Reading Strategy Instruction on Metacognitive Awareness: The Case of Turkish High School Students

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ABSTRACT

There has been less research available on the integration of metacognitive reading strategies into regular English courses in high schools. Therefore, this action research study was a modest attempt to search the impacts of a reading strategy instruction on students' metacognitive awareness. To this end, a 10-week metacognitive reading strategy instruction model based on O'Malley and Chamot's (1990) classification was designed. The participants consisted of 25, 10th grade students of a state high school in Turkey. Skimming, scanning, K-W-L, visualization, think aloud, annotating, reciprocal and self-assessment strategies were contained in the strategy training program. The researcher diary and semi-structured interview sessions were employed to obtain qualitative data. The Metacognitive Awareness Reading Strategies Inventory (MARSI) was employed to determine the students' perceived use of metacognitive awareness. The findings revealed statistically significant increase in the participants' perceived use of the strategies in all sub-scales and overall use. The results also indicated that the students employed problem solving strategies the most, followed by global strategies and finally, support reading strategies. Furthermore, it was not found gender effect on the employment of reading strategies.

INTRODUCTION

Considering language skills, reading appears to be the matter of hot debate in foreign language contexts by virtue of the fact that it is the lynchpin of reaching the sources of information. From this point of view, arguably as an individual act, numerous attempts have been made to highlight the cognitive and metacognitive aspects of reading in literature recently (Afflerbach, Pearson & Paris, 2008; Salmer´on, Kintsch & Kintsch, 2010). In and of itself, the reading is not just recognizing letters, combining and sounding them, rather it goes beyond. The primary aim of reading skill is purely to comprehend which is a perennial problem especially for EFL students (Bernhardt, 2011; Samuels & Farstrup, 2011; Tercanlioglu & Demiröz, 2015). A reader does not just recognize the letters on the page and transfer them into sounds. Furthermore, s/he substantially uses knowledge of words, grammatical structures and her/his personal experiences or prior knowledge to comprehend the written elements. In support of this view, Chun and Plass (1997) argued that the complicated nature of reading comprehension process entails students to build a mental representation for verbal knowledge to make sense of a reading material. Clearly, as it is

affirmed, this complex system is defined as an interactive model that progresses with bottom-up and top-down processes. Reading, initially considered as a passive, and later characterized as an active, recently an interactive (Wallace, 2001) and a fluent process (Grabe & Stoller, 2011), is a multifaceted skill offering a broad range of strategies. In link with aforementioned idea, Hacker, Dunlosky and Graesser (2009) averred that readers are expected to develop key competencies such as decoding or inferencing skills definitely required to activate for comprehending a text. In a sense, the reading is a skill in its own right, and embraces a wide variety of tasks, particular strategies or behaviors to achieve the goal of comprehension. As Cohen (1990) asserted, mental operations that readers intentionally use to fulfill reading tasks predominantly depended on raising of awareness. Apparently, a state of being aware of the strategies or displaying a higher degree of awareness enables good readers to use reading strategies more effectively (Zhang & Wu, 2009). Strategy awareness refers to "the self-control mechanisms" (Mokhtari & Reichard, 2002, p. 249) commonly known as the concept of "metacognition". Simply, metacognition is identified as one's awareness of and management over the process engaged in learning (Meltzer, Pollica & Barzillai, 2007). As proposed by Carrell, Pharis and Liberto (1989), metacognition literally means cognition of cognition.

In essence, a growing body of research within the domain of foreign language teaching has averred that students are asked to know what/how reading strategies are employed, to observe and regulate the use of specific strategies selectively in their reading tasks. Skillful readers may deploy a full range of strategies in their repertoires to construct meaning from a given text (Carrell, 1989; Sheorey & Mokhtari, 2001; Zhang, 2001). As Karbalaei (2011) aptly put it, metacognitive reading strategies, peculiar to that study, are major tools chosen by students consciously for a particular task properly when managing, organizing and controlling their reading processes and evaluating the effectiveness of their strategy use. A critical point to be considered herein is that metacognition requires thinking reflectively and regulating learning itself. In a similar way, metacognitively aware students know the strategies required for successful reading, and how to check the progress of use over a period of time systematically (Gettinger & Seibert, 2002). Sheorey and Mokhtari (2001) specify that skillful readers are better at choosing suitable strategies to deploy for the correct tasks, reflect and regulate their cognitive processes during the reading act. The recent hoopla about strategy research brings forward that less competent learners may foster their comprehension skills gradually and employ highly exclusive strategies used by more successful learners if they receive an explicit strategy training (Karbalaei, 2010; Tercanlioglu, 2004; Çubukçu, 2008).

Without doubt, therefore, language teachers should incorporate metacognitive strategies to their teaching praxis to advance students' knowledge of how to become better thinkers and strategic readers by convenient instructional instruments (Wilson & Conyers, 2016). Thus, it is almost certain that learners may become more acquainted with strategies and be fervent to employ a wide variety of strategies they are less familiar with at the end of strategy training. However, even proficient readers sorely confront several problems while they are reading. In such circumstances, striving readers are able to activate selectively particular strategies to repair their comprehension in a given text, or tailor any of strategies to the text's specific demands. They probably might reread a definite part of the text, or underline certain information, or ask critical questions about the text and answer them. In a sense, they may deliberately use a series of strategies in combination to meet varying needs of reading texts. Therefore, the strategies at question are to be taught directly students to raise their strategy awareness and to make their reading comprehension performance better (Antoniou & Souvignier, 2007).

This view is supported by Tankersley (2003) who offers that it is of vitally importance that language teachers train students directly on how to select and use suitable strategies in accordance with reading materials within a reasonable time frame. Accordingly, this study mainly seeks to develop a reading strategy program to promote the perceptions of the 10th grade EFL students' metacognitive awareness, and examine the emerging role of metacognition in an EFL setting.

In a sense, a primary concern of this research is in quest for potential effects of metacognitive strategy intervention on participants' strategy use while reading school related materials. For the quantitative phase of the research, the following questions were specifically intended to formulate:

1. Do the students' perceived use of strategies differ significantly in each category of the MARSI before and after the strategy training?

2. Do the students' perceived use of strategies differ in regard to their gender in each category of the MARSI on the pre-test and post-test?

3. How does the degree of strategy use differ in each category of the MARSI and overall the MARSI before and after the strategy instruction?

METHODOLOGY

Research Design

This study is an action research model. As Richards and Farrell (2005) bring forward, action research is performed in the teacher's real classroom environment and involves a series of activities ranging from spotting a problem or issue, gathering information about the issue, constructing a strategy to address the issue, testing the strategy and monitoring its effects. The classroom action research may be enriched with either quantitative or qualitative methods or with both of them. Therefore, triangulation method was employed in the present study to enhance validity in natural classroom atmosphere (Mettetall, 2002) through the use of a variety of data collection instruments (Mcniff & Whitehead, 2002). Besides, Kemmis and McTaggart model (1988) comprising four broad phases as follows: planning, acting, observing and reflecting were adopted in this study.

Participants

A total of 25 (11 females, 14 males) 10th graders receiving a regular English course in a state high school in Samsun-Turkey took part in this study.

Data Collection

Drawing on triangulation method, semi-structured interviews, the researcher diary and the MARSI were employed to obtain necessary data of the research. The researcher kept a diary to reflect the students' attitudes towards strategy training process. It also facilitated to review what was done at any stage and to record the effectiveness of the process and the flow of lessons. The researcher observed and took notes on the participants' reactions to the strategies during modelling and the students' practices. Then, it is employed semi- structured interviews with 10 participants who had difficulty in using the presented strategy or reacted more positively to the strategy use. Semi-structured interviews helped the researcher to obtain new different insights towards

strategies, to get anecdotes, suggestions and personal views in accordance with strategy use. Moreover, semi-structured interviews and diary observations, used as qualitative data collection tools, enabled the researcher to get students' metacognitive assessment of their learning process, capabilities of monitoring and regulating processes in line with the study's purpose.

For the quantitative data collection, the MARSI was employed to ascertain the 10th graders' perceived use of metacognitive reading strategies on the pre-test and post-test of the study. The MARSI developed by Mokhtari and Reichard (2002) to assess the metacognitive awareness and the perceived use of reading strategies while reading academic or school-related materials. The MARSI contains 30 items in three factors of reading strategies: Global Reading Strategies (GLOB), Problem-Solving Strategies (PROB), and Support Reading Strategies (SUP). GLOB category comprises 13 items about having a reading purpose and making predictions. PROB category consists of 8 strategy items for solving problems in comprehension. SUP category includes 9 items on the use of reference materials, text aids such as the glossary or footnotes, and asking for help from others. The Turkish version of MARSI adapted by Öztürk (2012) was used in this study. According to Öztürk (2012), the Turkish version was found to be coherent to the original form in terms of item-factor consistency and structure. The Cronbach's Alpha value of the inventory is 0.93 in the present study.

Procedure

Firstly, the participants were chosen by the convenience sampling method. The researcher designed a metacognitive strategy training model based on O'Malley & Chamot (1990) taxonomy. The students received 80 minutes (a two-hour lesson) of a reading strategy instruction over a period of 10 weeks.

According to the model of Kemmis and McTaggart (1988), in planning phase of the study, the students are instructed on reading strategies to be , autonomous and qualified readers in the planning phase of the study. Having reflected on the existing literature, data were compiled through a survey, a diary and semi- structured interviews with students along. At the beginning, MARSI scale was distributed and then skimming, scanning, K-W-L, visualization, think aloud, annotating, reciprocal, and self assessment strategies were chosen to involve in the training session. A wide array of reading topics assumed to appeal to most of the students were meticulously chosen for both modelling and practice sessions. As put forward by Rios Olaya and Valcárcel Goyeneche (2005), the reading process is fulfilled better when the materials for reading are planned and designed properly. The reading texts taken from Englishhood A2$_+$ -B1 Student's Book and Workbook of YDS Publishing (2016) are suitable for 10th Grade English Curriculum in Turkey. Additionally, the texts were chosen from both the coursebook and some authentic materials (book contents, film trailers, travel brochures, travel guidebooks, videos, movie posters, real stories, news…) by considering the target strategies aimed to teach in the current study.

The teacher designed the planning phase by pondering over the matters of suitability of the reading texts to strategies, motivation of the students, challenges to deal with, the elicitation of the strategies in modelling phase and use of them in the next steps etc.

After a 10-week course was planned and designed, the next cycle, action stage started. Firstly, the researcher modelled the strategies on a suitable text so that students are provided with the necessary practical knowledge about how to employ reading strategies properly. For explicit teaching of reading strategies, teachers become models till the students use them independently, give correcting feedback and reinforce the correct responses (Antoniou & Souvignier, 2007).

While modelling, the teacher used "think aloud strategy" all the time (Pressley & Gaskins, 2006), and sometimes asked volunteer students to elicit their reactions. Then, they practised strategies by individually or in groups at the action phase of the study. Finally, the teacher explicitly taught another strategy the students will use in the next lesson.

At observing stage, the teacher wrote down her observations about the lesson. While taking notes, she focused on answering the questions as follows: Is the lesson going on as planned? If not, what could be the reasons? How may I balance the lessons for different paces of learning? Is there any point that seems confusing or unclear? What types of attitudes do the students hold? and Why?

In the reflection process, the researcher used the reflections recorded in her own diary through observations and interviews. The major aim was to assist the students to reflect on their progress and guide them and to evaluate the activities' effectiveness in accordance with the students' attitudes towards metacognitive reading strategy instruction. To this end, teacher interviewed with ten students after each lesson asking probing questions as follows:

What is today's strategy? What do you understand from that strategy? Do you think this strategy is really necessary? Is it difficult or easy to use while reading? Have you ever used this strategy before? Did you like that strategy? Why? Why not? Do you consider using this strategy from now on?

RESULTS

Bearing in mind the aim of detecting the impacts of strategy training on each category of MARSI, quantitative data collection process was performed, and the findings were discussed in accordance with three research questions respectively. Firstly, it is explored whether the participants' reading strategy use significantly differs in each factor of the MARSI before and after strategy training.

Table 1. Descriptive Statistics of MARSI on the Pre-test and Post-test

Strategy	Test	Mean Rank	Sum of Ranks
GLOB	Pre-test	14.42	360.50
	Post-test	36.58	914.50
PROB	Pre-test	15.44	386.00
	Post-test	35.56	889.00
SUP	Pre-test	15.02	375.50
	Post-test	35.98	899.50

Table 1 showed the descriptive distribution of the mean scores of three factors in the MARSI before and after the strategy instruction. The findings seem to suggest that the mean ranks of all categories in the MARSI dramatically increased. Then, Mann-Whitney U test and Wilcoxon W tests were run to explore meaningful differences, if any, in EFL students' perceived use of strategies between the pre-test and post-test.

Table 2. Statistics of Mann-Whitney U and Wilcoxon Tests for the MARSI

Test Statistics	Strategies
	GLOB
Mann-Whitney U	35.500
Wilcoxon W	360.500
Z	-5.380
Asymp. Sig. (2-tailed)	.000
	PROB
Mann-Whitney U	61.000
Wilcoxon W	386.000
Z	-4.888
Asymp. Sig. (2-tailed)	.000
	SUP
Mann-Whitney U	50.500
Wilcoxon W	375.500
Z	-5.091
Asymp. Sig. (2-tailed)	.000

As demonstrated by Table 2, it was detected a statistically meaningful difference in the participants' perceived employment of strategies in each category of the MARSI before and after strategy instruction. The value of Asym. Sig ($p<0.05$) indicated that metacognitive strategy intervention considerably influenced the students' mean scores in all three factors of the inventory.

As for the second research problem, it is explored the potential influence of gender on the employment of strategies. Table 3 delineates the mean scores of females and males before and after strategy instruction.

Table 3. Statistics of Gender on the Pre-test and Post-test

Gender	N		Mean Rank	Sum of Ranks
Females	11	pre-test	11.36	125.00
		post-test	13.00	143.00
Males	14	pre-test	14.29	200.00
		post-test	13.00	182.00

As illustrated in Table 3, it was overtly seen that both females and males' mean scores they reported quite increased after strategy instruction. However, it was needed to clarify whether this increase statistically meaningful. To this end, Mann Whitney U and Wilcoxon W tests were conducted, and related findings were displayed below.

Table 4. Statistics of Mann Whitney U and Wilcoxon W Tests on the Pre-test and Post-test

Test Statistics	Pre-test	Post-test
Mann-Whitney U	59.000	77.000
Wilcoxon W	125.000	182.000
Z	-.988	.000
Asymp. Sig. (2-tailed)	.323	1000
Exact Sig. [2*(1-tailed Sig.)]	.344	1000

a. Grouping Variable: Statement1

b. Not corrected for ties.

Above Table 4 represented that no gender based difference was found between the responses of females and those of males both on the pre-test and post-test (p>0.05). According to a salient finding, female and male students' use of metacognitive strategy did not differ meaningfully in any categories of the MARSI before and after the intervention.

Lastly, it was further sought the frequency of participants' use of each category of the MARSI and the overall mean frequency of the three sub-scales on the pre-test and post-test. Obtained findings were clearly shown in Table 5.

Table 5. Statistics for Mean Frequency of Each Single Category of the MARSI and the Overall Mean Frequency of Sub-scales on the Pre-test and Post-test

	Pre-test		Post-test	
	Mean	**SD**	**Mean**	**SD**
GLOB	2.10	0.66	3.42	0.66
PROB	2.34	0.67	3.51	0.66
SUP	2.20	0.83	3.31	0.24
OVERALL	2.19	1.15	3.40	1.04

In the above given table, the frequency of participants' deployment of each factor and the overall mean frequency of the three factors were represented. When comparing the post-test mean scores to pre-test, the students reported using (in order of degree of use from most to least used) PROB (M=3.51), followed by GLOB (M=3.42), followed by SUP (M= 3.31) after the reading strategy intervention. Among the three categories, PROB was most favoured and espoused by the participants. According to the key of the MARSI, a mean score of ≤ 2.4 indicates a low level of using a strategy, 2.5–3.4 using a strategy at a moderate level, and a mean score of ≥ 3.5 indicates a high level strategy use. Hence, participants are reported the high-usage level of PROB whilst they used both GLOB and SUP at the medium level. As for three subscales of strategies were concerned, the results put forth an increased awareness in total score for all three categories at the end of a 10-week training. As for interpretation, the students reported a-low level (2.19) frequency

use in each category before training while at the moderate-usage level (M=3.40) after strategy training.

Qualitative Data Analysis

Adhering to the framework of methodology, necessary data gleaned from the class observations through the instructor's diary and semi-structured interviews were examined through content analysis. Data were categorized under each interview questions according to the similarities and differences and constructed wide categories out of them. Further, the recurring utterances were identified and classified through selective coding and then selected extracts that would assist their explanations.

In the first week, the teacher asked students to remark their attitudes toward reading. Majority of the students stated they enjoyed reading in their native language. They seemed to display negative attitudes towards reading in English. They mostly believed that reading in English was boring and full of challenges to confront with. A common view amongst interviewees was that they were motivated to read if the texts' topics appeal to their needs.

In the second week, after the training of skimming strategy, almost all students identified that skimming was a simple way of reading the text quickly to get the main idea of a paragraph, page, chapter or article; running one's eyes rapidly to get main idea. The participants seemed to realize that the gist of the text could possibly be understood without knowing the meaning of each word.

In the third week, the teacher taught the "scanning strategy". Nearly all students agreed on that they looked for and easily found many details or specific information instead of reading whole text. They largely stated that they would consider using this strategy from now on.

In the fourth week, they were introduced to K-W-L strategy. Mostly, the students gave positive feedback in the interviews. Although it takes too much time to fill in the columns, they felt excited to check their learning. For some, setting a particular purpose in minds made students more attentive thereby they easily distinguished the new information, ignored the irrelevant ideas and found the details. Besides, they commonly agreed on that they might control their comprehension.

After the "visualization strategy" was practised in the fifth week, all students specified that this strategy made them understand the text better. By and large, they were not anxious to practise that strategy though some students reported that they were not good at drawing. They mostly reported that picturizing what they read helped them to retain the text more easily.

In the sixth week, "think aloud strategy" was integrated to the lesson. They explained how they adopted and used the think aloud strategy. Generally, the students stated that they had a big chance to control their understanding and monitor their strengths or weaknesses during reading. Some felt that this strategy seems to be a dialogue between the text and themselves.

"Annotating strategy" was presented in the seventh week. Majority of the students displayed positive attitudes towards employing this strategy in the interviews. They commonly stated that this strategy made them feel as if they were talking to the text via symbols while others criticized that they spent much time and more effort using it as it is quite complex. Moreover, fairly few students stressed that they need a considerable amount of time to think on how and when they should use those symbols and what to write down.

In the eighth week, the students were taught "reciprocal reading strategy". They specified that they felt more self-confident while working with their friends cooperatively. As some students

put forward that they were not good at reading, and their friends in the group encouraged, coached and motivate them to think. However, they argued that it takes too much time to assign the roles and perform them in the groups.

In the ninth week, the teacher integrated "self-assessment strategy" with the aim of teaching learners how to monitor and regulate their own reading. Nearly all students confessed that they were inclined to performance-oriented pedagogy rather than process-oriented. Most of the students know that self-assessment strategy would encompass previously learned and practised strategies. Therefore, they contended that they might completely confuse all the strategies. They stressed it was extremely difficult to criticize their performances, analyze their comprehension, and follow how effectively they read.

In the tenth week, the teacher asked the students to revise and use metacognitive strategies they selected during class hour. According to the common points that the students touched through the interviews, annotating, visualization skimming and scanning strategies were the most favourite strategies. However, K-W-L and self-assessment were commented on a bit difficult to perform.

DISCUSSION AND CONCLUSION

The results addressing how the students perceived use of GLOB strategies in the pre- and post-test indicated that strategy intervention highly influenced the students' metacognitive awareness. The most reported items are "skimming the text" (item 10, M: 4.20), "guessing what the material is about" (item 26, M: 4.16). The possible reason behind the high mean score on the post-test was that most of the students appeared to brainstorm and predict the content. This result may also originate from the fact reported by Karbalaei (2010) that the students appear to know and use carefully planned strategies intentionally. In her research, Solmaz (2015) confirmed that guessing is highly employed by readers. Students might effectively get the general impression about the theme, purpose, issues or organizational structures as they paid attention to introduction or conclusions, graphics or visuals. A similar reason might be this category of strategy is closely related to "self-assessment" and "think aloud" strategies. Self-regulated students were assumed to monitor what they previously knew and what to know, and managed to connect them properly. Besides, "K-W-L" and "think aloud" strategies may be more effective to activate background knowledge; thereby they are likely to internalize what they read. The students are able to interrelate the texts and their personal lives.

The dramatic increase in "using tables, figures, and pictures" (item 17, M: 3.80) and "having a purpose in mind" (item 1, M: 3.72) prove that students know to analyze and interpret critically what they read in tables, charts, graphics or pictures to remember or check their understanding of fictional or real informative content of the texts. This finding may possibly be verified by the students' awareness in decision making to facilitate comprehension. Fortunately, "K-W-L strategy" helps students to decide what they want to learn and have learned through texts. The observed increases in the means could be attributed to the assumption that students may profoundly reflect on their decisions on the strategies ly chosen to fulfil the specific purpose of the text. In this sense, they assess or judge independently how well they understand while noticing the conflicts or gaps among the information in a text material. This finding further supports Zang and Wu's (2009) study that showed having purpose on mind was reported highly frequently and the readers preferred to use of contextual clues such as antonyms, synonyms, examples, pictures to maximize the comprehension after the training. As for interview responses, having purpose on

mind, skimming and guessing strategies were frequently employed by almost for each text without much effort.

This study also identified the difference in PROB reading strategies between the pre-test and post-test. The result eliminated from this research question overtly pointed out that strategy instruction has highly improved the students' perceptions on the use of PROB category (Al-Dawaideh & Al-Saadi, 2013). Within the category of PROB, the strategies reported of more frequent usage were respectively as follows: "trying to picture or visualize information" (item 21, M: 4.48), "reading slowly, but carefully to comprehend" (item 8, M: 4.16), "guessing the meaning of unknown words" (item, 30, M: 3.96), "stopping and thinking on reading" (item 18, M: 3.68), indicating that students were likely to detect comprehension difficulties and repair them conciously. They also stated how to deal with possible comprehension problems by managing reading speed to consider on the meaning of the text, and by visualizing messages from the reading material, and by using some contextual clues to guess unknown vocabulary rather than ignoring or getting the meaning through dictionaries or asking their counterparts. As a highly favoured strategy category, these strategies are deployed to overcome failures in comprehension such as: slow and careful reading, reading rate control, reread, pause to reflect on the reading, and read aloud (Onovughe & Hannah, 2011). This result was correlated with Tuncel (2014) and Anderson (1991) who revealed that visualization strategy is highly preferred strategy. The responses in current study indicated that students frequently created their own mental pictures and visual contexts through imagination after the training (M: 35.56). However, this finding differed from the study of Madhumathi and Ghosh (2012) in that their students' most frequently used strategy was visualization strategy with a mean 4.02 without any training. In more concrete words, the increase in students' strategy preferences clearly proved the students were able to actively take part in reading process and manage their comprehension. This result may also originate from the fact reported by O'Malley and Chamot (1990), visualization includes both self-management and self-monitoring metacognitive strategies. Notably, metacognitively aware readers know which conditions help them to learn and to arrange what they have learned. Undoubtedly, they evaluate their reading performance while reflecting their ideas through visuals. In a sense, they are apt to orchestrate and modify their use of reading strategies. In Course (2017) study, similarly, these two strategies were the most preferred strategies with high usage rather than medium usage by advance university students. Briefly, the students in the current research were extremely conscious of the use of problem-solving strategies after the instruction. Depending on this finding, it may be stated that the students with higher levels of metacognition are likely to be more competent in solving problems independently and controlling their comprehension process.

The present research tried to pinpoint the impacts of strategy intervention on the perceived use of SUP. Basically, SUP factor comprises the practical strategies for better comprehension as follows: Underlining or highlighting information, summarizing, paraphrasing, reading aloud, using a dictionary, asking oneself questions, and taking notes. The items reported with high mean scores in the category of SUP respectively as follows: "underlining or circling" (item 12, M: 3.60), "discussing with others to check comprehension" (item 9, M: 3.52), "reading aloud" (item 5, M: 3.48), "taking notes" (item 2, M: 3.36). The most favoured strategy after the training was found underlining strategy as in Solak and Altay (2014)'s study.

With reference to findings, it is assumed that strategy instruction has cultivated students' perceived use of SUP. A reasonable explanation for this result might be that the participants who received thinking aloud strategy training learned to verbalize what they were thinking and to perform their internal reflections before, during or after reading. Admittedly, the students managed

to become competent and independent readers reflecting their inner speech during reading process by the effects of continuous practices. In fact, this finding also confirmed that students support their deeper understanding through keeping notes and enhance their own summarizing or recalling the information in the texts easily. A likely explanation for this noteworthy finding is that the students may internalize the annotating strategies like underlining, taking notes or using specific figures symbolically. This may have also arisen from readers who seemed to be more self-competent to analyze the information searched. Better readers may easily ignore irrelevant distracters, arrange and check their comprehension. In this way, they self-manage their reading through annotating (O'Malley & Chamot, 1990). Besides, it is not a far-fetched idea to conclude that "reciprocal strategy" training makes a great contribution to discuss with and ask their peers to clarify what they read. It provides students with a guided practice through predicting, questioning, summarizing, and clarifying strategies. The students tend to be more eager to summarize their reflections after the training. Furthermore, it may be argued that "underlining strategy" is among the strategies the students commonly use in their native language reading, and they are relatively easy to use without much effort. This result of the study were in harmony with Solmaz (2015), and Zhang and Wu (2009) in that the most of the participants responded that they underline with coloured pencil or draw over them to remember or memorize easily before the training.

The findings unravelled that it was not identified statistically meaningful difference in the employment of strategies between females and males. To put it another way, a significant gender-based difference was not observed before and after instruction. It seems possible that this result is due to a sample size selected for the study. This striking finding is parallel with earlier studies: Poole, 2005; Kasımi, 2012; Friedman, 1989; Özsoy and Günindi, 2011; Vianty, 2007; Siswati and Corebima, 2017; Alyas, 2011 detected that there was no influence of gender as a distinctive agent on deployment of strategies autonomously. Conversely, the ineffective function of gender in the present study seems to clearly contradict with a limited number of investigations reporting that females employed reading strategies much more often than do males (Li, 2010; Lee, 2012).

Referring to the last research question, it was revealed that the degree of high school students' use of strategies increased in each category of the MARSI after the strategy training. One of the more significant findings to emerge from this study is that PROB is the most frequently used by students, followed by GLOB and finally SUP. This finding of the research is compatible with that of previous research by Mokhtari and Reichard (2002), Zhang and Wu (2009), Alhaqbani and Riazi (2012), Solak and Altay (2014), Amer, Al Barwani and Ibrahim (2010), Cantrell and Carter (2009), Hong-Nam (2014). In a similar path, Ghosh's (2012) findings echo those of Li (2010), who found that the most preferred category as PROB whereas the least one was global strategies. On the contrary, as put forward by Tuncel (2014), the participants mostly employed SUP, GLOB and PROB respectively in his study.

In the light of the findings achieved, it was also specified that overall reported use of reading strategies was (2,19) low usage before training whilst they were in medium level with a mean (3.40) after the intervention. This result may plausibly be justified by the premise that the long-lasting strategy training specifically designed for EFL readers help them find alternative solutions to their comprehension problems. Dramatic increase in the overall reported use of strategies' increase confirms that the strategy training enabled students to outperform in post-test. Similar finding was reported by Alhaqbani and Riazi (2012), Solak and Altay (2014), Amer, Al Barwani and Ibrahim (2010), Cantrell and Carter (2009), Hong-Nam (2014). In contrast, Mokhtari and Reichard (2002), Course (2017), Zhang and Wu (2009) pointed out their participants indicated a moderate to high usage of strategies.

As it is noted previously, the result strongly suggested that the students held positive attitudes and gained invaluable insights towards reading as they profoundly stated in their interview protocols. In line with the same advocacy, Diaz and Laguado (2013) also confirmed this remark that the participants were likely to display negative attitudes when they first read texts. In their study, the participants were observed to read the text more willingly after they practiced with two strategies. The students searched for practical ways to use those strategies and accurately transferred them to similar activities or tasks (Oxford, Lavine & Crookall, 1989).

Given the considerations and fundamental aspects of metacognition, the current study provided a strong ground for a substantial insight how EFL teachers integrate reading strategies into English classes' instructional frameworks. Deeming the advantage of explicit training in reading, a attempt was made to attune to a host of reading functions. There has been a longstanding debate peaking the curiosity of many scholars is that how the students are instructed on metacognitive reading strategies. According to the instructional model of strategies, teachers explain the strategy to the students, then model it for them, thereby, learners are provided with ample practices on when, where, and how to operate a full range of strategies selectively. In addition, the teacher may remodel the strategy if it is needed (Mokhtari & Reichard, 2002; Nyikos & Oxford, 1993). Thus, teachers have accomplished to combine declarative knowledge (the description of the strategies) with procedural knowledge (the ways to employ the strategies), and with conditional knowledge (practical time) in dynamic process of reading (Duffy, 1993). Consistent with the pedagogy expressed above, this research confirmed that specifically EFL readers needed to receive a long-term strategy instruction to use numerous strategies more strategically. To this end, as highlighted in literature, the readers should expend much effort to reflect their thinking process and to revise a repertoire of reading strategies while monitoring their comprehension (Kern, 1989; Razı, 2010). Likewise, Rubin (1975) opts for describing a good language learner with the claim that s/he knows how to understand the messages, to monitor their reading, to interact with texts, to gain insight to identify, and to overcome major learning difficulties.

All in all, the present study entirely agreed on that classroom action research is a specified method of scrutinizing teaching to regulate the current ways of teaching. Besides, it may provide a refreshed sense of excitement about teaching (Mettetall, 2002). First and foremost, common problems of a typical EFL class such as motivation, different needs of the students, limited time, overcrowded classroom etc. must be addressed to promote the deliberate use of strategies and also the effectiveness of metacognitive reading instructions. One more to note, this research proved that metacognitive awareness which has been dwelt upon for many years provides learners with deep insights over what is needed, what is to be done or what is achieved to meet the particular demands of different text types in regular reading courses in EFL contexts.

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