Exploring reading in third-year secondary school students learning English as a foreign language in Libya

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استكشاف القراءة لدى طـــلاب السنة الثالثة الثانـــوي الذين يتعلّمون اللغة الإنجليزية كلغة أجنبية في ليبيا.

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الملخــــــص:

تهدف هذه الدراسـة لاكتشـاف مهـارات القـراءة عنـد الطلبـة الـذين يدرسـون اللغـة الانجليزية كلغة أجنبية في المرحلة الثانوية فيما يتعلق بـالطرق التـي يسـلكونها أثنـاء القراءة وأساليب ومهارات القراءة التي يستخدمونها لفهم النصوص التي يقرؤنها. ستة طلاب تطوعوا للمشاركة في هـذه الدراسـة. الباحـث اسـتخدم مـنهج القـراءة والتفكيـر بالصوت الغالي لجمع المعلومـات مـن الطـلاب بعـد تـدريبهم لاسـتخدام هـذه الطريقـة المثلى المتبعة عند دراسة القراءة. الباحـث ـ أيضاً ـ نـاقش هذه الأداة المثالية بشيء من التفصيل وذلك لتعم الفائدة لكل المهتمين قي مجال اللغـة الانجليزيـة فـي اسـتخدام هـذه الأداة ، والمعلومات التي جمعت من الطلاب أثبتت بما لا يدع مجالا للشك في نجاعـة هذه الدراسة في إظهار تقنيات القراءة المتعددة التي استخدمها الطلاب.

Exploring reading in third-year secondary school students learning English as a foreign language in Libya

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ABSTRACT

This study was proposed to explore the Libyan secondary school students' cognitive and metacognitive reading processes with respect to what ways of reading they followed when reading in English and what types of reading use strategies they employed, Six Libyan secondary school students were voluntarily invited to take part in the study. The data was collected using the think-aloud protocol after the students had been involved in several training sessions on how to use the protocol before they performed the real tasks. The researcher discussed the protocol providing more details on some reading studies where the commentators have used the protocol successfully. The protocol outcomes revealed that the participants have used many types of reading use strategies encompassing direct strategies:

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memory, cognitive, and compensatory strategies and indirect strategies: comprising metacognitive, affective, and social strategies. The findings also showed that the protocol was a good research instruments for provided a valuable access to students' mental processes while they were problem-solving their tasks.

1. INTRODUCTION

Reading is a core subject matter in my context because students have no contact opportunities to communicate with native speakers to develop their English. They only learn about the target language and its people through reading. This current study was devoted to examining reading in the Libyan secondary school students learning English as a foreign language with respect to their cognitive and metacognitive tactics they applied while reading their written texts. Six third-year students were voluntarily invited to take part in this study. The think-aloud protocol was used as a research tool for collecting the required data from these informants after they had been involved in training sessions on how to perform the method. The students were allowed to think aloud using English. However, they were allowed to think aloud using their mother-tongue, Arabic as well. This possibly encourage them to better talk about their cognitive and metacognitive reading processes while reading than in thinking aloud in their target language, The data collected from students' protocols was recorded transcribed verbatim, translated, and then coded for the analysis. The outcomes indicated that the students deployed many different reading use strategies; encompassing direct strategies: memory, cognitive, and compensation strategies, and indirect strategies: metacognitive, affective, and social strategies.

2. RATIONALE OF THE STUDY

This study was proposed to investigate the Libyan secondary school students' cognitive and metacognitive reading processes with respect to what ways of reading the participants follow when reading in English and what types of reading use strategies they deploy while reading their core written materials in their target language as well. Reading is considered as a

core subject matter not only for English but also for their mother-tongue, Arabic. The Libyan students learning English as a foreign language know about the target language and its people only through reading in English. However, the amount of research conducted in this domain is very poor if it does not exist at all, particularly in secondary school education setting. Most of the research is done in other areas rather than reading. For example; Algahwash (2022) investigated the challenges encountered by EFL students in dealing with idiomatic expression in their writing. In another study Algahwash (2022) conducted a study on the impact of integrating English culture on teaching English language in EFL setting. Almshakowi (2022) wrote an article on exploring teachers' attitudes toward teaching target culture as a part of English language teaching; a case study at the University of Az Zawiya. Alzhari (2022) translated English verbal into Arabic. Abusteen (2015) uncovered the most common challenges in learning English speaking skills; the case of Libyan university students, etc. None of the above-mentioned studies dealt with reading and strategies with respect to how the Libyan students approached their reading written texts and the strategies they employed while processing their texts not only in the secondary education but also in the tertiary education as well. Thus, exploring how the Libyan secondary school students read in English becomes very necessary; if not urgent, for researchers, syllabus designers, educators, inspectors, teachers and policy makers to consider.

The study was proposed to answer these two research questions as follows:

1. What ways of reading do the Libyan secondary school students follow when reading in English?
2. What type of reading use strategies do the Libyan secondary school students rely on while problem-solving reading in English?

3. **READING**

Aebersold and Field (1997) viewed reading as a process refers to "what happens when people look at a text and assign meaning to the written symbols in that text" (p.15). The reader wants to understand what the text is about through the interaction with the writer's message. In parallel line with Aebersold and Field, Widdowson (1979) said that reading can be interpreted as a kind of dialogue between the reader and the text, or rather between the

reader and the author where the reader may either obtain a personal interpretation of a text or try to get an original message the writer wishes to convey. Similarly, Hundson (2007) described reading as an interpreting process where readers construct meaning from a text on their own.

Reading involves essential skills and strategies in order for readers to cope with any ongoing problems while reading. That is, readers need to scan the texts for specific information, skim the text being read for the gist or general comprehension, integrate information for evaluating and criticizing both the text and the author (Grabe, 2009). Other researchers provided lists of reading use strategies; however, there is no sufficient room to report all these tactics in this study. These; include; for example, identifying the main ideas, previewing the text, decoding words by making association between graphemes and phonemes or rather making a relationship between letters and their sounds in order to identify words and assign their meaning (Macaro, 2001; Abbott, 2006; Anderson et al.1991). Furthermore, these reading use techniques involve inferring meaning of unfamiliar words from background knowledge, relying on the context to infer the meaning of unknown words, planning on how to read the text, expecting what is happening next in the text, translating from the target language to the mother-tongue, evaluating the textual information, paying more attention to what is being read, and so forth..

Oxford (1990) classified reading behaviours or strategies into six components including: (1) memory strategies, such as: imagining, rehearsing, and placing a new word into a sentence; (2) cognitive strategy, such as: identifying the main idea, predicting, scanning a text for specific information, and rereading; (3) compensation strategies including making sense of linguistic clues, inferring the meaning of unknown word from context, guessing the meaning of unfamiliar words; (4) metacognitive strategies, such as: planning, monitoring and repairing comprehension, and evaluating textual information; (5) affective strategies, involve: keeping reading even when unsuccessful, skipping a difficult word or phrase, and encouraging yourself; (6) social strategies such as: posing questions about text information, and asking proficient users of English. According to

Oxford (1990)'s study, it is worth pointing out that memory strategies are used to retain and retrieve information and cognitive strategies are applied to better understand the textual information, whereas students employ compensatory strategies due to the lack of word knowledge. Metacognitive strategies are self-regulated techniques used for controlling and monitoring the cognitive strategies, for example, scanning the text for specific information and skimming the text for the gist or general information are both cognitive strategies; however, adjusting the speed while applying these cognitive strategies is a metacognitive strategy. Additionally, learners use the affective strategies to lower their stress and tension so as to encourage themselves to keep reading, particularly when the textual information is more complicated or challenging. Finally, the social strategies are used when learners can not understand something related to textual information and seek assistance from any proficient users of English, such as, teachers or any other people whom the learners believe they are good users of English.

In parallel to the above-mentioned commentators, Farag (2022) pointed out that reading is a strategic process since it involves the use of different skills and strategies; for instance, (1) memory strategies: placing new words in a sentence and imagining the events of a text being read; (2) cognitive strategies: identifying the main ideas and drawing conclusion; (3) compensation strategies: using a dictionary to get the word meaning and making sense of linguistic clues; (4) metacognitive strategies: monitoring and repairing comprehension and keeping the purposes for reading in mind; (5) affective strategies: keeping reading even when unsuccessful and skipping a difficult word, a sentence, a question, or a paragraph in order for readers to complete processing the textual information; (6) social strategies: asking for clarification/verification and posing questions about the textual information.

Grabe and Stoller (2002) viewed reading through two different levels of reading comprehension: lower level processes of reading comprehension includes word recognition, syntactic parsing, semantic proposition formation, and working memory activation; whereas the higher level processes of reading comprehension involves text model of comprehension, situation model of reader interpretation, background knowledge

(inferencing), and executive control processes. Of significance is that the lower-level processes encompass linguistic skills that readers rely on to rapidly and automatically comprehend a text, whereas, higher-level processes of reading comprehension comprise the comprehension processes where readers infer from background knowledge to understand the written texts. Abbott (2006) proposed some examples of bottom-up; language based reading comprehension strategies mainly on word meaning, sentence structure, and text details which are associated with using lower-level processes of reading comprehension; such as, breaking words into smaller parts, using knowledge of syntactic structures or punctuation, scanning for specific details, paraphrasing or rewording the original text, and looking for key vocabulary or phrases. Abbott also dealt with some examples of top-down reading processes that are mainly higher level processes of reading comprehension. These include; recognizing the main idea, integrating scattered information, drawing conclusion, inferring the meaning of unfamiliar words from context, predicting what might happen next in a text, and recognizing text structure.

4. METHODOLOGY

A secondary school; a research site, was successfully located. A good research site is really significant where the access and entry were possibly easy and where the participants were available and willing to take part in this study. Six third-year secondary school students were voluntarily invited to take part in this study complied with the purposeful sample strategy selection suggested by Patton (2002). In consultation with their teachers I selected the students who were knowledgeable and talkative who could reflect on their experiences, views, and perceptions Morse's (1991) The rationale and scope of my study was explained to all selected informants in order to initially build trust and rapport with them for the sake of the study.

The ethical considerations have also been considered in terms of Informed consent, confidentiality, and consequences (Bogdan & Biklen,1998; Burns, 2000) They were informed that the participation is voluntary without any compulsion and coercion and they preserve the right to withdraw from the participation at any time they want to give up their participations. They have

accepted and agreed to give their consent. Their privacy was also regarded as very essential and sensitive so that it should be dealt with very carefully and confidentially. Their names remained anonymous or given pseudonymous names instead. No piece of this research would be published that might lead others to recognize them. The research consequences were also addressed to ensure that there were no potential risks, which might jeopardise, affect, or even threaten the participants.

The prescribed task is on a written text on reading comprehension adopted from a reading comprehension textbook. The text was in about 550 words followed by a number of comprehension questions. Their teachers told me that the assigned text was actually equivalent to students' texts taught in their curriculum reading textbooks.

4.1 THE THINK ALOUD PROTOCOL

In my context most of researchers rely on research tools; such as questionnaires and interviews and a quasi-experimental study as well as pre-test-post-test design and these research tools have been used in the studies mentioned above in the rationale section. Reading is silent and can not be observed unless the researchers ask their participants to read and think aloud while they are problem-solving on their reading tasks. The think-aloud protocol is very valuable instrument in capturing what students exactly do while are reading. Hence are a number of studies where the think aloud protocols were chosen as a main data collection procedure. For example, Anderson (1991) used the think-aloud protocols to explore the variations in reading tactics employed by Spanish-speaking students. Having probed primary school pupils' use of reading strategies, Rao, et al. (2007) relied on this method to collect their data. In another study by Barnett (1998), the think-aloud protocol was used to gain access to students' cognitive and metacognitive processing. Lau (2006) deployed the protocols to achieve a more comprehensive understanding of participants' cognitive processes when reading as well. Salataci and Akyel (2002) also used think-aloud protocols to figure out whether the strategy instruction in English affects pre-intermediate Turkish students' reading strategic processes. Furthermore, Akyel in another study with Erçetin, (2009) implemented the protocol to collect data from ten undergraduate advanced students enrolled in the

Department of English language teaching at a Turkish university to determine whether they were essential differences between reading strategies employed while reading a hypermedia text and those reported in the literature for printed texts. Moreover, McElvay and Artelt (2009) conducted a study using the protocol to uncover the effects of child-parent reading program in Berlin on students' learning and reading strategies. Based on some other researchers' evaluation of the think aloud protocol, the protocols provided a real access to students' mental processes pertaining cognitive and metacognitive reading behaviors   (Abbott, 2006; Botsas & Padeliadu, 2003; Pressley & Afflerbach, 1995; Schellings, et al. 2006; Schueller 2004; and Yau, 2005)

Based in the vast body of worldwide research mentioned above, the think aloud protocols were adopted in this ongoing study as the main data collection procedures.

The principles underlying the think-aloud protocols are that the researcher instructs participants to think aloud (talk aloud) their thoughts while they are performing a cognitive process; (task). (Hu & Gao, 2017; Ericsson & Simon, 1993; Pressley & Afflerbach, 1995). Thus, one possible research tool is think-aloud protocols that people have used to collect information and experiences about participants' cognitive processes. Compared to retrospective methods; such as interviews and questionnaires, the think-aloud protocols are regarded as more accurate and reliable for accessing participants' learning cognitive and metacognitve learning processes (Yoshida, 2008). Someren et al. (1994) wrote that "it is one of the few techniques that give direct data about the reasoning problem" (p. 9). During the task, all verbalizations are recorded, transcribed and then analyzed for the sake of the study (Ericsson & Simon, 1993).

4.1.1 INSTRUCTIONS FOR USING THE PROTOCOLS

Ericsson and Simon recommended that researchers who employ the think-aloud method train respondents and explain its procedures before the real task is performed. This will familiarize respondents with the data collection procedures and any equipment they might be used in recording the

respondents' reports and ensure that all respondents understand the method. Ericsson and Simon gave some instructions that the researcher should read to participants in order to familiarize themselves with the technique before they administer the real task, as follows:

In this experiment we are interested in what you say to yourself as you perform some tasks that we give you. In order to do this we will ask you to TALK ALOUD as you work on the problems. What I mean by talk aloud is that I want you to say out loud everything that you say to yourself silently. Just act as if you are alone in the room speaking to yourself. If you are silent for any length of time I will remind you to keep talking aloud. Do you understand what I want you to do? (Ericsson & Simon, 1993, p. 376).

It is advisable that the commentators recommended researchers to consider the following: (1) interaction is not intended and the researcher should be seated behind the participant and should not be visible. When participants keep silent for more than 30 seconds, the researcher should remind them by saying "please keep thinking"; (2) the researcher should ensure that the participants understand the instructions on how to use the protocol; (3) the researcher should have the participants practice a couple tasks, for instance, multiplying 24 by 36 or practice a similar real reading task before they are introduced to the actual task; (4) the participants should be told to focus on completing a task, the instruction to think aloud being secondary (Ericsson & Simon, 1999; Ericsson & Simon, 1993; Ericsson & Simon, 1984; Ericsson & Simon, 1980).

4.2 DATA COLLECTION PROCEDURES

Before the participants actually administered the protocol, they had been involved in a number of training sessions in order for them to know how to perform the protocol. Although the literature has revealed that the protocol is widely employed in the field of foreign and second language teaching and learning, it is considered a guest and rarely used in my context.

In this study where the think-aloud protocol is a new experience for the students; I will comply with Ericsson and Simon (1993)'s recommendations to minimize the threat to reliability. Procedures have been explained to all participants. I involved the participants in a couple of practices or training sessions before they administer the actual tasks in order to familiarize

themselves with the method. Once I ensured that all participants understood the procedures of the protocols, Then, they have been instructed to perform the method while reading their intended tasks. The participants followed their normal ways of reading their academic materials. They had a choice to think aloud in English or even in their mother-tongue; Arabic where they could be confident to better think aloud. The participants performed the tasks individually. During the performed sessions, I sat behind each participant where I was unseen to avoid disturbing each participant while reading and thinking aloud. If informants remained silent for more than 30 seconds, they would be reminded to say something aloud by telling them "please keep thinking aloud" or "please say something aloud". However, when they said something which I thought was insufficient or incomplete, I probed them to more elaborate on this by saying "do you have something to add on this". The Participants' verbal reports have been entirely recorded, transcribed, translated to English, coded based on the Oxford (1990)'s taxonomy of learning strategies. The next section would deal with the findings of the current study.

5. FINDINGS OF THE STUDY

The study was mainly proposed to respond to the following research questions mentioned below:

1. What ways of reading do the Libyan secondary school students follow when reading in English?
2. What type of reading use strategies do the Libyan secondary school students rely on while problem-solving, reading in English?

This section of findings was devoted to answering the first research question;

What ways of reading do the Libyan secondary school students follow when reading in English?

The data collected from the protocol has showed that my participants followed different ways when reading texts in English. Some participants previewed the text by looking at the title, headings, and subheadings. They

scanned the text very quickly moving their eyes from left to right and from top to down in an attempt to come up with general understanding relying on their prier experiences. Then, they came back to the text and read it word by word, sentence by sentence, and paragraph by paragraph for more details. Other participants started reading the text and did not stop until they finished reading the whole text. These participants read the text first and then read the comprehension questions after the text. Other participants began reading the comprehension questions first and then they read the entire text because they believed that reading the comprehension questions first could provide them with preliminary ideas about the current reading text. During reading, they remembered some words and phrases that they had read, seen or heard before. They reviewed the text imaging its events in order to make sense of what they were reading. The data emerged from the protocol has also illustrated that the participants relied on cognitive strategies in order to understand the textual information. For example, they read the text in order to understand it and construct its meaning bearing their purposes for reading in mind. When they came across unfamiliar words, sentences, or a paragraph, they stopped reading and reread the text for better comprehension. They predicted what happens next in the text based on the available textual information read in the text. They also reasoned deductively and identified the main ideas rapidly. To better understand the textual information, they summarized the text and expressed the need for taking notes. They also scanned the text rapidly when they were looking for specific information. When the participants did not understand an unfamiliar word due to their lack of word knowledge, they were likely to vocalize it making association between graphemes and phonemes or rather between letters and their sounds in order to identify that unknown word. Sometimes, they relied on guessing of that word or inferring its meaning from context. Furthermore, my participants made sense of linguistic clues by indentifying the grammatical functions of words to assign meaning.

Other ways of reading these participants followed involved concentrating, controlling, and monitoring themselves while reading, paying attention to text information. They adjusted their reading speed based on the textual information. They read rapidly when they wanted to scan the text for

specific information or skim it for the general understanding. They also read quickly when they successfully recognized the words. When sentences were too long or difficult to understand they monitored this, so that they divided these complicated sentences into manageable pieces to better understand them. If they misunderstood something in the text, they would pay attention and closely monitor this problematic issue. They would not ignore this but they right away repaired their faulty comprehension. Moreover, sometimes they came across a challenging chunk of a text being read, so that did not give up reading but rather they connected words and phrases to each other in an attempt to identify such a difficulty while a problem-solving process. When they overcame this they read that chunk of the text over again for more details. Their ways of reading also encompassed their tactics on how to deal with text features when they failed to understand something. They encouraged themselves to keep reading and continued reading even when unsuccessful. However, if they strived to come up with the meaning construction, they skipped that word, sentence, question, or even the whole paragraph in order to keep reading the rest of the text. Ultimately, the participating students' verbal reports emerged from the protocol were clearly obvious that these participants posed questions about textual information and expressed a need to seek assistance from proficient users of English to overcome their problematic reading.

Now, I turned to look at my second research question:

What type of reading use strategies do the Libyan secondary school students rely on while problem-solving, reading in English?

As illustrated in table 1, showing frequencies of protocol direct strategies used by all participants, all students have used 3 different memory strategies and used them for 23 times, with an average of 3.60% of all direct strategies. They used these strategies "remembering information read in the text", "imagining events read in the text" , and "reviewing a text", used for 10, 7, 6 times respectively, accounting for 43.47%, 30.43%, and 26.08% of all memory strategies. For cognitive strategies, the participants all together deployed 11 different cognitive strategies, for 429 times or an average of 67.24% of all direct strategies. First, the most frequently common used strategy was "reading for understanding or constructing meaning", used for

70 times, or an average of 16.31% of all cognitive strategies and it was used by every participant. Second, the most frequently common used strategy was "stopping reading at unfamiliar word or sentence" used for 66 times, accounting for 15.38% of all cognitive strategies. Third, the most frequently common used strategy was "rereading, used for 56 times, or 13.05% of all cognitive strategies. The next two most frequently common used strategies were "expressing the need to take notes; and scanning a text for specific information" which were used by all participants for 40 times each, accounting for 9.32% each of all cognitive strategies. For other most frequently common used strategies involving "previewing the text", "getting the idea quickly", and "summarizing", see table 1, showing the instances and the average of each strategy. There was only one most infrequently used strategy "predicting what happens next in the text" which was used for 12 times, with an average of 2.79% of all cognitive strategies. For the compensation strategies, the students have employed 6 compensatory strategies, used for 186 times with an average of 29.15% of all direct strategies. The first most frequently common used compensatory strategy was "vocalizing unfamiliar words", which was used for 60 times, accounting for 26.54% of all compensation strategies. The second most frequently common strategy was "guessing the meaning of an unknown word", used for 55 instances with an average of 24.33% of all compensation strategies. The next most frequently common strategy was "identifying the grammatical function of words", used for 25 times, accounting for 11.06% of all compensatory strategies. The fourth most infrequently common used strategy was "expressing a need to use a dictionary", which was used for 12 times, with an average of 5.30% of all compensatory strategies. For other compensatory strategies including "inferring meaning of an unknown word from context" and "using text features; subheadings, transitions", see table 1, showing the instances and the average of each strategy.

Table 1 Frequencies of protocol direct strategies used by participants

Memory strategies	THINK-ALOUD PROTOCOL	
	Frequencies	Percentages %
Remembering information read in the text	10	43.47
Imagining events read in the text	7	30.43
Reviewing a text	6	26.08
Total	**23**	**3.60**
Cognitive strategies		
Previewing the text	35	8.15
Reading for understanding or constructing meaning	70	16.31
Rereading	56	13.05
Predicting what happens next in the text	12	2.79
Getting the idea quickly	37	8.62
Reasoning deductively	17	3.96
Expressing the need to take notes	40	9.32
Summarizing	31	7.22
Scanning a text for specific information	40	9.32
Making sense of linguistic clues	25	5.82
Stopping reading at an unfamiliar word or sentence	66	15.38
Total	**429**	**67,24**
Compensation strategies		
vocalizing unfamiliar words	60	26.54
Guessing the meaning of an unknown word	55	24.33
Identifying the grammatical function of words	25	11.06
Inferring meaning of an unknown word from context	19	8.40
Expressing a need to use dictionary	12	5.30
Using text features; subheadings, transitions	15	6.63
Total	**186**	**29.15**
Total number of all strategies	**638**	**100.00**

Now, i move to look at the indirect strategies including, metacognitive, affective, and social strategies as illustrated in table 2.

The participants reported using 11indirect strategies including metacognitive, affective, and social strategies, which were used for 304 times, with an average of 72.72% of all indirect strategies. The first most frequently common used strategy was "identifying difficulties", used for 51

times, accounting for 16.77% of all metacognitive strategies. The next most frequently common strategy was "reading a text for more details", used for 49 times, with an average of 16.11% of all metacognitive strategies. The third most frequently common strategy was "dividing a text into manageable pieces", used for 42 times, accounted for 13.81% of all metacognitive strategies. The next most frequently common used strategy was "monitoring/checking comprehension" for used 30 times, with an average of 9.86% of all metacognitive strategies. The fifth most frequently common used strategy was "repairing faulty comprehension", which was used for 29 times, accounted for 9.53% of all metacognitive strategies. For the following metacognitive strategies including "adjusting reading speed", "paying attention to sentence structure and punctuation marks", and "relating words/ideas/sentences to each other", see table 2, showing the instances and the average of each strategy. There were three most infrequently used strategies comprising of "evaluating a text or an author", "concentrating on text information", "planning what to do next" which were used respectively for 15, 13, 15 times each or 4.93%, 4.27%, 4.93% each of all metacognitive strategies. For affective strategies, all students used 3 affective strategies for 71times, or 16.98" of all affective strategies. These were "continue reading even when unsuccessful", "encouraging yourself", "skipping a difficult word, sentence, question, and paragraph", used respectively for 29, 20, 22 times each, accounting for 40.84%, 28.16%, 30.98% each of affective strategies. Finally, the informants deployed 2 social strategies for 43 times, or 10.28% of all social strategies. These were "asking for clarification/verification" and "Posing questions about text information", used respectively for 25, 18 times with an average of 58.13%, 41.86% of all social strategies. In general, the participants have used a total of 1056 strategies including direct strategies: memory, cognitive, compensation and indirect strategies: involving metacognitive, affective, and social strategies. Particularly, they used 638 direct strategies with an average of 60.41% of all direct and indirect strategies and 416 indirect strategies, or 39.58% of all direct and indirect strategies.

Table 2 Frequencies of protocol indirect strategies used by participants

	THINK-ALOUD PROTOCOL	
Metacognitive strategies	**Frequencies**	**Percentages %**
Adjusting reading speed	25	8.22
Dividing a text into manageable pieces; sentences, or words	42	13.81
Evaluating text or author	15	4.93
Identifying difficulties	51	16.77
Monitoring/checking comprehension	30	9.86
Paying attention to sentence structure and punctuation marks	20	6.57
Concentrating on text information	13	4.27
Planning what to do next	15	4.93
Reading a text for more details	49	16.11
Relating words/ideas/sentences to each other	24	7.89
Repairing faulty comprehension	29	9.53
Total	**304**	**72.72**
Affective strategies		
Continue reading even when unsuccessful	29	40.84
Encouraging yourself	20	28.16
Skipping a difficult word, sentence, question, and paragraph	22	30.98
Total	**71**	**16.98**
Social strategies		
Asking for clarification/verification	25	58.13
Posing questions about text information	18	41.86
Total	**43**	**10.28**
Total number of all atrategies	**418**	**100.00**

6. DISCUSSION

The data collected from the protocol has showed that these secondary school students participated in this study reported using the lower-level processes of reading comprehension involving reading word by word sentence by sentence and paragraph by paragraph. They made sense of linguistic clues by identifying the function of words, vocalized the new words making association between graphemes and phonemes or rather between letters and their sounds in an attempt to recognize these unfamiliar words and this conforms to findings of Macaro (2001)'s study. They, in fact, involved in

syntactical parsing process in order for the meaning to come up. These lower level processes the student relying on attended to bottom-up ways of reading comprehension which mainly comprises of linguistic skills the students depended upon to overcome their reading challenges while they were problem-solving (Grabe & Stoller, 2002, Abbott, 2006). It was also obvious that these students adopted the higher-level processes of reading comprehension while processing the text. They guessed the meaning of unknown words due to their lack of word knowledge, The also relied on context to infer the meaning of unfamiliar word, expressing a need to pose questions, asking proficient users of English when they failed to construct the word meaning, relating words to each other, dividing long sentences into small features or parts to easily for them to come up with meaning, identifying the main ideas of the text. Furthermore, students were connecting textual information to their prior experiences in order to understand the text, predicting what happens next in a text, summarizing the textual information and taking notes for next use, paying attention to text features; headings, sub-headings, and transition words, monitoring and checking comprehension. All these higher-level reading processes attended to top-down model or ways of reading comprehension and these coincide with what I have discussed in the literature review section (Abbott, 2006; Grabe & Stoller, 2002; Macaro, 2001; Oxford, 1990). Thus, my participants did not only follow the bottom-up model of reading comprehension but also they adopted the top-down model of reading comprehension. They, in fact combined strategies from the bottom-up model with the other strategies from the top-down model (Abbott, 2006). For example, during text processing, the students decoded words, made sense of linguistic clues, read the text slowly for more details and these tactics are mainly bottom-up model; ways of reading comprehension, meanwhile, they relied on other strategies like predicting, guessing meaning, relating words to each other, evaluating, concentrating on text information, monitoring and repairing comprehension which are top-down model; ways of reading comprehension. Of significant is that students employed the metacognitive strategies discussed earlier to regulate, control, and monitor the cognitive strategies. They are self-oriented/self-regulated strategies they used them in order to

know when, what, and where to apply the other strategies. For example, skimming a text for the gist or general understanding is a cognitive strategy; whereas, adjusting speed while skimming is a metacognitive strategy and this conforms with other commentators' views discussed in the literature review section (Oxford, 1990; Grabe, 2009). My participant involved in a dialogue process with the writer, who wrote the text, in order to assign the text meaning successfully and this is coincident with how reading researchers looked at reading process (Aebersold & Field, 1997; Hudson, 2007; Widdowson 1979). The think-aloud protocol was a powerful and valuable research instrument for providing access to participants' reading cognitive and metacognitive reading process. The data emerged from the protocol was actually rich and reflected what informants did during reading their written texts. I was really satisfied with such an instrument. My views towards this research tools coincided with other commentators who used this research method (Abbott, 2006; Botsas & Padeliadu, 2003; Pressley & Afflerbach, 1995; Schellings, et al. 2006; Schueller 2004; and Yau, 2005).

7. CONCLUSION

The secondary school students followed different ways of reading. Some of them started reading the text slowly word by word, sentence by sentence, and paragraph by paragraph decoding words, making sense of the linguistic clues, and reading for more details. This model of reading is purely bottom-up. Other participants read previewed the text focusing on its features; headings, subheadings, and transitions. They read the text guided by the comprehension questions predicting what happened next in the text, planning how to read the text, inferencing from their background knowledge, identifying the main ideas rapidly, and checking and monitoring and repairing comprehension and these are mainly top-down ways of reading comprehension. The students reported using all six categories of strategies reported in Oxford's (1990) study including direct strategies: memory, cognitive, compensation, and indirect strategies: metacognitive, affective and social strategies. However, they used more direct strategies than indirect strategies. The study has some pedagogical implications for reading teachers. Asking students to read a text and them go immediately to

answer it comprehension question is purely a traditional way of teaching reading, neglecting the purposes for reading and the skills and strategies interpreting reading process, so that teachers should abandon thus traditional ways of teaching reading for comprehension. Strategies are problem-solving devices help students to overcome their problems while reading. They can not be observed but they can be taught, so that teaching students on how to use strategies, when to use them, and what specific strategies to use in a particular reading problem will foster students' reading proficiency on how to sort out their reading problems successfully. Teachers should also pay their students' attention that one strategy might not solve a particular problem so that combining strategies with each other will work. Thus reading is a dialogue process between the writer who conveys the massage and the reader who wants to interpret their massage using skills and strategies to come up with that interpretation. The study has also methodological implication in that the protocol was a powerful and valuable technique for providing a vast access to students' cognitive and metacognitive reading processes. If it was well constructed it would reveal very rich data.

8.   REFERENCES

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