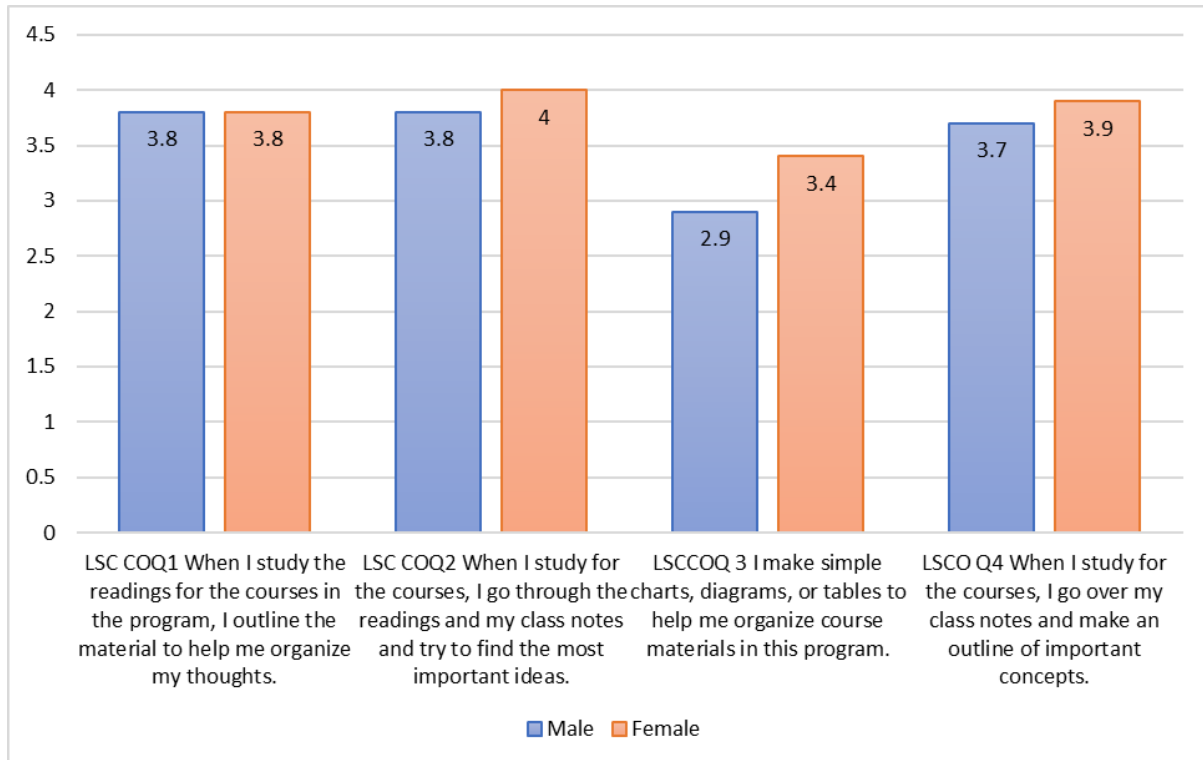


Figure 5-Mean for Organisation

Figure 5 shows that both male and female respondents find that reading the courses in the program helped them organize their thoughts (male & female 3.8). Meanwhile, female respondents are in favor of going through the readings the class notes and try to find the most important ideas (female 4, male 3.8). More female respondents make simple charts, diagrams, or tables to help them organize course materials in this program (male 2.9, female 3.4). Finally, female respondents are also in favor of going over their class notes and making an outline of important concepts (male 3.7, female 3.9)

(c) Elaboration

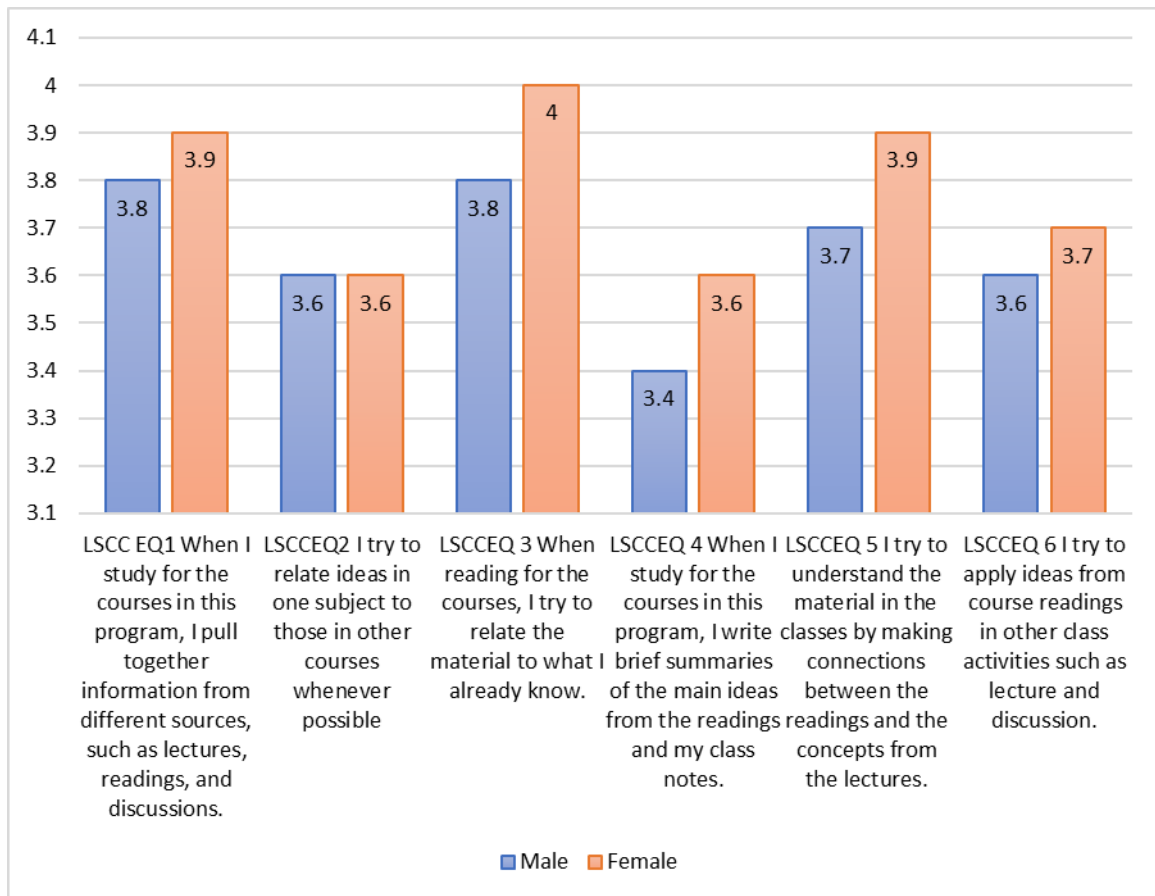


Figure 6-Mean for Elaboration

Figure 6 shows that both male & female respondents try to relate ideas in one subject to those in other courses whenever possible (male & female 3.6) However, in all other cases, female respondents are in favor compared to male respondents. When studying for the courses in this program, they pull together information from different sources, such as lectures, readings, and discussions (male 3.8, female 3.9). When reading for the courses, they try to relate the material to what they already know (male 3.8, female 4). When studying for the courses in this program, they write brief summaries of the main ideas from the readings and the class notes (male 3.4, female 3.6). Trying to understand the material in the classes by making connections between the readings and the concepts from the lectures (male 3.7, female 3.9) and finally when it comes to applying ideas from course readings in other class activities such as lecture and discussion, the results also indicate female respondents are in favor compared to male respondents (male 3.6, female 3.7).

(d) Critical Thinking

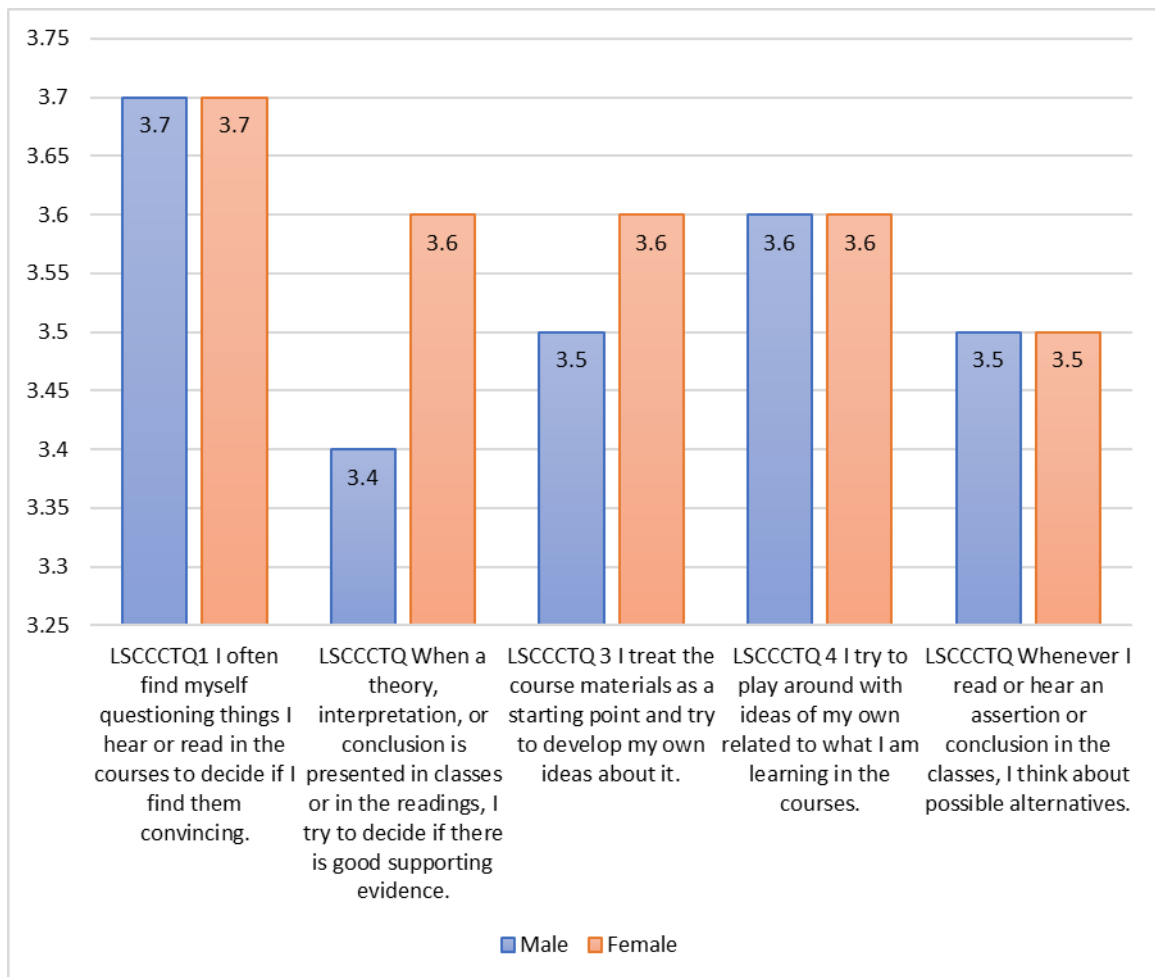


Figure 7-Mean for Critical Thinking

Figure 7 indicates that three elements of critical thinking for both male and female respondents, portrayed equal mean score. It shows that for both respondents, male and female are able in : questioning oneself regarding the course for comprehension (female and male 3.7) playing around with their own ideas and trying to relate it with the learning process (female and male 3.6) and also thinking about the possible alternatives after reading any assertion and conclusion in the classes (female and male 3.5). However, when it comes to trying to decide if there is good supporting evidence when a theory is presented in classes, the findings portray that female respondents are much better than male (female 3.6, male 3.4). Plus, female respondents are much more capable, in comparison with male, of developing their own ideas about the course and treating the course materials as a starting point (female 3.6, male 3.5).

A. Metacognitive Self-Regulation (11 items)

This section presents data to answer research question 2: How does the use of metacognitive strategies across gender? 11 items are used to represent the meta-cognitive self-regulation by learners. The 11 items are sub-divided into categories such as (a) planning with 4 items, (b) monitoring with 4 items, and (c) self-evaluation with 3 items.

(a) PLANNING

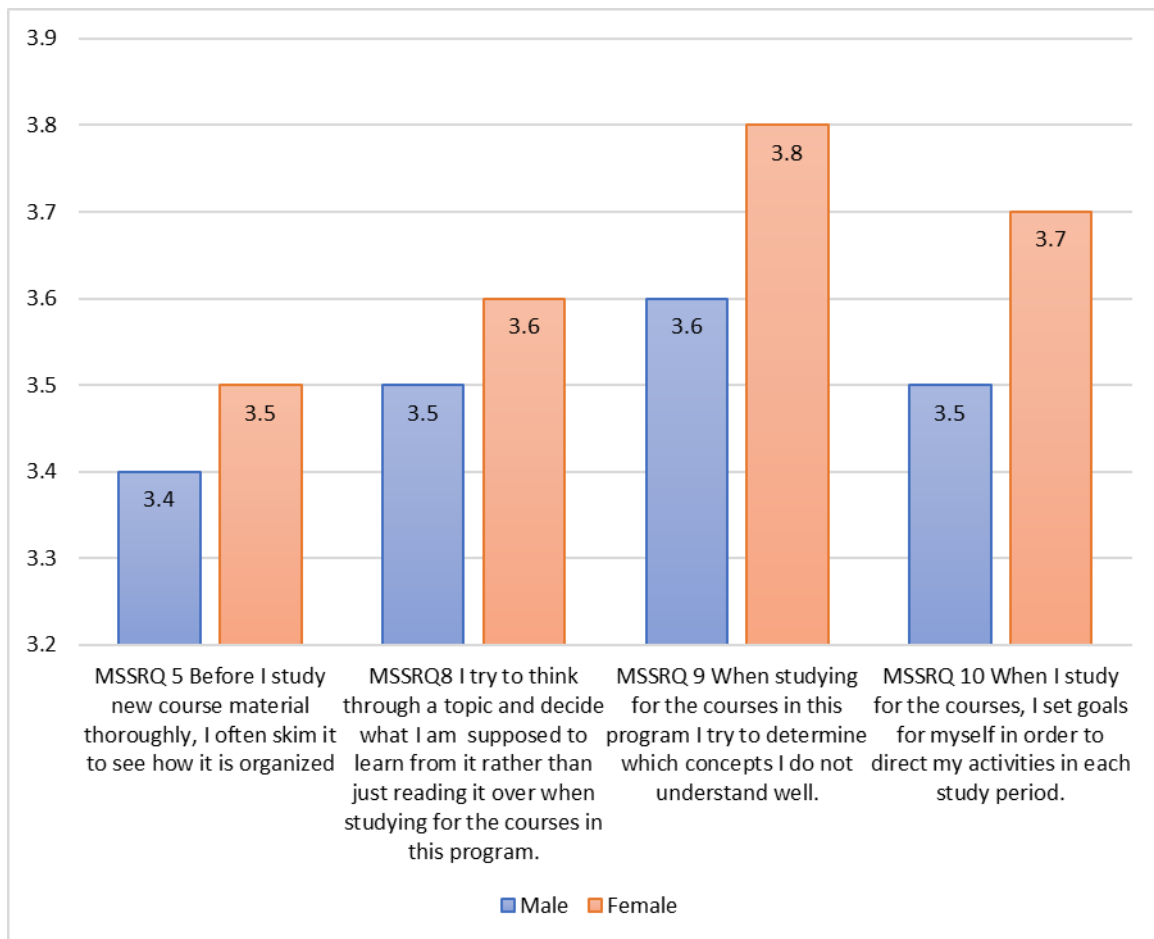


Figure 8-Mean for Planning

Figure 8 shows that all the elements of planning portray that the findings for the female respondents is slightly higher than male respondents. It indicates that female respondents, in comparison with male respondents, often see the way the course is organized before studying thoroughly the new course material (female 3.5, male 3.4) and decide what to learn rather than just reading it over when studying for the course (female 3.6, male 3.5). Plus, when studying the course, female respondents are better in identifying which concept is ambiguous or unclear (female 3.8, male 3.6) and also better in setting their own goals in each study period (female 3.7, male 3.5).

(b) Monitoring

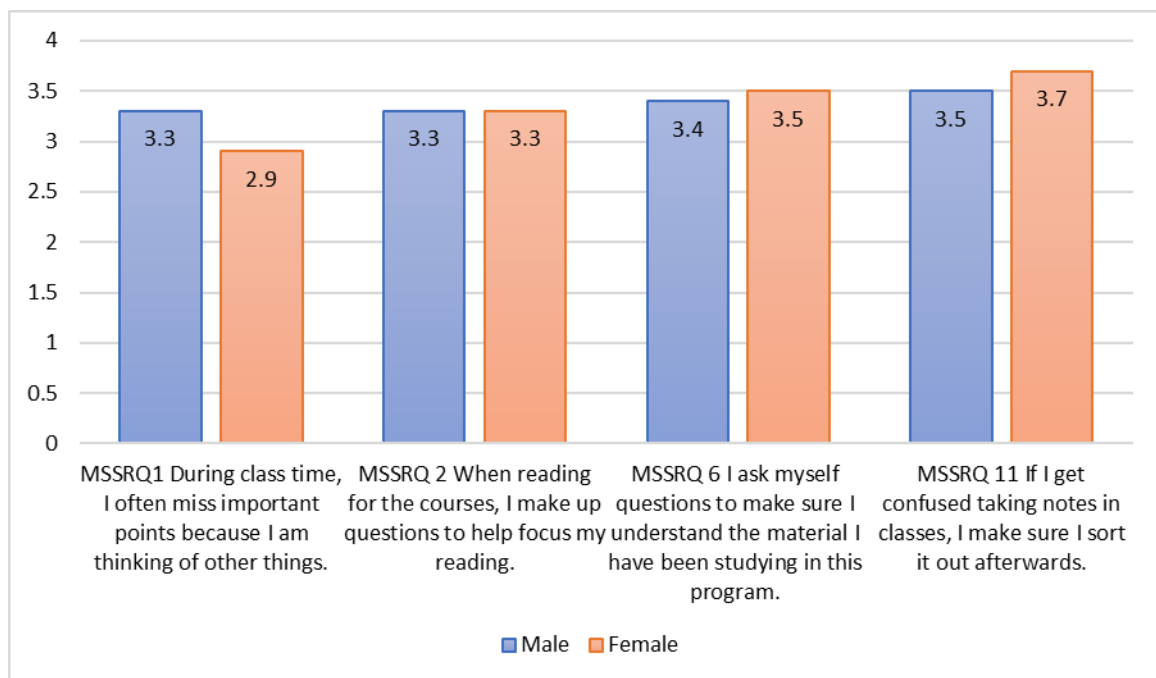


Figure 9-mean for Monitoring

For monitoring, the findings revealed that there was a significant difference between female and male students, when it comes to missing important points during class time (male 3.3, female 2.9). Furthermore, female students are better at organizing their notes, as they will go through their notes if they get confused while taking notes in class. (female 3.7, male 3.5). While there is only a slight difference for both genders, when it comes to validating their understanding of the material in the program (male 3.4, female 3.5). However, both genders have the same mean score in formulating questions to help them focus in their reading (male and female 3.3)

(c) Self-Evaluation

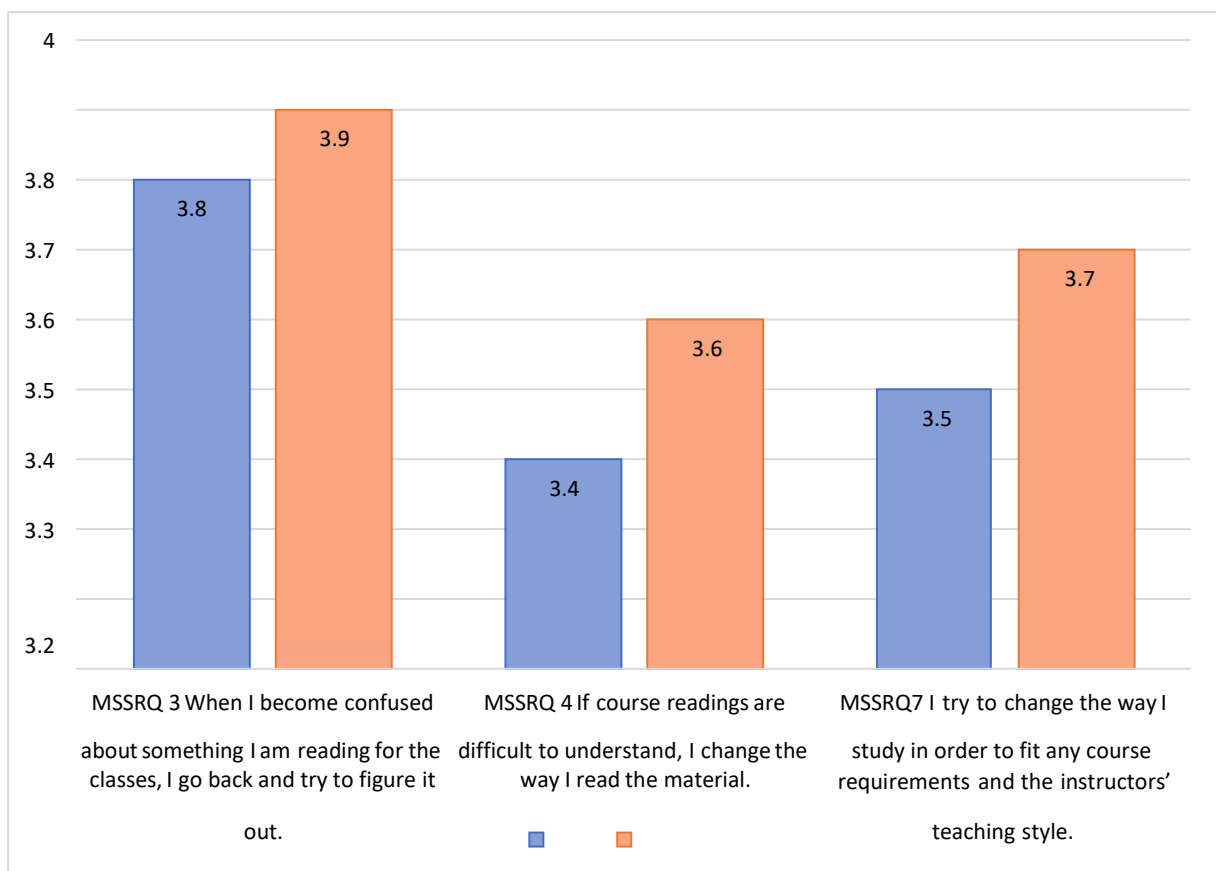


Figure 10-Mean for Self- Evaluation

Finding for self-evaluation revealed that both genders, when they are confused with the reading materials, will try to understand it later (female 3.9, male 3.8). When it comes to changing strategies when readings are difficult to understand, female students score a higher mean (3.6) compared to male (3.4). Female students also scored a higher mean (3.7) compared to male (3.5) in their ability to change learning strategies in order to fit the course requirements and instructor's teaching style.

Conclusion

Summary of Findings and Discussion

A summary of the study has shown interesting findings about the use of cognitive and metacognitive strategies across gender. It showed that female learners reported using cognitive and metacognitive strategies more often than males. The examination of the means for the cognitive variables reveals that female learners have significantly higher scores than male learners. It can be inferred that there could be some differences of choices in the cognitive strategy use among genders especially in all rehearsal, organization, elaboration and critical thinking cognitive components. Female learners tend to be using all these components more than male learners.

To find out the differences between genders in metacognitive variables, we refer to the scores revealed by the study and it was found that the means for female learners are higher compared to male learners particularly in planning, monitoring and self-evaluation elements. The results suggest that although both male and female learners use all the cognitive and metacognitive strategies, but female learners incline to use these strategies more than male learners.

The findings of this study were consistent with previous studies (examples: The et al., 2009; Glowka, 2014; Ho & Ng, 2016) in which female learners tended to use cognitive and metacognitive learning strategies more frequently than male learners.

Evidence from this study supports a high preference for cognitive and metacognitive strategies among female learners compared to male learners, which enable them to plan and organize their language learning (see, Zeynali, 2012; Alhaysony, 2017).

Pedagogical Implications

In the fields of foreign language learning, gender has been shown in this study to be the classic and substantial predictor. Therefore, awareness on how to use and when to use cognitive and metacognitive strategies has to be created among learners to enable them to increase their potential and to fully benefit from classroom language learning. Therefore, teachers' role is deemed predominant in identifying the range of factors influencing strategy uses and choices of learners. Hence, the study further demonstrated the importance of strategy training. To identify these factors, behavioral classroom observation between genders can be conducted during class activities. Once identified, teachers would be able to provide to learners an explanation of LLS especially in these two categories.

The main implication of this study is that additional opportunities to use LLS focusing on cognitive and metacognitive strategies need to be made available to learners. Activities should be targeted in two ways. Firstly, the communication tasks among learners given in the classroom and secondly, the textbook activities involving both cognitive and metacognitive strategies. These activities would be able to bring learners closer to become more successful in language acquisition.

Internal and external settings also contribute directly to language learning. Thus, teachers' role should be transformed progressively to facilitator whereby they should not only encourage learners to acknowledge the significance of LLS but also to utilize and to develop the range of cognitive and metacognitive strategies. As facilitator, teachers would be leading learners in employing those strategies by creating an input-rich setting inside and outside the classroom.

Suggestions for Future Research

The literature review revealed a paucity of research on cognitive and metacognitive strategies among gender on French as foreign language in general and in the Malaysian context in particular. Further research, involving descriptive, experimental and cross-sectional studies, is therefore recommended to enhance understanding of FFL LLS use in multicultural environments. In addition to that, teacher factors such as teachers' perceptions and

awareness of LLS should also be investigated. More research on the effect of strategy training on LLS use and the effectiveness of LLS between genders would be helpful. To conclude, future researchers may look at the factors that affect strategy choice which can be considered as important areas to be studied.

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