Journal of Education and Practice
ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)
Vol.8, No.18, 2017

Gender Differences in Metacognitive Reading Strategy Use among English as a Foreign Language Students at Al-Balqa Applied University

TamadorKhalaf Abu-Snoubar
Assistant Professor, Department of English Language and Literature, Al- Salt Faculty for Humanities/ Al- Balqa Applied University P.O.box 19117

Abstract
The current study aimed at exploring gender differences in the employment of metacognitive reading strategies by English as a foreign language students at Al-Balqa Applied University in an attempt to bridge the gap in this specific field of knowledge. The study relied on a group of 86 participants (36 males=43% and 49 females= 56.9%) of different levels of proficiency and various academic fields of study. The participants completed the 30-item Survey of Reading Strategies (SORS) developed by Mokhtari and Sheory (2002). The findings of the study revealed that the participants were high users of the overall metacognitive reading strategies with no significant gender differences in the strategies employed. Both males and females equally employed the same strategies with the same order of frequency, ranking problem solving as the most frequently used (M=3.8081), followed by support strategies (M=3.5393) and reporting global strategies to be the least preferred (M=3.5169). These results illustrated that EFL readers' utilization of the reading strategies is due to reasons other than gender.
Keywords: Metacognitive, Reading Strategies, Support Strategies, Global Strategies, Problem Solving Strategies, English as a Foreign Language (EFL), gender, male, female.

1. Introduction

Depending on the established fact that reading in English is one of the difficult challenges facing most English as a foreign language (EFL) learners, and in order to pave the way for EFL readers to overcome these reading difficulties, research has directed its focus towards exploring the metacognitive reading strategies employed by students in their attempts to avoid comprehension failure. These strategies enable us to dig deeper into how readers deal with texts and what strategies they rely on to help them tackle any difficulties. The concept of metacognitive reading strategies means that the reading comprehension processes are monitored and regulated by the reader, which also means that learners are viewed as mentally active participants (Alsheikh and Mokhtari, 2011; Lien,2014; Darwish 2017). Nasri and Biria (2017) support the stream of researchers who want to call the reading strategies "skills." An opinion also supported by Kashef, Damavand and Viyani (2012) who strongly believe in the importance of a reading comprehension instruction program based on the metacognitive strategies. Establishing these strategies as part of the students' reading behaviour is believed to allow EFL readers to deal with the reading comprehension problems that appear and wax after they join universities.

An overwhelming number of studies have proved a strong relation between employing the metacognitive reading strategies and being a proficient reader (Poole, 2009; Al-Alwan 2012;Akkararitwutthikun, 2013;Dundar, 2016). However, the aspect of gender when it comes to the utilization of the metacognitive reading strategies still suffers from lack of serious attention worldwide. (Phakiti, 2003; Poole, 2005; Ghezlou, Kurdi and Nasrabadi, 2014; Asgarabadi, 2015; Tavakoli, 2014). The reason behind this scarcity of studies might be, as explained by Poole (2005), because of the established belief among language researchers that females are better and more skilled language learners than the males. But beliefs like these should never hinder any new attempts to reach the best understanding of gender differences in the area of reading which continues to be the starting point for the development of the other language skills (Chang, 2005).

When it comes to the Arab world, the gap of knowledge in this field of gender and reading strategies is found to be so wide. This study is meant to bridge this gap by investigating how male and female EFL students at Al-Balqa Applied University utilize these strategies.

1.1.Statement of the Problem

Despite the fact that there is an impressive number of studies dealing with metacognitive reading strategies and how they affect the proficiency and reading comprehension, gender differences have been rarely visited by researchers worldwide and the Arab world in general. Up to the researcher's knowledge, there are just few studies that have investigated this field of knowledge in Jordan. Consequently, this deficit in our knowledge as EFL teachers, instructors and curricula planners encouraged the researcher to investigate how differently male and female EFL students at Al-Balqa Applied University utilize the metacognitive reading strategies.

1.2.Theoretical Frame

Generally speaking, reading strategies are techniques that both native and non-native students employ to increase their comprehension and beat difficulties they face when reading passages in English (Lee, 2012). Munsakorn (2012) believes that EFL students do not properly comprehend the texts they read due to the fact that they do not utilize the needed and suitable reading strategies. Reading strategies are classified as cognitive and metacognitive. The cognitive reading strategies give the learners the abilities essential to get the meaning from a certain text, while the metacognitive strategies allow the readers to evaluate their reading process (Lein, 2014). Magogwe (2013) adds that the metacognitive strategies are the arrangements that the learners employ to assess their learning process. The metacognitive strategies are divided into three subcategories: global, support and problem solving.

The importance of the metacognitive reading strategies is demonstrated by a number of studies as made clear in the Literature Review section of this paper.

1.3.Purpose of the Study

There are many studies investigating the factors that affect EFL students' use of metacognitive reading strategies, but little knowledge is available about the differences on the favorite reading strategy use between male and female learners especially at university level. This study aimed at investigating the gender differences in reading comprehension metacognitive strategy use.

1.4.Research Questions

This study tried to explore the metacognitive reading strategies employed by male and female EFL students at Al-Balqa Applied University. The proposed research questions are

1-Are there gender differences in the frequency of the reading metacognitive strategy use among Al-Balqa Applied University students?

2-Are there significant differences in the metacognitive reading strategies employed by EFL students at Al-Balqa Applied University?

1.5.Significance of the study

The significance of this study stems from the fact that it highlights the gender differences concerning the use of the metacognitive reading strategies of Jordanian EFL students at Al-Balqa Applied University.

Up to the researcher's knowledge, this study is one of the few attempts that examine this field in the region. Therefore, this study is meant to be a contribution in the effort to bridge this gap since the area of reading comprehension is the most needed skill for any educational opportunity and for enhancing the chances of employment and promotion.

This study should also motivate school teachers and curricula planners to check whether their strategies and approaches really cater for the EFL learners' needs.

1.6.Definitions of Terms

To guarantee clarity, it is important to provide definitions of the important terms used in this study(Mokhtari and Sheory 2002).

English as a foreign language or EFL refers to the idea that English is not spoken in the everyday communication of the students' community local, it is neither the first nor a dominating language in their society.

Reading strategies are techniques that students use to increase their comprehension and tackle any problems they face when reading English passages.

Metacognitive strategies refer to carefully planned techniques which learners employ to monitor or manage their reading. The readers intentionally resort to these strategies to evaluate their reading process.

Support strategies refer to strategies intended to aid the reader in comprehending the text during reading. These strategies include underlining key words, highlighting important points and paying attention to words in italic and bold print. They also mean the use of reference materials from the text such as notes in the margins, summarizing, or simple underlining of important information.

Global Reading Strategies are those purposeful, intently planned techniques by which learners are taught how to organize or manage their reading. It refers to pre-reading activities such as having a purpose in mind before reading and thinking about what one already knows about the material before reading.

Problem-Solving Strategies include techniques that readers use when they face difficulties while reading an English text so that they can avoid failure. Examples of these strategies are rereading hard to understand text and adapting one's reading rate to the difficulty level of what they're reading.

1.7.Limitations of the Study

The current study is limited to Al-Balqa Applied University EFL students / the center faculties, during the

second semester of the academic year 2016 – 2017.

2. Literature Review

In recent years, researchers have started to steer their metacognitive reading strategy efforts towards the destination of how males and females utilize and employ these strategies. Sheorey and Mkhtari (2001) explored the differences in the use of metacognitive reading strategies of native and non-native English speakers. The sample consisted of 302 college participants divided into 150 native English speakers and 150 ESL students. The learners completed a questionnaire that showed that both groups are aware of the overall strategies. The females in the native English speaking group reported higher frequency use of the overall strategies, a phenomena not found in the ESL part of this sample.

Poole (2005) aimed to compare the reading strategies of male and female ESL college students who are originally from East Asia, Western Europe, South Asia, the Middle East, Eastern Europe and Western Africa. The sample of his study consisted of 248 participants (138 males and 110 females) from six universities and one community college located in the United States Midwest and South. After analyzing the data obtained through the Survey of Reading Strategies (SORS), few strategic differences were noticed and both sides employed the strategies with medium or high frequency. There was no significant difference on any of the three SORS subscales.

Marteniz (2008) examined 157 Spanish ESP university students' strategy use and compared the male (52%) and female (48%) participants' utilization of these strategies. The data analysis proved that the sample learners were moderate to high users of the strategies in general, and that the females employed the overall strategies more than the males and that they opted more for the support reading strategies.

In a study investigating the reading strategies used by male and female Colombian university students, Poole (2009) employs the Survey of Reading Strategies (SORS) to gain the data needed. 352 (male= 117; female=235) low to intermediate participants were asked to complete the 30-item questionnaire. The outcomes demonstrated that males moderately employed these strategies while the females' utilization of these strategies was significantly higher. To clarify things, males used 14 strategies with high frequency and 16 strategies with moderate frequency. Females, on the other hand used 15 strategies with high frequency and 15 strategies with moderate frequency. The males opted most for problem solving metacognitive reading strategies, followed by global reading strategies and rated the support reading strategies as their least preferred strategies. By way of contrast, females preferred the problem solving reading strategies and equally used the other two sub- strategies.

Griva (2012) delved into the area of gender and reading strategies. Through the 406 school students (199 females and 206 males), the researcher aimed to highlight the differences between males' and females' strategy employment. The data analysis showed that female students employed the metacognitive reading strategies more than the females.

Kashef, Damavand and Viyani (2012) explored the effect of Strategies-Based ESP Instruction (SBI) of reading comprehension on Iranian 24 male and 26 female students. The empirical study that is built on a pre-test, a fifteen- week treatment program and a post-test proved that the males and females improved their reading comprehension abilities almost equally; the means of the males was (M=75.5) and the means of the females was (M=74.1). To conclude, the instruction was quite successful in improving participants reading comprehension although no significant differences were found between the males and females.

Lee (2012) modified a 39-item questionnaire derived from the strategy taxonomy of Oxford (1990) to investigate males' and females' employment of reading strategies in general. The sample consisted of 156 participants (84 males and 75 females). The students were university freshmen with different majors. The results displayed that the male students employed less metacognitive strategies than the female participants. The data analysis depicted that there were significant differences between the male and female participants in the cognitive strategies ($t=70.19$, $p<.05$), compensation strategies($t=67.56$, $p<.05$), metacognitive strategies ($t=70.41$, $p<.05$) and social-affective reading strategies ($t=66.46$, $p<.05$).

Munsakorn (2012) carried out a quantitative study to investigate gender differences related to reading strategy use at Bagkok University. The 380 participants with different majors were asked to complete a 47-item questionnaire developed for this study. The study found no statistically significant difference in the reading strategies between males and females concerning the overall use of strategies and they did not even differ on any individual reading strategies.

Ghezlou, Kordi and Nasrabady (2014) investigated, beside other items, gender differences in Iranian English as a foreign language students' reading strategy use. The sample included 127 sophomore students majoring in English language and Literature. The 65 males and 62 females completed a reading strategy use questionnaire that proved the existence of no significant differences in the employment of reading strategies due to gender factors.

Lien (2014) carried out a study that tried to investigate the gender differences in the reading strategy use of EFL tertiary learners. The study was built on a sample of 411 Taiwanese students who were asked to

complete the Metacognitive Awareness of Reading Strategy Inventory (MARSI). Although no significant difference was found in the MASRI metacognitive reading strategy use, male and female participants proved to have significant difference in the use of support reading strategies. Male students employed support strategies less frequently than females students do. The highest employed support strategies by those female students were underlining information, reading out to help understanding, using dictionary, and translating English into Chinese.

Tavakoli (2014) explored the effect of gender on the use of metacognitive reading strategies of Iranian university EFL students. The researcher employed the Survey of Readong Strategies Questionnaire (SORS) and the semi-structured interview technique. The outcomes revealed that Iranian EFL students are moderate users of the metacognitive reading strategies. The strategies employed most were the support reading strategies followed by global and then problem solving support strategies. The study also certified that there were no significant differences due to gender.

Asgarabadi, Rouhi and Jafarigohar (2015) explored the effect of the learner's gender on reading strategy use when dealing with descriptive and narrative macro-genres. 50 EFL students (21 males and 29 females) furnished the sample for this study. The findings proved that there was no statistically significant differences between the male and female participants concerning the reading strategies utilized in the descriptive and narrative macro-genres. On the other side, no significant difference was noticed between the male and female participants' reading comprehension in those macro-genres.

Chen and Chen (2015) examined the metacognitive reading strategies employed by 1259 EFL students from 34 high schools in Taiwan. The large sample completed The Survey of Reading Strategies (SORS). The findings depicted a high awareness of reading strategy use and pointed out that the participants preferred the global reading strategies most, then problem solving strategies and giving the last frequency of use to the support strategies. Female participants were more frequent users of the reading strategies when compared to the male students in the sample.

Shikano (2015) conducted a quantitative study to investigate the effect of gender on reading strategy use. The 130 Japanese participants completed the Survey of Reading Strategies (SORS). The obtained results proved that males and females were upper- moderate users of problem-solving (M=3.45) more frequently than global strategies (M=3.38) and support reading strategies (3.10). The 58 female participants utilized problem solving reading strategies more than the 72 males. When it came to the areas of support and global reading strategies, no significant differences were traced.

In a contribution in this field made by Alami (2016), 200 Omani students studying at Salalah College of Technology completed the Metacognitive Awareness of Reading Strategies Inventory (MARSI). The 90 female and 110 male participants proved to be medium level users of the reading strategies (3.46). The problem solving strategies proved to be the strategies most used, followed by global strategies while the support strategies occupied the last place. Concerning the gender differences, female students used the metacognitive reading strategies more often (3.64) than male students whose frequency of use was (3.28). The problem solving strategies proved to be the strategies most used by the female students while males employed all three strategies equally.

Kocaman and Beskardesler (2016) conducted a study to examine the metacognitive awareness of reading strategies by language teaching students in Sakaraya University, Turkey. The sample consisted of 122 students (84 females and 38 males). The researchers employed the Metacognitive Awareness of Reading Strategies Inventory (MARSI) as an instrument to collect data. The results proved that the senior students utilized the reading strategies more immensely than the other levels of students. The participant students in general depicted a tendency towards employing the global reading strategies more than problem solving and support strategies. In addition, a significant difference was noticed between male and female students in both global and support reading strategy use. No statistically significant difference was traced in problem-solving strategy use.

The study by Mahasneh, Alkhawaldeh and Almakanin (2016) investigated the students' use of metacognitive reading strategies. The study which dealt with 148 undergraduates at the Hashemite University in Jordan employed the Metacognitive Awareness of Reading Strategies Inventory (MARSI). The findings demonstrated the fact that the participants highly utilized all of the metacognitive strategies with problem solving being the ones most used. No significant gender differences were noticed in this study.

Panchu, Bahuleyan and Seethalakshmi (2016) investigated the metacognitive awareness of reading strategies among medical students who are supposed to be skilled readers. Metacognitive Awareness of Reading Strategies Inventory (MARSI) was the data collection instrument employed in this study. The results depicted that the metacognitive awareness of reading strategies was high. The strategies most preferred were the Problem solving strategies. The students second favorite strategies were the support strategies followed by global reading strategies. The findings also demonstrated that females were better users of the metacognitive reading strategies in general, and they opted for the second two strategies more frequently than the male participants.

3.Methodology

3.1.Participants

The participants of this study consisted of 86 EFL students (37 males and 49 females) registered in the English 101 and English 102 service courses. The low to high proficiency participants ranged from freshmen to seniors and were majoring in different fields of study like English language and Literature, Law, Child Education, Business and Project Planning, Information Technology, Agricultural Technology, Physics, Mathematics, Chemistry, Engineering, Medical Analysis and Medicine. It is worth mentioning that the participants belong to different social and economic backgrounds. Their ages range between 18 and 22. The sample of the study was selected through random sampling, and was determined based on Sekaran and Bougie (2013) .

3.2. Instrument

The instrument employed in this study is The Survey of Reading Strategies (SORS) by Mokhtari and Sheory (2002). This questionnaire consists of thirty items divided into three subscales: global (represented by 13 items), support strategies (represented by 9 items) and problem solving strategies (represented by 8 items). As my colleagues recommended, there was no need for the questionnaire to be translated into Arabic since the language used in it is clear and simple. The Cronbach's Alpha was applied to guarantee the instrument reliability which mounted to (88.8) as a whole. For more clarity, the global reading strategies' reliability was (85.33), the problem solving reading strategies reliability was (89.2), and the reliability of the support strategies was (77.7). The lecturers were kind enough to administer the survey by asking the volunteers to complete the questionnaire in a process that took 15 minutes. Almost all the participants completed the survey. The researcher used (Cronbach alpha) to measure the stability of the measuring tool which is excellent; being higher than the acceptable 60%. (Miller, 2013).

3.3.Data Analysis and Characteristics of the Sample

The Statistical Package for the Social Science (SPSS.Ver.20) was used for analyzing the data and testing of study questions.

Characteristics of the study sample in terms of gender are illustrated in **Table (1).**

Table (1): Demographic Characteristics of Study Sample (Gender)

Gender	Frequency	Percentage
Male	37	43.1 %
Female	49	56.9 %
Total	**86**	**100.0%**

Table (1) shows that 56.9 % of respondents were females and the rest were males and **Figure (1)** shows this percentage.

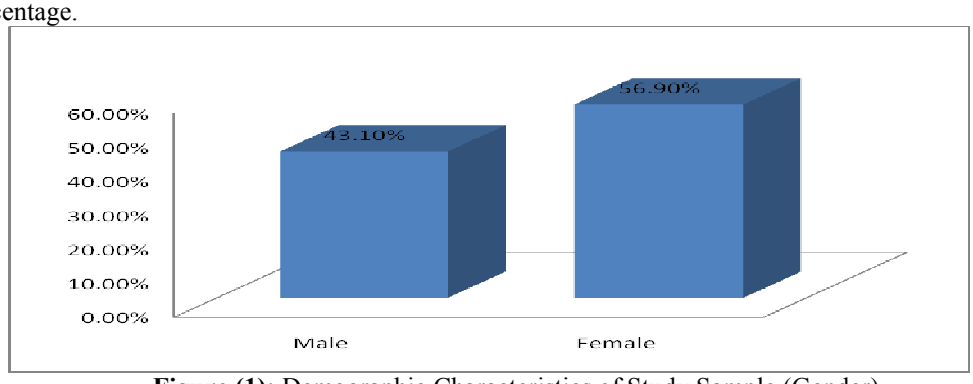

Figure (1): Demographic Characteristics of Study Sample (Gender)

Results :

Q1: Are there gender differences in the frequency of the reading metacognitive strategy use among Al-Balqa Applied University students?

In order to identify the answer to this question, the arithmetic mean and the standard deviation of each strategy were identified. The computational medium was also identified for each of the strategic items, which were arranged in a descending order. Tables (2) and (3) show the arithmetic mean and the standard deviations of each item and strategy

(Table 2): Mean and Standard Deviation for the three meta-cognitive reading strategies

Gender		Problem solving	Support	Global
Male	**Mean**	3.7207	3.6689	3.5290
	N	37	37	37
	Std.Deviation	.5984	.6293	.5572
Female	**Mean**	3.7653	3.4745	3.4665
	N	49	49	49
	Std. Deviation	.4601	.6219	.5343
Total	**Mean**	3.7461	3.5581	3.4934
	N	86	86	86
	Std. Deviation	.5213	.6289	.5420

It is noted from the previous table that the highest strategy used by males was Problem Solving (M=3.7207, S.D.=0.5984), and the least strategy used by males is the Global subcategory (M=3.5290, S.D.=0.5572).

The females participants depicted the same results with the highest strategy used was Problem Solving (M=3.7653, S.D.=0.4601). The least strategy used by females is the Global (M=3.4665,S.D.=0.5343).

To conclude, the highest strategy used by males and females is problem solving (M=3.7461, S.D.=0.5213) and the least strategy used is the Global subcategory (M=3.4934, S.D.=0.5420).

Table 3: Mean & Standard Deviations for each strategy

Strategy	Phrase	Mean	Std. Deviation
Strategies used with high frequency			
Problem solving	7-I read slowly and carefully to make sure I understand what I am reading.	4.1977	.9433
Support	10- I underline or circle information in the text to help me remember it .	4.1047	1.0293
Problem solving	25-When text becomes difficult, I re-read it to increase my understanding .	4.0349	.9634
Problem solving	14-When text becomes difficult, I pay closer attention to what I am reading.	3.9767	1.0735
Problem solving	9-I try to get back on track when I lose concentration.	3.9651	1.0895
Global	17- I use context clues to help me better understand what I am reading.	3.7791	1.0561
Global	23- I check my understanding when I come across new information.	3.7209	1.0809
Problem solving	19-I try to picture or visualize information to help remember what I read .	3.7093	1.1153
Support	18-I paraphrase(restate ideas in my own words) to better understand what read .	3.6977	1.1279
Global	20-I use typographical features like bold face and italics to identify key information .	3.6861	1.1141
Global	1-I have a purpose in mind when I read.	3.6860	1.2296
Problem solving	11-I adjust my reading speed according to what I am reading.	3.6512	1.0929
Global	3- I think about what I know to help me understand what I read.	3.6163	1.1290
Global	6-I think about whether the content of the text fits my reading purpose.	3.6112	1.2732
Support	13-I use reference materials (e.g, dictionary) to help me understand what I read .	3.6047	1.2393
Global	21-I check my understanding when I come across new information.	3.5930	5.7423
Global	24-I try to guess what the content of the text is about when read .	3.5233	1.2530
Support	29-When reading I translate from English into my native language.	3.5581	1.2797

Support	30-When reading, I think about information in both English and my mother tongue .	3.5116	1.3612
Strategies used with medium frequency			
Problem solving	28-When I read, I guess the meaning of unknown words or phrases.	3.4778	1.0252
Global	4- I take an overall view of the text to see what it is about before reading it .	3.4767	1.2149
Problem solving	16-I stop from time to time and think about what I am reading.	3.4535	1.1848
Support	26-I ask myself equations I like to have answered in the text.	3.4186	1.1320
Support	2-I take notes while reading to help me understand what I read.	3.4070	1.2212
Global	27-I check to see if my guesses about the text are right or wrong..	3.3837	1.1598
Support	5-When text becomes difficult, I read aloud to help me understand what I read.	3.2907	1.3536
Support	22-I go back and forth in the text to find relationship among ideas in it.	3.2900	1.3214
Global	8-1 review the text first by noting its characteristics like length and organization.	3.2442	1.3279
Global	12-When reading, I decide what to read closely and what to ignore.	3.2093	1.1794
Global	15-I use tables, figures, and pictures in text to increase my understanding .	3.1860	1.2416

It can be understood from the previous table that the two highest utilized strategies were "I read slowly and carefully to make sure I understand what I am reading" (M=4.1977, S.D.=0.9433) followed by "I underline or circle information in the text to help me remember it" (M=4.1047, S.D.=1.0293). The two least utilized strategies are "I use tables, figures, and pictures in text to increase my understanding" (M=3.1860, S.D.=1.2416), and "When reading, I decide what to read closely and what to ignore" (M=3.2093, S.D.=1.1794).

Table 4: Independent Samples T-Test for identification (Are there gender differences in the frequency of the reading metacognitive strategy use among Al-Balqa Applied University students)?

Gender Section	Male (N= 37)		Female (N=49)		T	Sig
	Mean	S.D	Mean	S.D		
Problem	3.7207	0.5984	3.7653	0.4601	0.391	0.123
Support	3.6689	0.6293	3.4745	0.6219	1.428	0.582
Global	3.5290	0.5572	3.4665	0.5343	0.527	0.974

Table 4: shows that there are no significant statistical differences at ($\alpha \leq 0.05$) level in the frequency use of metacognitive strategies among Al-Balqa Applied University students due to gender.

Q2: Are there significant differences in the metacognitive reading strategies employed by EFL students at Al-Balqa Applied University?

In order to identify the answer to this question, the study extracted the arithmetic mean and the standard deviation of the three strategies (Global, Problem Solving, Support), and the arithmetic mean and the standard deviation of each subcategory can be presented as follows:

Table (3): Use of metacognitive reading subcategories

Metacognitive Reading Subcategories	Mean	Standard deviation (S.D)	Level
The first Subcategory: Global	3.5169	1.5392	High
The Second Subcategory: Problem solving	3.8081	1.0610	High
Third Subcategory: Support	3.5393	1.2301	High

It is noted from the previous table that there are differences in the arithmetic mean with respect to the three metacognitive reading strategy subcategories. In order to identify differences in the strategy use, one-way ANOVA was used. The findings are illustrated in **Table (4)**.

Table (4): One Way ANOVA for strategy category

Items	Sum of Squares	Mean Square	df	F	Sig.
Between Groups	22.846	.286	80	5.711	.029*
Within Groups	.250	5.000E-02	5		
Total	23.096		85		

* significant at the level ($\alpha \leq 0.05$)

Table 4: shows that there are significant statistical differences at the level ($\alpha \leq 0.05$) for Problem and Support Strategy, Global Strategy. Thus, there are differences in the metacognitive reading strategies employed by male and female EFL students at Al-Balqa Applied University.

In order to identify the differences, the test (Scheffe) was used, as shown in the following table.

Table (5) Scheffe test for the metacognitive reading strategy use across the three subcategories (Global, Support and Problem solving)

(I)strategy	(J) strategy	Mean Difference (I-J)	Std. Error	Sig.
Problem solving	Global	0.30742*	0.0421	0.002
	Support	0.42514*	0.05031	0.000
Global	Problem solving	-0.30742*	0.0421	0.002
	Support	0.14139	0.5668	0.068
Support	Problem solving	-0.42514*	0.05031	0.000
	Global	-0.14139	0.5668	0.068

Table (5) shows that there are statistically significant differences at the level of ($\alpha \leq 0.05$) in the responses of the sample members concerning the use of the metacognitive reading strategies in favor of the Problem solving strategy.

5. Conclusions

In the light of the findings of the statistical analysis of the study questions, the study findings showed that there are no significant statistical differences at ($\alpha \leq 0.05$) level between reading metacognitive strategies' use among Al-Balqa Applied University students due to the demographic variable (gender), while differences in the use of metacognitive reading strategies employed by EFL students at Al-Balqa Applied University were noticed and they were in favor of the Problem solving metacognitive reading strategies.

6. Discussion

The data analysis of the first question of the study dealing with whether there are gender differences in the frequency of the reading metacognitive strategy use among Al-Balqa Applied University students proved that males and females employed all the strategies with the same degree of frequency. The male and female participants proved to be high users of the overall strategies (problem solving: M=3.8081 and S.D. 1.0610, support strategies: M= 3.5393 and S.D. 1.2301, global: M=3.5169 and S.D.1.5392). These results are consistent with previous studies like Lien (2014) and Poole (2005) whose participants proved to be high users of the overall strategies with no significant frequency differences due to gender. The findings of the current study also support the results reached by Munsakorn (2012), Mahasneh, Akhawaldeh and Almakanin (2016) and Shikano (2015) proving their sample participants to be high users of the metacognitive reading strategies with no gender differences traced in the frequency of use. Other studies with similar findings are Ghezlou, Kordi and Nasrabady (2014) as well as Asgarabadi, Rouhi and Jafarigohar (2015). The findings of this study do not support the findings of some studies, however. Lee's (2012) study displayed that the male participants employed less metacognitive strategies than the female participants who also employed different strategies. Sheory and Mokhtari (2001), Marteniz (2008),Poole (2009) and Alami (2016) proved their male participants were less frequent users of the metacognitive reading strategies than the female participants.

Concerning the second question which tackles the point whether there are differences in the metacognitive reading strategies employed by EFL students at Al-Balqa Applied University, it was proved that both males and females proved to be high users of the overall strategies (Table 5) and employed the three subcategories in the same order. They placed problem solving strategies as the strategies most frequently used (M=3.8081, S.D=1.0610), followed by support strategies (M=3.5393, S.D.1.2301). Global strategies were the least strategies utilized (M=3.5169, S.D.=1.5392). This result confirmed previous studies like Poole (2005), Munsakorn (2012), Tavakoli (2014), Asgarabadi, Rouhi and Jafarigohar (2015), Shikano (2015), Mahasneh, Alkhawaldeh and Almakanin (2016) whose participants reported no significant differences in the order of the subcategories employed due to gender. On the other hand, the current study is not consistent with studies that confirm gender effect on the use of the reading subcategories like Poole (2009) whose male participants opted for problem solving strategies most and ranking support strategies as the least preferred. By contrast, the females

preferred the problem solving strategies and equally employed the other two subcategories. Sheory and Mokhtari (2001), Marteniz (2008), Griva (2012), Chen and Chen (2015) and Panchu, Bahuleyan and Seethalakshmi (2016) report results that were not supported by the findings of this study. The present study is also inconsistent with Kocaman and Beskardesler (2016) who reported a significant difference between male and female students in both global and support reading strategy use.

As mentioned before, the results of this paper point that problem solving strategies were the most frequently used strategies by the sample participants, followed by support strategies and ranking the global strategies as the least favorite ones. This result, especially the rating of the problem solving strategies at the top support previous studies like Alsheikh 2002; Alsheikh and Mokhtari 2011; Mokhtari and Riechard 2002; Alami (2016) and Magogwe (2013). The results of the current study do not accord with other previous studies, however. Jafari's and Shokrpour's (2012) and Sheory's and Mokhtari's (2001) participants ranked global strategies as the most frequently employed strategies and support strategies as the least preferred ones. The findings of this study point out that although the sample students are high users of the overall metacognitive reading strategies, they still need to enhance their use of certain support and global strategies as clarified below.

Among the top five reading strategies used, as illustrated in (Table 3), four are problem solving and one is within the support strategies subcategory. " I read slowly and carefully to make sure I understand what I am reading" is the most frequently employed problem solving strategy (M=4.1977, S.D=.9433), followed by the "I underline or circle information in the text to help me remember it" support strategy (M=4.1047, S.D.=1.0293). The top five list goes on with the three problem solving strategies; "When text becomes difficult, I re-read it to increase my understanding" (M=4.0349,S.D.=.9634), "When text becomes difficult, I pay closer attention to what I am reading" (M=3.9767, S.D.=1.0735) and "I try to get back on track when I lose concentration" (M=3.9651,S.D.=1.0895).

Two of the five least frequently utilized strategies are within the support strategies subcategory; "When text becomes difficult, I read aloud to help me understand what I read" (M=3.2907, S.D.=1.3536), "I go back and forth in the text to find relationship among ideas in it" (M=3.2900, S.D.=1.3214). The three least used strategies ever belong to the global strategies subcategory. "I review the text first by noting its characteristics like length and organization" (M=3.2442, S.D.=1.3279), "When reading, I decide what to read closely and what to ignore" (M=3.2093, S.D.=1.1794) and "I use tables, figures, and pictures in text to increase my understanding" (M=3.1860, S.D.=1.2416).

These findings are satisfying especially because the "When reading, I translate from English into my native language" and "When reading, I think about information in both English and my mother tongue" support strategies are not ranked among the five most frequently used strategies. In fact, they are ranked as the eighteenth (M=3.5581,S.D.=1.2797) and nineteenth (M=3.5116,S.D.=1.3612) favored items. However, other items need to be enhanced to make Al-Balqa Applied University EFL leaners more active readers. For example, the least used strategy "I use tables, figures, and pictures in text to increase my understanding" needs to be given more attention by teachers because if students are properly trained to use these aids, they will minimize the time they need for understanding a reading text. Another strategy that needs more training is "When reading, I decide what to read closely and what to ignore" is also ranked among the five least frequently utilized strategy. If students are given enough training concerning how to use this strategy, this will guarantee a better time management opportunity and better understanding chances. The "I take notes while reading to help me understand what I read" support strategy (M=3.4070, S.D.=1.2212) is very important and EFL students should be advised to use it more often because it enhances their writing and paraphrasing skills, in addition to the fact that most of what students read these days is online material which leaves fewer chances for the highly ranked underlining and circling important information strategy. "When I read, I guess the meaning of unknown word or phrases" problem solving strategy (M=3.4778,S.D.=1.0252) is another strategy that needs more in-class training and attention especially because the sample students do not rank the "I use reference materials (e.g, dictionaries) to help me understand what I read" support strategy (M=3.6047, S.D.=1.2393) among the five most frequently employed metacognitive reading strategies.

7. Recommendations

The area of metacognitive reading strategies still needs more serious study. Understanding what metacognitive reading strategies our EFL learners employ should go beyond the surface level of theoretical ink and paper borders. In fact, it should dive deeper to make changes in affect the procedures and teaching strategies that actually take place in any EFL reading class in Jordan. Curricula planners should take the findings of these studies into consideration and check that while certain strategies need to be strengthened, others like "When reading, I translate from English into my native language" need to be totally avoided.

EFL learners should be encouraged to rely more on different problem solving strategies The problem solving reading strategies should be encouraged because they can be developed into skills that can live with the learners, And in the light of the above mentioned results, the researcher would propose a number of

recommendations, namely:

1. The need to conduct more research about the subject of this study.
2. Preparing and recruiting teachers who can efficiently train students to use the different metacognitive reading strategies.

Reference

Akkararitwutthikun, S. (2013). A Survey to Assess Students' Metacognitive Awareness of Reading Strategies Used by the Master of Arts Program in English for Careers, Thammasat University. The 2nd LITU International Graduate Conference.

Alami, M. (2016). Cross-gender Comparison of Metacognitive Strategies Utilized by Omani Students in Reading Comprehension Classes. *International Journal of Applied Linguistics and English Literature,* Vol.5, No. 4

Al-Sheikh, N. (2002). An Examination of the Metacognitive Reading Strategies Used by Native Speakers of Arabic When Erading Academic Texts in Arabic and English. Doctoral dissertation. Oklahoma State University.

Alsheikh, N., Mokhtari, K. (2011). An Examination of Metacognitive Reading Strategies Used by Native Speakers of Arabic When Reading in English. *English Language Teaching*, Vol. 4., Issue 2.

AL-Alwan, A. (2012). The Effect of Using Metacognition Reading Strategies on the Reading Comprehension of Arabic Texts. *IJAES.* Vol. 13, No. 2.

Asgarabadi, Y., Rouhi, A. and Jafarigohar, M. (2015). Learner's Gender, Reading Comprehension, Reading Strategies in Descriptive and Narrative Macro-genres. *Theory and Practice in Language Studies,* Vol. 5, No. 12

Chang, D. (2005). Comparing the Effects of Traditional vs. non-traditional Reading Instruction on Level of Reading Comprehension Use of Metacognitive Strategies in EFL Learners in Taiwan. Doctoral Dissertation, La Sierra University.

Chen, K., Chen S. (2015). The Use of EFL Reading Strategies Among High School Students in Taiwan. *The Reading Matrix: An International Online Journal.* ol.15, NO. 2.

Darwish, I. (2017). Meta Cognitive Strategy Use: Off or ON in Online Readi International Conference on Literature, History, Humanities and Social Sciences LHHSS-17). Jan.1-2 Dubai (UAE).

Dundar, S. (2016). Determining EFL Students' awareness of Metacognitive Reading Strategies. *ELT Research Journal. Vol.5, Issue 1.*

Ghezlou, M., Kordi, L. and Nasrabady, A. Gender Differences in Reading Strategy Use, Reading Self-Efficacy, and Perceptual Learning Styles Among EFL Learners. *International Journal of Language Learning and Applied Linguistics World,* Vol. 5 (1).

Griva, E. (2012). Reading Preferences and Strategies Emloyed by Primary School Students: Gender, Socio-Cognitive and Citizenship Issues. *International Education Studies,* Vol. 5, No. 2

Jafari, S., Shokorpour, N. (2012). The Reading Strategies Used by Iranian ESP Students to Comprehend Authentic Expository Texts in English. *International Journal of Applied Linguistics and English Literature.* Vol.1, No. 4

Kashef, S., Damavand, A. and Viyani, A. (2012). Strategies-Based ESP Instruction (SBI) of Reading Comprehension: Male vs. Female Students. *International Journal of Education, Vol. 4, No. 2*

Kocaman, O., Beeskardesler. (2016). Meta cognitive Awareness of Reading Strategy Use by English Language Teaching Students in Turkish Context: Sakaraya University Sample. *Sakaraya University Journal of Education.* 6/2

Lee, M. (2012). A Study of the Selection of Reading Strategies among Genders by EFL College Students. *International Educational Technology Conference*, published by Elsevier.

Lien, H. (2014). Reading Strategy Awareness of English Major Students. *International Journal of Social, Behavioral, Economic, Business and Industrial Engineering.* Vol. 8, No. 8.

Mahasneh,A., Alkhawaldeh M.,Almakanin,H. (2016). Assessing Students' Metacognitive Awareness Reading Strategies in Jordan. *North American Journal of Psychology*. Vol.18 Issue 2.

Magogwe, J. (2013). Metacognitive Awareness of Reading Strategies of University of Botswana English as a Second Language Students of Different Academic Reading Proficiencies. *Reading and Writing, 4 (1)*

Martinez, A. (2008). Analysis of ESP University Students' Reading Strategy Awareness. *Iberica*, vol.15

Miller,D. (2013). Measurement by the Physical Educator, Why and Low, (3rd ED) Indianapolis, Indiana, WM. C. Brown Communication, INC.

Mokhtari, K. and Reichard, C. (2004). Investigating the Strategic Reading Processes First Language Readers in Two Different Cultural Contexts. *System, 32.*

Mokhtari, K., Sheory, R.(2002). Measuring ESL Students' Awareness of Reading Strategies. *Journal of Developmental Education.*Vol.25, No.3.

Munsakorn, N. (2012). Awareness of Reading Strategies among EFL Learners at Bagkok University. *International Journal of Social, Behavioral, Educational, Business and Industrial Engineering.* Vol. 6, No. 5

Nasri, M., Biria,R.(2017). Integrating Multiple and Focused Strategies for Improving Reading Comprehension and L2 Lexical Development of Iranian Intermediate EFL Learners. *International Journal of Applied Linguistics and English Literature*, Vol 6, No 1 (2017)

Oxford, R..L., and Ehrman, M (1995), Assessing the use of language learning strategies worldwide with EFL/ESL version of the Strategy Inventory for Language Learning (SILL), System, 23(1):1-23.

Panchu, P., Bahuleyan, B., Seethalakshmi, K. (2016). Evaluation of Metacognitive Awareness. Journal of Research in Medical and Dental Science. Vol. 4, Issue 3.

Poole, A. (2005). Gender Differences in Reading Strategy Use Among ESL College Students. *Journal of College Reading and Language, 36 (1)*

Poole , A. (2009). The Reading Strategies Used by Male and Female Colombian University Students. *Profile Issues in Teachers' Professional Development.* Profile no. 11.

Sekaran, U & Bougie, R., (2013), Research Methods For Business: A Skill –Building Approach, 6th, John Wiley & Sons.

Shikano, M. (2013). A Quantitative Survey on Metacognitive Awareness of Reading Strategy Use in English by Japanese University Students. *International Education Centre Journal.* Vol. 14.

Sheory, R. Mokhtari, K. (2001). Differences in the Metacognitive Awareness of Reading Strategies Among Native and Non-native Readers. *System, Vol.29, Issue 4.*

Tavakoli, H. (2014). The Effectiveness of Metaognitive Strategy Awareness in Reading Comprehension: The Case of Iranian University EFL Students. *The Reading Matrix,* vol. 14, no.2

Appendix

The Survey of Reading Strategies (SORS)

Gendre : ☐*Male* ☐*Female*

Phrase	**I never or almost never (1)**	**Only occasionally (2)**	**I sometimes (3)**	**I usually (4)**	**Always or almost always (5)**
1-I have a purpose in mind when I read.					
2-I take notes while reading to help me understand what I read.					
3- I think about what I know to help me understand what I read.					
4- I take an overall view of the text to see what it is about before reading it .					
5-when text becomes difficult, I read aloud to help me understand what I read.					
6-I think about whether the content of the text fits my reading purpose.					
7-I read slowly and carefully to make sure I understand what I am reading.					
8-I review the text first by noting its characteristics like length and organization.					
9-I try to get back on track when I lose concentration .					
10-I underline or circle information in the text to help me remember it .					
11-I adjust my reading speed according to what I am reading.					
12-When reading, I decide what to read closely and what to ignore.					
13-I use reference materials (e.g, dictionary) to help me understand what I read .					

14-When text becomes difficult, I pay closer attention to what I am reading.					
15-I use tables, figures, and pictures in text to increase my understanding .					
16-I stop from time to time and think about what I am reading.					
17-I use context clues to help me better understand what I am reading.					
18-I paraphrase(restate ideas in my own words) to better understand what read .					
19-I try to picture or visualize information to help remember what I read .					
20-I use typographical features like bold face and italics to identify key information .					
21-I check my understanding when I come across new information.					
22-I go back and forth in the text to find relationship among ideas in it.					
23-I check my understanding when I come across new information.					
24-I try to guess what the content of the text is about when read .					
25-When text becomes difficult, I re-read it to increase my understanding .					
26-I ask myself equations I like to have answered in the text.					
27-I check to see if my guesses about the text are right or wrong..					
28-When I read, I guess the meaning of unknown words or phrases.					
29-When reading I translate from English into my native language.					
30-When reading, I think about information in both English and my mother tongue .					