

Libyan Secondary School Students' Metacognitive Online Reading Strategies and Their English Language Performance

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ABSTRACT: *This study investigates the relationship between metacognitive online reading strategies and English language performance of EFL Libyan secondary school students. It explores the use of metacognitive online reading strategies by EFL Libyan secondary school students and identifies the problems that these students encounter while reading online. This study used mixed method design, both quantitative (questionnaire) and qualitative (interview). Data analysis was done using SPSS version 20.0 for quantitative data and Nvivo version 10 for qualitative data. The results showed that there is a positive significant relationship between metacognitive online reading strategies and English performance of EFL Libyan secondary school students. The study also found that the participants are moderate users of metacognitive online reading strategies and they face problems while reading online. The study suggests that teachers teach the metacognitive online reading strategies to students to improve their online reading process and help them to get the benefits of online sources in less time with less effort, which will be reflected positively in their English language performance.*

Keywords: *metacognitive online reading strategies, English language performance*

I. INTRODUCTION

English language has become widely used as an international medium and it has been the world's language of education, commerce, communication, science, technology, and the most widely studied, read, and spoken foreign language (Flowerdew & Peacock, 2001). Language learning occurs through the application of four skills such as listening, speaking, writing, and specifically reading. Yousefvand & Lotfi (2011) claim that reading skill is very important because what needed to be known, especially in the academic context is viewed in written mode. They also added that effective reading is critical for long-term learning and particularly important for students' academic purposes. Carrell et al. (1988) stated that, for students in second and foreign language context, effective reading in English is critical at advanced level of proficiency and for academic English purposes.

In the light of the above, Gilakjani et al. (2011) stated that online learning environment gets more popular among learners. In the context of language learning, online reading has an impact on learning enhancement and it increases the importance of creating new instructions and investigation of new reading strategies that can affect reading comprehension. Meng (2009) supports this idea by saying that most learners read for the purpose of education, information, and occupation. Dail (2003) argues that the important thing to be adopted by the new technology users is the widespread use of internet and World Wide Web (WWW) which makes an up-dated environment for the learners.

In the context of learning English as a second and foreign language, more and more L2 classrooms are involving learners in online learning tasks (Ioannou-Georgiou, 2002) including online reading (Omar, 2014) which has become an issue for discussion in educational and English as a second and foreign language fields (Omar, 2014). Akyel & Erçetin (2009) and İnceçay (2013) claimed that reading online requires separate skills and different strategies other than those used in offline reading texts to achieve a better understanding of online texts.

In the Libyan context, the government policy statements explained in detail the aims of education in Libya. The curriculum was designed to cover all the activities that promote the moral, cultural, intellectual, and physical development of students, and must prepare them for the opportunities, responsibilities, and experiences of life and society (The General People's Committee of Education, 2008). The policy is being followed up and implemented. With the technological developments, educational materials and curricula have been updated to set the grounds for building updated generation to meet these developments and create active contributors to development of Libya (The General People's Committee of Education, 2008).

In Libyan context, information and communication technology (ICT) started to be introduced into education to develop and modernize the entire educational process, including curricula development which is an

essential factor in the country overall development plans, but it is still in an early stage and faces many challenges in terms of the full implementation of ICT and E-learning in teaching and learning (Rhema & Miliszewska, 2010). English language which is a part of Libyan curriculum is taught as a foreign language, and the purpose of learning English is for effective communication. In Libyan schools, EFL teaching practices are still away from teaching reading skills and strategies. EFL teachers spend the time devoted for reading in practicing only one reading skill which is "silent reading", which made a huge gap between the world's rapid movement toward teaching online reading skills and strategies, the movement towards E-learning in Libya and the reality of English reading practises in Libya. Students at Libyan schools encounter problems in learning including reading in English, due to many factors but learning strategies including reading strategies and metacognitive online reading strategies are the most important factors (Elmadwi & Shepherd, 2015). Rhema and Miliszewska (2010) stated that there must be special training for Libyan students to raise their ICT awareness and its uses which will motivate students to learn, enhance the knowledge, and establish necessary skills for their performance.

In the light of the above arguments, the present study seeks to find whether there is a relationship between metacognitive online reading strategies used by EFL Libyan secondary school students and their English language performance. In addition, it addresses the perceptions of EFL Libyan secondary school students in the application of metacognitive online reading strategies and it also explores the problems that they encounter when they read online.

II. RESEARCH OBJECTIVES

In the light of the above research problem, the following research objectives were formulated.

- To investigate the use of Metacognitive Online Reading Strategies by EFL Libyan secondary school students.
- To discover whether there is a relationship between the use of metacognitive online reading strategies and English language performance of EFL Libyan secondary school students.
- To investigate the problems encountered by EFL Libyan secondary school students in using online reading strategies.

For the purpose of the current research, the above research objectives were the basis for the following research questions.

III. RESEARCH QUESTIONS AND HYPOTHESES

- 1- What are the metacognitive online reading strategies that EFL Libyan secondary school students use when reading online?
- 2- Is there a significant relationship between metacognitive online reading strategies used and English language performance of EFL Libyan secondary school students?
- 3- What are the problems encountered by EFL Libyan secondary school students while reading online?

In order to facilitate the present research, the following hypotheses were formed:

H₀1: There is no significant relationship between the overall metacognitive online reading strategies used and English language performance of EFL Libyan secondary school students.

H₀2: There is no significant relationship between the global online reading strategies used and English language performance of EFL Libyan secondary school students.

H₀ 3: There is no significant relationship between the problem solving online reading strategies used and English language performance of EFL Libyan secondary school students.

H₀ 4: There is no significant relationship between the support online reading strategies used and English language performance of EFL Libyan secondary school students.

IV. LITERATURE REVIEW

According to Pritchard (2007), reading is one of the most important skills that plays a specific role in learning. The author also claimed that effective reading is crucial for the learners with the purpose of comprehension for academic purposes. As technology comes along with the educational system, it adds more advantages to learning situations where L2 learning is a part of it. The integration of reading with computer-mediation, supports learners to improve their reading skills and strategies (Stakhnevich, 2002). Internet provides variety and authenticity in texts that supports the development of L2 reading skills and strategies among learners (Kasper, 2000).

On the other hand, Coiro (2003) claimed that implementing technology in L2 learning setting; create challenges that can affect learners' ability to comprehend the text. Hobbs (2006) stated that L2 learners face some problems when comes to applying reading strategies to the internet-based materials. The author added that

L2 learners need to learn strategies in reading to critically evaluate and comprehend online reading texts. This made researchers investigate different strategies that can help learners to read online text.

Anderson (2003) conducted a study to investigate the online reading strategies of L2 readers both in ESL and EFL reading environments. One hundred and thirty one (N=131) EFL students from Utah and one hundred and sixteen (N=116) ESL students from Costa Rica participated in this study. The author adopted the Survey of Reading Strategies (SORS) instrument to measure the metacognitive reading strategies of L2 readers while reading printed academic texts (Sheorey & Mokhtari, 2001). Thus, based on SORS, the writer developed Online Survey of Reading Strategies (OSORS) to measure the metacognitive reading strategies used by EFL and ESL readers in the context of online environments. The instrument consists of 38 questions which are divided into three categories like SORS: global reading strategies (18 items), problem solving strategies (11 items), and support strategies (9 items). The study shows that the second language readers used a lot of problem solving strategies, eight of the top 12 strategies (67%). The result shows that there is no significant difference in the use of overall OSORS between the EFL and the ESL groups but EFL readers use problem solving strategies more frequently than did the ESL readers.

Pookcharoen (2009) investigated the metacognitive online reading strategies use for academic purposes among hundred and eleven (N=111) Thai EFL students from different majors using mixed methods, i.e. quantitative and qualitative approaches. The results showed that the proficient readers differed from the less proficient readers in terms of frequency and quality of use. It was also revealed that the less proficient reader group struggled with overwhelming vocabulary leading to inaccurate understandings of the online academic texts. In addition, compared with the proficient reader group, the less proficient group had more difficulty regarding grammatical structures, text length and organization, and text evaluation. Amer, Al Barwani & Ibrahim (2010) conducted a study to investigate the Online Reading Strategies of Omani EFL students in Oman. Karbalaei (2010) conducted a study in an Indian setting to investigate the differences between EFL (Iranians) and ESL (Indians) readers in the context of using metacognitive reading strategies. The result of this study revealed that although the two groups represent different socio-cultural environments, the subjects in both groups reported similar strategy awareness while reading academic materials. Indians reported more use of metacognitive reading strategies than Iranians.

Vaičiūnienė & Užpaliėnė (2013) conducted a study in Lithuania to identify the metacognitive online reading strategies employed by eighty nine (N= 89) students. The authors aimed to discover the interrelation between online reading strategies and metacognitive awareness among the participants. Data was collected using a quantitative tool using "Online Survey of Reading Strategies" (OSORS). The survey showed that readers worked directly with the text to solve problems while reading online. The results also indicated that a low score on any of the subscales of the inventory (i.e. Support strategies use) meant that there may be strategies in those parts that students were unaware.

Sitindaon, Wijaya, & Salam (2013) conducted a study to find out the level of metacognitive reading strategy use in online environment. The participants of this study were forty eight (N=48) sixth semester students of English Education Study Program in university setting in Indonesia. Data collection was done using the Online Survey of Reading Strategies (OSORS) questionnaire. The descriptive statistics was used to analyse the data. The results showed that the most preferable strategy used by the students was problem solving reading strategy. The data also revealed that 66.7% of students were moderate strategy users, 25 % were high strategy users, and 12.5% were low strategy users. This study indicated a need to improve student awareness of effective metacognitive online reading strategies.

İnceçay (2013) conducted a mixed method, both quantitative (questionnaire) and qualitative (Think Aloud Protocols and semi- structured Interviews) study among Turkish EFL students to investigate metacognitive online reading strategies use. The study aimed to show strategies used by EFL students for academic purposes and how they used the reported strategies in their actual reading tasks. For the quantitative part, the Online Survey of Reading Strategies (OSORS) questionnaire was used to gather data from thirty (N=30) students. For the qualitative part of this study, two (N=2) students participated in think-aloud protocols and post-reading interviews. This study showed that the participants reported a wide range of metacognitive strategies when reading online academic texts such as reference materials (i.e. online dictionaries), scrolling through the text, rereading for better understanding, guessing what the content is about and paying closer attention to reading. It was noted that students actually used most of the strategies they while they were reading online texts.

Eghlidi, Abdorrahimzadeh & Sorahi (2014) conducted a study in Iran to identify the type and frequency of online metacognitive reading strategies among 50 Iranian graduate EFL students when they encounter academic texts on the Internet. It also aimed to find out the differences in the type and frequency of metacognitive online reading strategies among proficient and less proficient learners. Data was collected using Survey of Online Reading Strategies (OSORS) with an adapted Internet use questionnaire, think-aloud sessions, and TOEFL reading comprehension test. The result showed that the proficient and less proficient groups

reported significant differences in applying eighteen (18) strategies. The respondents experienced difficulties in dealing with vocabulary when reading academic texts online.

Omar (2014) conducted a study to explore the use of metacognitive online reading strategies by thirty (N=30) Libyan postgraduate EFL students in Libya. Data was collected using the Online Reading Strategies (OSORS) questionnaire. The results of this study showed that the participants were moderate users of metacognitive online reading strategies. It also revealed that the most frequently reported strategy was problem solving strategies, while support reading strategies were the least.

Ostovar-Namaghi & Noghabi, (2014) also conducted a study to discover whether there are any significant differences between Iranian Master of Science (MSc) students perceived use of the metacognitive reading strategies when reading online text compared to printed academic text. Fifty four (N=54) MSc students of Gonabad University of Medical Sciences in Iran. Data collected using the demographic information sheet and two questionnaires, i.e., the survey of reading strategies (SORS) and the online survey of reading strategies (OSORS). The data were analysed using the SPSS software. The results showed that the participants were moderate users of metacognitive reading strategies while reading academic text in both online and printed form.

V. THEORETICAL FRAMEWORK OF THE STUDY

The current study is underpinned by two theories namely, the information processing theory and metacognitive theory. The information processing theory of learning is a cognitive approach that explains the process of transforming information inside the human mind. This theory flourished during cognitive in the late 1950's due to the invention of the computer to represent mental processes in comparison to that of a computer. There is no one certain theorist claims to have invented this theory as it is a result of many theorists' experimental researches about the human mind internal processes. Atkinson & Shiffrin (1968) redefined clearly this theory and called it the modal model. This theory says that information from the world around us moves across the eyes to the brain, the information which can be remembered, gets into the working memory to be saved for few seconds in the short-term memory. If the person decided to save or remember it, it will move to long-term memory, where memories are stored for a person to access later.

Applying this theory to the current study, in online environment, the reader come across many types of information that could be important or unnecessary to him/her, the information that is unnecessary come across the eyes to be saved in the short-term memory which can be deleted after seconds of exposing to it, but if the information is important, it comes across the eyes to be saved in the long-term memory of the brain. The reader decides which information is needed and which is not so that the brain can act automatically according to that. The question here is how does the reader choose the needed information quickly? The metacognitive theory is the answer.

Metacognitive theory is hypothesized by Flavell (1979). Flavell (1979) defined metacognition as a person's ability to control "a wide variety of cognitive enterprises occurs through the actions and interactions among four classes of phenomena: (a) metacognitive knowledge, (b) metacognitive experiences, (c) goals (or tasks), and (d) actions (or strategies)". Metacognition in education refers to people ability to monitor their cognitive process by using the four categories mentioned above.

Relating this theory to the current study, which focuses on EFL Libyan secondary students' use of metacognitive online reading strategies, metacognitive online reading strategies are described in the theory as actions that readers use to achieve metacognitive reading objectives by controlling thinking activities during reading to decide whether or not the cognitive reading goals are achieved.

Therefore, it will be beneficial to find out if these students' knowledge or beliefs about the factors that affect cognitive reading process "cognitive tasks (reading task), goals (aim of reading), actions or strategies (Metacognitive online reading strategies) and their experiences (internal responses), will lead these students to use metacognitive online reading strategies more effectively which will enhance their English language performance.

Mokhtari & Sheorey (2002) classified these strategies into three separated domains:

- 1- Global reading strategies: readers carefully plan their reading by using techniques such as having a purpose in mind and previewing text.
- 2- Problem solving strategies: readers work directly with text to solve problems while reading, such as rereading text.
- 3- Support strategies: readers supporting techniques to aid reading process such as using a dictionary and taking notes.

Mokhtari & Sheorey (2002) have used the strategies mentioned above to develop questionnaire statements to measure metacognitive reading strategies of L2 when reading printed academic materials and the instrument called the *Survey of Reading Strategies* (SORS).

The current study is on metacognitive online reading strategies use by EFL Libyan secondary school students in Malaysia and it uses the Online Survey of Reading Strategies (OSORS) developed by Anderson (2003) questionnaire to measure the metacognitive online reading strategies of the mentioned students. The following figure illustrates the theoretical framework of this study, (see figure 2.1),

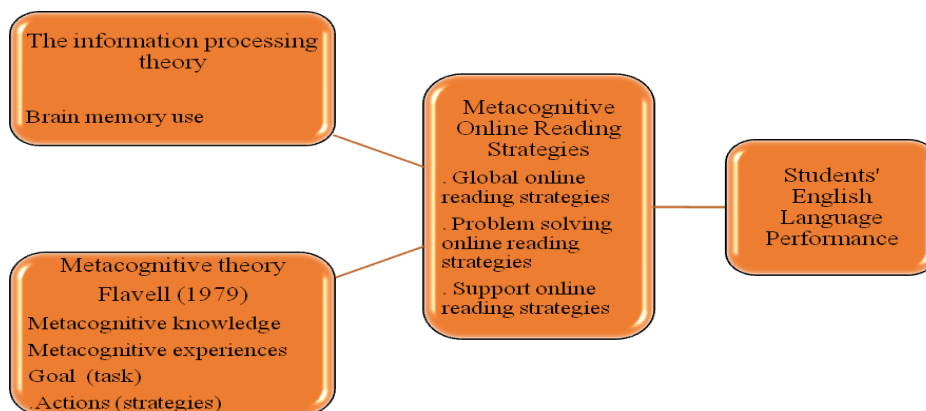


Figure 1.0 Theoretical Framework

As shown in the figure, the information processing theory and metacognitive theory Flavell (1979) are used as theories that underpin the study.

VI. METHODOLOGY

Research design

The current study uses a mixed method approach to collect data. This study shed a light on the use of Metacognitive Online Reading Strategies by EFL Libyan secondary school students and the problems encountered by them when they read online. This study followed the explanatory design, in which the qualitative results used to explain more and interpret the findings of the quantitative results (Creswell, 2013).

Population and sample

The sampling procedure was purposive sampling. The researcher selected 106 EFL Libyan first, second and third year secondary school students at two Libyan Schools in Malaysia for the purpose of the study. The sample consists of 49 male and 57 female students. Interviews were also conducted. The sampling procedure for the interview was purposive sampling. The purpose was to obtain unique and rich information of value to the study. Eight (N=8) students and three (N=3) teachers of Libyan secondary schools were interviewed to obtain more information about the problems that the students encounter when they read online and to get insight into possible suggestions to overcome the claimed problems, which was aimed at achieving the third objective of this study.

Research instruments

This study used two instruments namely, questionnaire and interview to collect data. The Online Survey of Reading Strategy (OSORS) which was created by Sheorey & Mokhtari 2001 was used in this study. OSORS is a list of thirty eight (N=38) items that measure metacognitive online reading strategies.

The second instrument is interview. Eight EFL Libyan secondary school students and their three teachers were interviewed to investigate the problems encountered by EFL Libyan secondary school students when they read online and how to deal with the claimed problems.

After piloting OSORS, the result of reliability test showed that the Cronbach's alpha of the overall Online Survey of Reading Strategies (OSORS) was high at .899 as shown in Table 1.0.

Table 1.0 The Overall OSORS Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.899	.900	38

Each interview was recorded using digital recorder (Samsung). Then, the recordings were transcribed manually according to what they said. After that, the transcriptions were entered into NVivo 10 for qualitative data analysis.

VII. RESULTS AND ANALYSIS

Q1: What are the metacognitive online reading strategies that EFL Libyan secondary school students use when they read online?

The descriptive analysis using the mean and standard deviation of the three domains of metacognitive online reading strategies namely, global, problem solving and support were done to explore the most and the least domain used by EFL Libyan secondary school students when they read online.

Table 2.0 The Domains Descriptive Statistics

	N	Mean	Std. Deviation
Problem Solving Strategies	106	3.2950	6.46870
Global Strategies	106	3.2872	10.09618
Support Strategies	106	3.1950	5.53570

As shown in table 2.0, the mean and the standard deviation were calculated for each domain average to compare between them in terms of use. Anderson (2003) stated that the OSORS is scored on a five point Likert scale. The score which is 2.4 or below is considered low strategy use, 2.5 to 3.4 indicates moderate strategy use, and 3.5 or above represents high strategy use.

As it is noted in table 2.0, the first item (problem online reading strategies) domain recorded the highest mean score at 3.2950, which indicates that this domain is the most used by EFL Libyan secondary school students when they read online and the standard deviation were 6.46870, which means that students' responses is distributed at 6.46870 point from the mean. The second domain namely, global online reading strategies recorded the medium score upon the three domainsat mean score of 3.2872, which indicate that EFL Libyan secondary school students were moderate users of this domain when they read online. The students' responses to this domain are distributed at standard deviation of 10.09618. The last domain namely, support online reading strategies has obtained the lowest score at 3.1950 mean point, which indicates that this domain is the least used domain by EFL Libyan secondary school students when they read online. The standard deviation is 5.53570, indicating the distribution of students' responses from the mean for this domain. These results concluded that the most used domain was global online reading strategies and the support online reading strategies domain was the least used by EFL Libyan secondary school students. Comparing the mean results of each domain with the strategies used scale that was proposed by Anderson (2003), it can be concluded that the students who participated in the study were moderate users of metacognitive online reading strategies domains.

Q2- Is there a significant relationship between metacognitive online reading strategies and English language performance of EFL Libyan secondary school students?

In order to answer the second research question, the sum of the overall online reading strategies and the sum of each domain were calculated, then correlated separately with English score of each student. Data analysis using Pearson correlation was done to discover whether there is a significant relationship between Overall Metacognitive Online Reading Strategies used and English Language performance of EFL Libyan secondary school students. It was also done to each domain to specify which of the domains has a significant relationship with English language performance. Correlation analysis was also done to decide whether to accept or reject the research hypotheses.

H₀₁: There is no significant relationship between the overall metacognitive online reading strategies used and English language performance of EFL Libyan secondary school student.

The result of the correlation analysis of the Overall Metacognitive Online Reading Strategies with students' English scores is showed in Table 3.0.

Table 3.0 Overall strategies and English score Correlation

		Overall strategies	English score
Overall strategies	Pearson Correlation	1	.298**
	Sig. (2-tailed)		.002
	N	106	106
English score	Pearson Correlation	.298**	1
	Sig. (2-tailed)	.002	
	N	106	106

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

The result showed that $r = .298$, $p = .002$. The significant value .002 was smaller than 0.01 which is the significant value that means there is a significant relationship between Overall Metacognitive Online Reading Strategies use and English Language performance of EFL Libyan secondary school students. Thus, the null hypothesis of the overall strategies is rejected.

H₀2: There is no significant relationship between the global metacognitive online reading strategies used and English language performance of EFL Libyan secondary school students.

The results of the correlation analysis of the Global Metacognitive Online Reading Strategies with students' English score showed in Table 4.0.

Table 4.0 Global Strategies and English score Correlation

		Global strategies	English score
Global	Pearson Correlation	1	.232*
	Sig. (2-tailed)		.017
	N	106	106
English score	Pearson Correlation	.232*	1
	Sig. (2-tailed)	.017	
	N	106	106

*. Correlation is significant at the 0.05 level (2-tailed).

As noted in Table 4.0, the significant score of the global strategies correlational analysis was .017 which is smaller than the significant value which is 0.05, which indicates that there is a significant relationship between metacognitive global online reading strategies used and English language performance of EFL Libyan secondary school students. Thus, the second null hypothesis is rejected.

H₀ 3: There is no significant relationship between the problem solving online reading strategies used and English language performance of EFL Libyan secondary school students.

The results of the correlation analysis of the Problem Solving Metacognitive Online Reading Strategies with students' English scores are shown in Table 5.0.

Table 5.0 Problem Solving Strategies and English Score Correlations

		Problem Solving Strategies	English score
Problem Solving Strategies	Pearson Correlation	1	.306**
	Sig. (2-tailed)		.001
	N	106	106
English score	Pearson Correlation	.306**	1
	Sig. (2-tailed)	.001	
	N	106	106

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

As noted in Table 5.0, the Problem Solving Strategies significant value is .001 which is smaller than the correlation significant value $P=0.01$, which means that there is a significant relationship between the problem solving online reading strategies used and English language performance of EFL Libyan secondary school students. Therefore, the null hypothesis of this domain is rejected.

H₀ 4: There is no significant relationship between the support metacognitive online reading strategies used and English language performance of EFL Libyan secondary school students.

The results of the correlation analysis of the Support Metacognitive Online Reading Strategies with students' English scores showed in Table 6.0

Table 6.0 Support Reading Strategies and English Scores Correlations

		Support Reading Strategies	English score
Support Reading Strategies	Pearson Correlation	1	.224*
	Sig. (2-tailed)		.021
	N	106	106
English score	Pearson Correlation	.224*	1
	Sig. (2-tailed)	.021	
	N	106	106

*Correlation is significant at the 0.05 level (2-tailed).

As shown in Table 6.0, correlation score for support reading strategies is .02 which is lower than the significant correlation value of 0.05. This indicates that there is significant relationship between the support metacognitive online reading strategies used and English language performance of EFL Libyan secondary school students. Thus the null hypothesis is rejected.

In summary, the significant value for overall metacognitive online reading strategies is ($P = .002 < .01$), global metacognitive online reading strategies significant value is ($P = .01 < .05$), the significant value of problem solving domain is ($P = .001 < .01$) and ($P = .02 < .05$) for support metacognitive online reading strategies show significant relationships between the variables. Therefore, the results of analysing the

correlations revealed that there is a significant relationship between these strategies and English language performance of EFL Libyan secondary school students and all null hypotheses are rejected.

Q3: What are the problems encountered by EFL Libyan secondary school students while reading online?

The data obtained from the interviews with students showed that most of the students faced problems with the new vocabulary including the meaning and pronunciation of the new vocabulary. They faced problems with the length of the text as the long text make it more difficult for them to get the main idea or the information they wanted from a long text. They also reported having difficulties with different types of text as the structure of the text is sometimes not familiar for them making it more difficult and taking a longer time for them to understand the theme and the information presented in the text in online context.

To deal with these problems, most of the interviewed students used translation to their first language via online dictionary e.g. Google translate as a tool to get the new vocabulary meaning and pronunciation to understand the new vocabulary more quickly.

For the text length and type difficulties, most of them reported using rereading and adjusting the reading speed to concentrate as ways to get the text meaning and the information they wanted.

Interviews with teachers were conducted to get more information about the students' problems when they read English text online. Most of the teachers reported similar problems that students reported during the interviews, which confirmed that the students really faced problems when they read online. The teachers claimed that their students faced problems with the new vocabulary including the meaning and pronunciation as English is a foreign language for them. The teachers also reported that their students faced problems with text type and length. They claimed that this is because of lack of concentration when they read online.

To deal with the claimed problems and to develop stronger online reading strategies, the teachers suggested building the students' vocabulary and exposing them to different text types and structure e.g. giving them more tasks which require reading online to increase their reading habits. They also suggested teaching reading strategies throughout the classroom topics

VIII. DISCUSSION

Comparison between EFL Libyan secondary school students' use of metacognitive online reading strategies domains mean scores show that the problem metacognitive online reading strategies domain is the most used by EFL Libyan secondary school students when they read online. They are also moderate users of global solving metacognitive online reading strategies. The support metacognitive online reading strategies are the least used domain by EFL Libyan secondary school students when they read online.

These findings are parallel to the findings of Omar (2014) that was conducted on Libyan postgraduate students in Libya. The study found that problem solving strategies domain was the most used strategies, support metacognitive online reading strategies domain was the least used strategies by the participants. The study also found that they were moderate users of overall metacognitive online reading strategies.

The current study is also parallel with Sitindaon, Wijaya, & Salam (2013) who conducted a study on the level of metacognitive reading strategy used in online environment by Indonesian English language students. The data revealed that 66.7% of students were moderate strategy users, 25 % were high strategy users, and 12.5% were low strategy users.

Ostovar-Namaghi & Noghabi (2014) also had similar results with this study. Their findings showed that the Iranian Master of Science (MSc) students were moderate users of metacognitive reading strategies while reading academic text in both online and printed form.

The findings obtained from the correlational analysis of the Overall Metacognitive Online Reading Strategies and its domains with English language performance of EFL Libyan secondary school students showed that there is a significant ($P = .002, < 0.01$) relationship. Global overall metacognitive online reading strategies showed a significant relationship ($P = .01, < 0.05$) with English language performance of EFL Libyan secondary school students. The findings also showed a significant relationship ($P=001. < 0.01$), between the problem solving metacognitive online reading strategies used and English language performance of EFL Libyan secondary school students. Support metacognitive online reading strategies also showed a significant relationship ($P = .02. < 0.05$) with English language performance of EFL Libyan secondary school students. Therefore, all the null hypotheses were rejected.

These findings are found to be in consistence with Chu et.al. (2012). Their study on learning strategies; where the metacognitive strategies as part of it found that there was a correlation between each learning strategy and English academic achievement of EFL Taiwanese university students. The study showed a significant relationship between the metacognitive strategies and English academic achievement of the participants. The current study also revealed a significant relationship between the Overall Metacognitive Online Reading Strategies and its domain and English language performance of EFL Libyan secondary school students when correlated.

This study also corresponds with Pookcharoen (2009) who conducted a study on metacognitive online reading strategies among Thai EFL university students. The study compared proficient and less proficient students in terms of metacognitive online reading strategies used. The result showed that the proficient students in English used these strategies better than less proficient students in terms of frequency and quality of use, indicating that their use of metacognitive online reading strategies was influenced by their English proficiency level and vice versa. The current study find out that there is a significant relationship between metacognitive online reading strategies used and English language performance of EFL Libyan secondary school students, which also indicates that metacognitive online reading strategies used influence their English language performance and vice versa.

The findings of interviews concur with Eghlidi, Abdorrahimzadeh & Sorahi, (2014) study on the type and frequency of online metacognitive reading strategies among Iranian EFL graduate students when they encounter academic texts on the Internet. The result showed that the respondents experienced difficulties in dealing with vocabulary when reading academic texts online.

These findings also in parallel with Sitindaon, Wijaya, & Salam (2013) who conducted a study on the level of metacognitive reading strategy used in online environment by Indonesian English language students. The results indicated a need to improve student awareness of effective metacognitive online reading strategies.

The current study also found to be in consistence with Pookcharoen (2009) who conducted a study on metacognitive online reading strategies among EFL Thai university students. The study compared proficient and less proficient students in terms of metacognitive online reading strategies used. The study showed that the less proficient reader group faced difficulties with vocabulary which led to inaccurate understandings of the online texts. They also had difficulty with grammatical structures, text length and organization and text evaluation. These students used a fixed set of reading strategies to deal with different text difficulty level. This study also found that the interviewed students faced problems in understanding the new vocabulary, they also faced problems with text length type. They also used a limited number of metacognitive online reading strategies, indicating that EFL Libyan secondary school students, lack of effective metacognitive online reading strategies used while reading online.

The findings of the qualitative part of this study showed that the students who participated in the interviews were having problems in dealing with vocabulary meaning, text length, type, and structure. They dealt with these difficulties by using online dictionary to translate the text and they reread the text to understand more.

Joining together the findings from both quantitative and qualitative data, it can be revealed that EFL Libyan secondary school students faced problems when they read online and they used some ways to help them in overcoming these difficulties. Interestingly, these ways were found to be metacognitive online reading strategies. Using online dictionary, adjusting the reading speed, concentrating more, and rereading the text are metacognitive online reading strategies. This indicates that these students use metacognitive online reading strategies, even though they did not know that these ways are called metacognitive online reading strategies and they used them unconsciously but in a limited way. These findings were made stronger by quantitative findings which revealed that the students who participated in the survey were moderate users of the metacognitive online reading strategies and there is a significant relationship between using metacognitive online reading strategies and English performance of EFL Libyan secondary school students in Malaysia. Thus, this study recommends EFL Libyan secondary school students to be taught the metacognitive online reading strategies to enhance effective use of these strategies.

IX. IMPLICATIONS

The current study shows that that EFL Libyan secondary school students are moderate users of metacognitive online reading strategies when they face problems while reading online and there is a relationship between using of metacognitive online reading strategies and their English performance.

According to Pookcharoen (2009), English language proficiency demand is increasing everyday all over the world. Reading skill is one of the students' problems that may hinder their English success, as having the skills and strategies to comprehend the internet information plays a significant role in students' success. John (2014) added that English language learners are exposed to different reading practices and strategies when reading online text, but they lack sufficient skills to effectively research and evaluate information online, that create a need to teach digital literacy skills in the TESOL field. Pookcharoen (2009) also suggested implementing reading strategy instruction in EFL classes as the students need to use different strategies to deal with different reading purposes. The author introduced many techniques that can be used by teachers to teach reading strategies in more effective way.

Also in the current study, the interviewed teachers recommended teaching metacognitive online reading strategies to their students to enable them to develop stronger reading strategies and to use these strategies more effectively.

This study strongly recommends that schools make it a necessity for teachers to teach metacognitive online reading strategies to EFL Libyan secondary school students in order for them to develop stronger reading strategies. This study is useful as it provides an evidence that EFL Libyan secondary school students face problems while reading online. Educational people such as education policy makers can use the findings of this study to help them in formulating the educational decisions such as teacher training sessions. Directors and administrators will benefit from this study in designing more practical teaching and learning approaches. Teacher training centres can use this study findings to prepare more effective training plans for teachers on how to implement digital sources and how to use them in the classroom environment. For teachers and students, this study will raise their awareness about metacognitive online reading strategies and will enable them to cope with problems they face while reading online.

X. CONCLUSION

As the online materials become sources of educational information and knowledge for the students, it becomes necessary to understand how students deal with these materials. What strategies they use, what kind of difficulties they face, how they deal with these difficulties and discover if they use the proper strategies to get the needed information.

By understanding students' use of metacognitive online reading strategies, as this study showed, educators and teachers will be able to detect the problems that their students face when reading online and take necessary actions to effectively cope with the difficulties faced. It also will help designers of pedagogy instructions to update reading curriculum based on the students' needs.

Implementing online reading strategies in the syllabus will help to improve students' learning process through improving their reading process and this will be reflected in the students' English language performance. In addition, this study also will assist the students to become independent readers, if they are powered by effective online reading strategies and tools.

As a conclusion, the researcher suggests teaching students metacognitive online reading strategies as it is an effective tool to improve the students' online reading process and help them get the benefits of online sources in less time with less effort, which will positively affect their English language performance.

As shown above, many studies have been conducted to measure metacognitive online reading strategies but in many different ways, such as exploring the difference between two groups, the difference between forms of texts, examining the level of the strategies used, investigating the perceived use of the readers and investigating the perceived use of the metacognitive online reading strategies for academic purpose. Moreover, these studies use different population sample and different sampling procedures for their studies purposes. They also have been conducted in many different settings and contexts such as, in Costa Rica, Utah, Taiwan, Oman, India, Lithuania, Indonesia, Turkey, Libya, and Iran.

Therefore, the current study was conducted on the metacognitive online reading strategies use but in a different way. This study looked at the use of meta-cognitive online reading strategies for English language learning purpose. It was also conducted in another setting which is Malaysia by using another population sample that is EFL Libyan secondary school students. This study aims to investigate the relationship between the metacognitive online reading strategies and English language performance of EFL Libyan secondary school students. It also explores metacognitive online reading strategies used by EFL Libyan secondary school students for English language learning purpose and also investigates the problems that these students encounter when they read online.

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