LEARNERS' METACOGNITIVE STRATEGY USE AND READING COMPREHENSION: INSIGHTS FROM A VIETNAMESE CONTEXT

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ABSTRACT

The effects of meta-cognitive strategy use on learning reading comprehension have gained much interest of researchers and educators (Chumpavan, 2000; Shmais, 2002; Phakiti, 2003; Aegpongpaow 2008; Subasi, 2009; Zhang and Wu, 2009). Available literature indicated a positive correlation between learners' meta-cognitive strategy use and their achievement in reading comprehension. This paper reports results of an investigation into which meta-cognitive reading strategies used by Vietnamese learners of English as a foreign language (EFL) and the interaction between learners' meta-cognitive strategy use and their reading achievement. The paper also focuses on problems hindering learners' use of meta-cognitive strategies. Both qualitative and quantitative methods were used in this study. Data was collected from questionnaires, reading comprehension tests and interviews. Eighty-four students at grade 11 of an upper secondary school in a remote area of the Mekong Delta in Vietnam participated in this study. Results showed that participants used problem-solving strategies most often and support strategies, least often. The study found a rather strong interaction between participants' use of these strategies and their achievement in reading comprehension. Problems hindering participants' use of meta-cognitive strategies in their reading are also reported in this study.

Keywords: Meta-Cognitive Strategies, Reading Comprehension, Reading Achievement.

INTRODUCTION

Meta-cognitive strategies are considered as part of effective strategies that enhance learners' reading ability (Cohen, 1998). To become successful readers, learners should improve their reading ability via integrating their prior knowledge and meta-cognitive strategies with the understanding of words and sentences in a text (Hammadou, 1991). Researchers have recognized the significant role of meta-cognitive awareness and use in reading comprehension among successful and less successful readers; their research have shown that most of the comprehension activities of efficient readers take place at the meta-cognitive level (Carrell et al., 1998; Hudson, 2007). Readers with high meta-cognitive awareness can select appropriate reading strategies in relation to reading purpose and task demands. These readers can also monitor the process of comprehension, evaluate the effects of selected strategies and adjust those when needed (Cohen, 1998; Hudson, 2007; Zhang and Wu, 2009).Once learners' knowledge about meta-cognitive strategies and their regulation of cognition are improved, they will become better strategy users (Farrell, 2001).

A large body of empirical research investigated the effectiveness of the instruction and use of meta-cognitive strategies on reading comprehension. Studies by Chumpavan (2000), Shmais (2002), Phakiti (2003), Aegpongpaow (2008), Subasi (2009), and Zhang and Wu (2009) explored the effect of meta-cognitive strategy use on reading comprehension. These studies have indicated a positive interaction between meta-cognitive strategy use and reading comprehension: The more reading strategies learners used, the higher their reading scores were. Since poor readers are less likely to be aware of reading strategies and their role in enhancing their comprehension of texts, some researchers have focused on investigating measures which may promote learners' meta-cognitive awareness through the direct instruction of meta-cognitive strategies

(Song, 1998; Rasekh and Ranjbary, 2003; Çubukçu, 2008). These studies reported positive results about the effects of the direct meta-cognitive strategy instruction on learners' reading comprehension: Teachers who demonstrated better meta-cognitive strategy instruction helped students to make more progress in their meta-cognitive knowledge. Such meta-cognitive knowledge would in turn lead to better results in reading comprehension.

Results from the above studies confirm an important role which meta-cognitive strategies play in learners' learning reading in the second language. These meta-cognitive strategies help the learners to plan, monitor, evaluate effectively and remediate their comprehension before, during and after their reading. Direct instruction of meta-cognitive strategies in reading lessons might also develop learners' awareness and perceived use of the strategies they have learned, and accordingly they would become better strategic readers.

Though previous researchers shared a consensus that meta-cognitive strategies are helpful to second language learners, they have a number of limitations. Those studies were conducted following either a qualitative or quantitative method. Most researchers found that poor or unsuccessful learners are unable to or less frequently use meta-cognitive strategies in their reading processes, and little focus was paid on investigating problems hindering the use of meta-cognitive strategies.

In the context of Vietnamese secondary education, very little classroom time, even not at all, is spent on instructing students reading strategies (i.e., providing sufficient explanation of the strategic skills needed to complete reading tasks,...). Comprehension questions are most dominant tasks in reading lessons. As a result, students in secondary schools have misconception about the nature of reading and incomplete awareness of reading strategies and executive processes for monitoring and regulating comprehension (Carrell, 1998). Their misconception may prevent them from being capable of using strategies in their reading processes.

The researchers of this study assume that it would be beneficial to investigate the effect of meta-cognitive strategy use on learners' reading ability. A case study related to this field would help the researchers better understand learners' problems in using reading strategies, which could in return inform proper reading pedagogy. For this reason, the present study was conducted to examine the use of meta-cognitive strategy on reading achievement of the eleventh graders in an upper secondary school in the Mekong Delta of Vietnam.

Aims of the Study

This study aims to investigate the overall meta-cognitive strategies used by the participants and their interaction with subjects' achievement in reading comprehension. The study also aims to gain an in-depth understanding of problems which hinder participants' use of meta-cognitive reading strategies. Providing that participants' use of meta-cognitive strategies is under or at the average level, there would be problems which affect their use of these strategies. It is also anticipated that findings from the study would provide classroom practitioners, curriculum developers, researchers and English language policy-makers with an insight look into the role which meta-cognitive strategies play in reading lessons in a Vietnamese context.

Methodology

Participants

In this study, 84 participants (grouped into two classes) were randomly chosen from a population of 350 grade 11th students at an upper secondary school located in a rural area in the Mekong Delta of Vietnam. Their ages ranged from 16 to 18; 30 were female and 54, male. The subjects in the study were taught English, using the textbook English 11 (Hoang et al., 2007), which is used throughout Vietnam. The study was carried out at the end of the first semester of the academic year 2009-2010, from September 2009 to February 2010.

Instruments

Reading Comprehension Test

A reading comprehension test was used to measure participants' ability to comprehend two English texts for main idea, details, and inferences. Specific skills which participants needed to have to do the test were (i) scanning the text for specific information, (ii) skimming the

text for general idea, (iii) guessing the meaning of unknown words and phrases from the context, (iv) evaluating information in the text, and (v) drawing inferences from the content of the text. Those skills are major achievement targets of teaching and learning English reading skills to the eleventh graders in Vietnam.

To meet the objectives of testing learners' ability in reading corresponding to their current grade 11, the reading texts were carefully selected from the materials English 11 Review and Practice Exercises (Truong, 2007) and Testing and Evaluation of Student's Progress of English 11 (Nguyen et al., 2007). Two passages in the test were designed in light of the textbook English 11 and achievement targets for reading in English set by the Vietnamese Ministry of Education and Training (2006). The test was an achievement test which is commonly used in English classrooms in Vietnamese upper secondary schools. The topics of reading texts in the test were about a celebration and sport which consisted of non-technical words. Participants were asked to complete the reading test in 45 minutes.

The total score for the test was 100. In addition to the use of Right/Wrong credit to score the test, three written responses to the test were focused on evaluating participants' appropriate and comprehensible ideas in terms of contents meant to express by the participants, rather than spelling and grammatical structures. Also, for the purpose of the present study, it was decided that participants who obtained the score of 50 or above were grouped as successful and those who got under 50, the unsuccessful group.

Questionnaire on Meta-cognitive Reading Strategies

To collect data on participants' meta-cognitive strategy use, a 5-point Likert scale questionnaire was adopted from the Meta-cognitive Awareness of Reading Strategies Inventory (MARSI) by Mokhtari and Richard (2002). Thirty items in MARSI were developed to test EFL adolescent and adult learners' awareness of meta-cognitive strategies and their perceived use of those in their reading academic or school-related texts. The questionnaire requires respondents to mark strategies they self-report using on a 5-point Likert scale: (i) (never do), (ii) (occasionally do), (iii) (sometimes do), (iv) (usually do) and (v) (always do). In examining students' strategy use in terms of the Likert scale that ranges from 1 to 5, this study employed three levels of usages, as suggested by Oxford and Burry-Stock (1995) for strategy use in language learning, that is, high (a mean of 3.5 or higher), moderate (a mean of 2.5 to 3.4), and low (a mean of 2.4 or lower)

Before the questionnaire was used to collect the data for the study, it was modified so that it would become more suitable in the research context. Firstly, the MARSI version was administered in Vietnamese to avoid participants' language problems which may cause their misunderstanding of the items. Secondly, the sequence of the items were rearranged according to their categories (i.e., strategies under the same category were clustered together) to support participants' better understanding of the items in the questionnaire. After the MARSI was clustered, items 1 to 13 belonged to Global Reading Strategies. These generalized and intentional strategies were used for a global analysis of text or setting up the stage for the reading activity. Items 14, 15, 16, 17, 18, 19, 20, 21 and 22 tested learners' ability to identify problems and decide ways to solve the problems. They were considered as Problem-Solving Strategies. Items 23, 24, 25, 26, 27, 28, 29 and 30 belonged to the third cluster, Support Reading Strategies; these strategies provide readers with functional or support strategies (i.e., dictionaries, reference materials, and other practical strategies) aim to sustain learners' attending to readings.

Interviews on Problems Hindering Participants' Use of Meta-cognitive Strategies

A three-question interview which was developed by the researchers was used in this study. It centred on eliciting information regarding problems hindering participants' use of meta-cognitive strategies in reading, including (i) the lack of knowledge of cognition, (ii) the lack of regulation of cognition, and (iii) the lack of intrinsic motivation. When conducting the interviews, the researcher was also able to exploit extra data by looking at what meta-cognitive strategies the participants actually used in their reading.

Based on participants' achievement in the reading comprehension test, eight participants of the study were

purposefully selected for interviewing. Eight participants who gained the most and the least in their reading achievement (namely 4 "successful" and 4 "less successful" participants) were chosen for interviews. To conceal interviewees' identity, they all were given pseudonyms. The interviews were conducted face-to-face after the questionnaire was administered. Questions were asked in Vietnamese to make the interviewees feel convenient and self-confident in providing as much information as they can. Data obtained from the interview was subsequently translated into English; the English translated version was validated by two English lecturers by re-translating the texts into Vietnamese. Where there was a mismatch between the versions in Vietnamese and English, the researchers checked and did the translation again.

Data Collection and Analysis

To gain insights into participants' ability in reading comprehension, a reading test was administered. A questionnaire was then given to these participants. After informing the purpose of the questionnaire, the researcher asked the students to read each item and rate how often they reported the described strategies in that item using a 5-point Likert scale. The participants were also reminded that their responses were to refer only to the strategies they used when reading school-related materials like textbooks. They were also encouraged to rate strategies and to ask any questions about the items they did not understand.

After results from the reading test were computed, eight participants were selected and interviewed. The interviews were transcribed and translated into English. Finally, the interview data were analyzed with such procedures as (a) developing a thematic framework, (b) organizing the data, (c) coding the data, (d) deducing the data, and (e) interpreting the data. The data were coding in light of theories of problems hindering the use of meta-cognitive strategies, and codes emerging from the dataset. When the transcripts were coded and rechecked for coding consistency, common patterns of problems in meta-cognitive strategy use were identified.

As regards statistical methods, the software SPSS 11.5 version for Microsoft Windows was used. In particular, to ascertain the level of meta-cognitive strategies employed by the respondents, the One-Sample 'T'- Test and the Independent Sample T -test were utilized. In identifying the reading achievement of the participants, the test mean of the group was computed. To check for the interaction between meta-cognitive strategies and reading scores, the Correlation Test was run. And in identifying the problems hindering participants' use of meta-cognitive strategies, data gained from interviews were analyzed, using a coding system.

Results and Discussions

Meta-cognitive Strategy Use by the Participants

A 30-item questionnaire was used in the current study to collect data in participants' use of meta-cognitive strategies in English reading comprehension. Eighty-four participants were asked to report their responses to each item on a five-degree scale. However, after the questionnaires were collected and examined individually, eight out of 84 participants did not completely finish the questionnaire. Then only 76 valid questionnaires were used for statistically analyzing via the software SPSS. The reliability of the questionnaire was computed; the result showed that the internal reliability coefficient is significantly high (α = .87). The questionnaire used in this study showed to be reliable.

A one-sample 't'-test was conducted on metacognitive strategy use scores to evaluate whether their mean was significantly different from 3.0-the accepted mean for metacognitive strategy use in questionnaire inventory. The sample mean (M= 3.29, SD= 0.55) was significantly different from 3.0- the average point (t= 4.53, df= 75, p= .00). This means that participants' use of metacognitive strategies in reading is above average. The results supported the conclusion that the participants' level of metacognitive strategy use was higher than that of the accepted mean.

The analysis of the questionnaire data resulted in evidence to suggest that the participants were generally strategic readers. Their awareness and perceived use of meta-cognitive strategies in reading comprehension were slightly higher than the average level. This finding incorporates with Shmais (2002) and Zhang and Wu's (2009) findings which indicated that high school students were active meta-

cognitive strategy users. They were conscious of their cognitive process during reading and were able to utilize various reading strategies to achieve comprehension. Similarly, this finding in the current study is consistent with Chumpavans (2000)'s. In her study, Chumpavan found that the students used a number of meta-cognitive strategies such as prior knowledge and experience, grammatical knowledge, self-questioning and summarization to assist their reading comprehension.

The result could be explained with the following reason. Most participants might acquire various reading strategies unconsciously since these strategies embedded in the reading comprehension exercises during class. However, most participants in the study reported that they used global and support strategies less frequently than problem-solving strategies, which could due to the lack of their knowledge on these two category strategies. Therefore, what teachers could do is to find out how effectively learners use different strategies and to give them guidance accordingly, just as Oxford (1989) suggests that it is important to teach learners clearly why and how to use effective strategies and to use strategies in appropriate contexts.

Considering global, support, and problem-solving strategies as categories of metacognitive strategy used by two groups of successful and less successful, the Independent Sample T- Test was conducted to evaluate whether there is a significant difference between the successful participants and the less successful counterparts in terms of metacognitive strategy categories. The results of the test are demonstrated in Table 1.

It can be seen from Table 1 that a difference between two groups of participants was statistically significant in their use of global and supporting strategies (t= 4.45, df= 74, p= .00 and t= 3.20, df= 74, p= .00, respectively). In contrast, there was not a significant difference between the groups in terms of problem-solving strategy use (t= 1.81, df= 74, p= .07), though the mean scores of two groups for this subscale of metacognitive strategies were slightly different. These results indicate that the successful group demonstrated their higher use of metacognitive strategies over the less successful counterparts in terms of global and supporting strategies. However, participants in the two groups did not differ from each other in terms of problem-solving strategy use.

Variables	Group	N	Min.	Max.	M	MD.	SD.
Global	Successful	18	3.08	4.23	3.74	.63	.31
	Less Successful	58	1.69	4.08	3.11		.58
Support	Successful	18	2.33	4.44	3.60	.57	.578
	Less Successful	58	1.11	4.44	3.04		.68
Problem-Solving	Successful	18	2.25	4.63	3.72	.33	.57
	Less Successful	58	1.63	4.50	3.39		.72

Table 1. Differences between the Successful and Less Successful Groups in Using Metacognitive Strategies

The results show that successful participants were capable of planning for reading, utilizing possible aids to enhance their understanding and memorizing. Problem-solving strategies were found to be most frequently used in comparison to global and support strategies, indicating participants' ability to monitor their comprehension. They would use strategies like "re-read to increase understanding" or "adjust reading speed" when a text became difficult. Although all the participants reported the frequent use of problem-solving and global categories of strategies, the successful group demonstrated the most frequent use of them. These findings were consistent with findings from previous studies which stated that the successful students have good control of their cognitive process in reading by varying their meta-cognitive reading strategies to understand the text and effectively solve their reading problems (Phakiti, 2003; Aepongpaow, 2008; Çubukçu, 2008; Subasi, 2009).

Correlation between Participants' Metacognitive Strategy Use and their Achievement in Reading Comprehension

A reading comprehension test designed by the researcher was used to measure participants' achievement in English language reading comprehension. The score of the reading test is ranked from 10 as the minimum to 100 as the maximum. The test scores were then subjected to SPSS for data analysis. The internal consistency of the reading comprehension test for the present study showed to be acceptable (α = .75). Means and standard deviations for the reading scores can be found in Table 2.

As shown in Table 2, the mean score for correct answers by the participants (M = 43.62) was under average in the scale of "10 as minimum" to "100 as maximum". The

Variable	N	Min.	Max.	Mean	MD	SD
Reading scores	76	20	85	43.62	38.62	16.82

Table 2. Descriptive Statistics of Participants' Achievement in Reading Comprehension

sample mean (M= 43.62, SD= 16.82) was significantly different from 50, the average point (t = 20.01, df = 75, p= .00). This means that the participants' achievement in reading comprehension was below average. The results supported the conclusion that the participants' achievement in reading comprehension was lower than that of the accepted mean. It can be concluded that participants' reading achievement in the study was low, below the average.

Participants' scores in the reading test presented in this study were used to evaluate their ability in reading in English. The researcher divided the participants into two groups: (i) the successful were participants who got the score of 50 or above and (ii) the less successful were those who got less than 50.

The Correlation Test was run to measure an interaction between participants' metacognitive strategy use and their achievement in reading. The statistic test was performed at the level of .01 and the Pearson r value is 0.54, which denotes a positive relationship between metacognitive strategy use and reading achievement (n= 76, r = .54, p = 0.00). This result indicates that there was a positive interaction between metacognitive strategy use and reading comprehension achievement though this correlation was not very strong, and that the more participants used metacognitive strategies, the higher they would achieve in their reading comprehension.

Previous studies indicated a significant relationship between meta-cognitive strategy use and reading achievement, and especially upper secondary school students' pattern of strategy use was found to be closely related to their overall EFL achievement (Phakiti, 2003; Subasi, 2009; Zhang and Wu, 2009). Consistent with these previous findings, this current study found that a positive correlation between meta-cognitive strategy use and reading achievement did exist: Participants who got high scores in their reading test were found to use more meta-cognitive strategies in their reading processes and vice versa.

It was not very surprising to see the positive relationship between meta-cognitive strategy use and reading achievement since this has been tested through numerous previous studies. However, the result of the current study demonstrated that such a relationship was not very strong (r = .54). There are possible explanations for this result. At the first place, there might be a number of participants who got low scores in the reading test but high scores in the questionnaire inventory. In fact, these students could be well aware of meta-cognitive strategies, but they failed to apply them to reading appropriately; they did not actually use them when reading; they might simply perceive those at the time responding to the questionnaire. In addition, there could be also successful students with higher scores in the reading test but lower scores in giving responses to the questionnaire. Although they did not use meta-cognitive strategies when reading, they might have skills in doing a reading test. So they could get high scores in reading without using meta-cognitive strategies. As Collins (1994:2) argued, "it is not enough to be aware of one's understanding or failure to understand- a learner must be able to self-regulate his or her reading process in order to read for comprehension. The reader needs knowledge about meta-cognitive strategies." Another explanation for the less significance of the above relationship between the two variables was that there might be problems hindering participants' use of meta-cognitive reading strategies. These might be caused by students' lack of knowledge of cognition, regulation of cognition, and intrinsic motivation.

Problems Hindering Participants' Use of Metacognitive Reading Strategies

Participants' Lack of Knowledge of Cognition: Based on the related literature in the field, the researchers of this study made a distinction between knowledge of cognition and regulation of cognition. The former includes three subcomponents: declarative, procedural, and conditional knowledge. The participants in the interview were asked information concerning how to use reading strategies such as skimming, scanning and guessing meaning from the context; the conditions under which these strategies are most useful, and a brief rationale for why one might wish to

use them. Data from the interviews illustrated that five out of eight participants were not fully aware of what these strategies are. They did not know what these strategies are, and they did not know how, when and why to apply these strategies when reading. These participants said,

> *We did not know what skimming or scanning is. We do not know how to skim or scan. Sometimes, our English teacher asks us to guess the meaning of new words from context, but we cannot do that. we don't know how to guess meaning from the context. (Mai*, Tuan and Bao in the less successful group)*

The findings showed that the less successful participants' knowledge of cognition was limited. The results could be explained that since these participants were not completely aware of reading strategies, they had no strategies to select from and apply appropriate ones that would best help them to understand a reading passage at hand.

Participants' Lack of Regulation of Cognition: With respect to regulation of cognition, eight participants were interviewed on their using of three main metacognitive strategy categories: planning before reading, self-monitoring when comprehension breaks down, and self-evaluating of comprehension after reading. The results showed that six out of eight participants did not use self-regulation strategies when reading. The participants revealed,

> *We read a text in order to finish reading assignments. We start to read and then do the tasks followed. Sometimes we think of what we know about the topic in order to comprehend the text easier or try to guess meaning of new words, but it does not help. (Tuan and Sang in the less successful group)*
>
> *… After reading, we do not discuss with peers about what have been read or summarize the text in our own words since it is difficult for us to do. We never analyze or evaluate the information presented in the text. (Tai in the successful group)*

Data from the interviews suggested that the less successful students faced more problems in using meta-cognitive reading strategies. Whereas most successful students knew which strategies to use and how to use them, the unsuccessful had difficulties in identifying appropriate strategies to apply during their reading. This finding was well supported by a number of previous studies in that less successful students were found to be weak at meta-cognitive awareness, so they were unable to select reading strategies suitable for a reading task, monitoring the process of comprehension, or adjust strategies when needed (Al Melhi, 2000; Zhang and Wu, 2009; Subasi, 2009).

This finding could be explained that less successful students did not possess enough knowledge about meta-cognitive knowledge, so they were not good at using meta-cognitive strategies. In other words, poor readers or unskilled readers who showed evidences of meta-cognitive deficiencies are considered as unaware and incapable of monitoring their mental processes while reading. With respect to this area of knowledge, Al Melhi (2000) found that some differences did exist between skilled and unskilled readers in terms of their actual reported reading strategies, their use of global reading strategies, their meta-cognitive awareness, their perception of a good reader, and their self-confidence as readers.

Participants' Lack of Instrinsic Motivation for Learning to Read in English: Students' motivation was classified into two main types: (1) external regulation which means learners perform certain behaviors so as to satisfy external demands or to get external reward, and (2) learners' intrinsic motivation for learning a language for fun or for intrinsic fulfillment. From the interview data, six out of eight participants showed that they did not like to learn reading in English, and that they were more extrinsically motivated than intrinsically motivated. The result implies that most of the students learned to read in English for external reasons instead of for their own sake. Some successful participants stated that they did not feel it necessary or fun to learn English, and that they saw English as a compulsory subject taught in the classroom. They said,

> *We do not enjoy reading in English. We learn to read in English because we do not have any choice, it is a compulsory task in English language curriculum and we learn it to get good scores. (Tai and Ly in the successful group)*

The less successful participants also shared the same concern with the unsuccessful when they reported that they were not keen on learning to read in English that, For instance, Mai from the successful group reported she did not study English for her own interest, but for her parents' sake. She explained,

> *It is not interesting to learn to read in English. The primary reason for me to learn it is because it is assigned. I also learn to read in English to satisfy my parent's expectation.*

The results indicated that most participants (75%) in this study learnt to read in English for external reasons: They learn it for getting good grades or satisfying their parents' expectation. There were few successful participants (25%) who showed their strong inherent interest for learning to read in English. As Noels et al. (2001) has pointed out that the learners may engage in language learning because of rewards or punishment, but they may also cease learning once the external pressure no longer exists. Learners who are intrinsically motivated to learn are still believed to be more persistent in language learning, and this persistence may in return contribute to learners' achievement. To this end, in this study, participants' intrinsic motivation should be developed.

The results gained from this study suggested that most participants reported to have stronger extrinsic motivation than intrinsic motivation on learning to read in English. The results were consistent with the recent study (Chang, 2005) that students in Taiwan were reported to be more extrinsically motivated in learning English. The possible explanation for the result in this study may be due to the environment where English is taught as a foreign language in a rural area of the Mekong Delta; the region where there was limited chance provided for students to use English in real life; some students may not feel it necessary or fun to learn English. The other possible reason is that students may consider external motivation very important for their learning. They learn to read in English just for getting good grades or satisfying their parents' expectation.

In summary, the results from the interview data revealed that while most successful students were self-aware of reading strategies and were able to apply them in a relatively effective way, the less successful participants' awareness of these strategies was limited and they rarely used reading strategies in their reading activities. The study indicated that less successful students had more problems using metacognitive strategies, the problems related to their lack of knowledge of cognition and regulation of cognition. It is anticipated that most participants in this study were not intrinsically motivated for learning to read in English. These problems interfered with the participants' using of metacognitive reading strategies and decreased their motivation for using these strategies. Therefore, it is suggested that less successful students could be trained in using meta-cognitive strategies in order to become strategic readers and to improve their reading achievement as well.

Conclusion and Implications

The current research was conducted to investigate meta-cognitive strategies used by learners of English as foreign language in a Vietnamese secondary school context. The study also explored the relationship between the use of meta-cognitive strategies and learners' reading comprehension achievement, and documented problems hindering learners' use of meta-cognitive strategies. It was found that successful participants in the study used more strategies than the less successful. Additionally, the relationship between meta-cognitive strategy use and reading achievement was shown to be positive. In other words, the successful students were better users of meta-cognitive strategies in their reading and vice-versa; the less successful learners faced problems in using meta-cognitive strategies such as lack of knowledge of cognition, regulation of cognition, and intrinsic motivation.

In the light of this empirical research, a number of pedagogical recommendations for English foreign language education were drawn. It is first suggested that promoting less successful students to use meta-cognitive strategies would contribute to their effective learning reading. It can be seen from the results of this study that although learners on the whole frequently used quite a wide range of strategies, the less successful learners seemed to be distinguished from their successful counterparts in strategic knowledge and regulation. To this

end, English language instructors should raise awareness in less successful learners that meta-cognition could increase their academic success. The teachers should help learners construct explicit knowledge about when and where to use appropriate strategies (Goh, 2008) which may enable individuals to plan, monitor, and evaluate their learning reading. In addition, the language instructors should understand the factors or problems hindering learners' use of strategies so as to adjust their instruction accordingly. Besides, participants' learning to read in English in this study was shown to be more extrinsically motivated. It is recommended that learners' intrinsic motivation should be more emphasized through teaching methods and more interesting activities in classroom context.

According to Oxford and Crookall (1988), learners' use of appropriate strategies enabled them to be responsible for their own learning through improving their independence, self-direction, and learner autonomy, which are crucial for learners to continue their life-long learning endeavours. For this reason, it is also suggested that direct instruction of meta-cognitive strategies should be incorporated into the reading curriculum for the English language teaching. In other words, the instructing learners reading strategies should be considered as an integral part of reading activities during reading classes. Then it should be explicit and relevant with reading tasks and should be prescribed in textbooks which are currently used in secondary schools.

Recommendations & Limitations

Though this study has shed insights into the role of meta-cognitive strategy use on reading comprehension in an EFL context, two limitations remain. The study was first limited in that it only focused on the eleventh-grade students in a Vietnamese upper secondary school and restricted to the period of 2009-2010. Future studies investigating this topic in a larger sample with a more variety of locations in Vietnam would bring a higher external validity. The second limitation of the study was related to the investigation of problems learners faced in using meta-cognitive reading strategies. In other words, in addition to problems with knowledge of cognition, regulation of cognition, and motivation, other factors including individual's learning styles, cultural background, and gender may also have great effect on learners' use of meta-cognitive strategies. These variables should be explored and measured for a closer look at the effective use of meta-cognitive strategies in reading.

Suggestions for Further Research

It could be noticed from the literature in the field and the current research findings that meta-cognitive strategies have a great impact on language learning in general (Liu, 2010) and in reading comprehension in particular. Therefore, it would be beneficial to test the effect of meta-cognitive strategies use in other language skills such as listening, speaking and writing or in an integrated language class in further research for more comprehensive insights into the effects of meta-cognition in language learning, or in urban school settings (Berkowitz & Cicchelli, 2004). Taking factors affecting learners' use of meta-cognitive strategies in reading into consideration, it is suggested that the use of meta-cognitive strategies should be accounted with factors such as individual's learning styles, cultural background (Baker & Boonkit, 2004), and gender in further research. Since this case study with a small number of subjects did not give a full picture of the matter under investigation, further research in the field should be conducted with a lager population including high school students of grades 10 and 12. A wider sample would bring a holistic view of meta-cognitive strategy use among secondary school students.

References

[1]. Aegpongpaow, O. (2008). *A qualitative investigation of metacognitive strategies in Thai students' English academic reading*. Unpublished master's thesis, Srinakh arinwirot University, Thailand. Available at: http:// thesis. swu. ac.th/swuthesis/Eng (M.A.)/ Orranuch_A. pdf.

[2]. Al Melhi, A. M. (2000). Analysis of Saudi college students' reported and actual reading strategies along with their metacognitive awareness as they read in English as a foreign language. *Dissertation Abstracts International,* 60.

[3]. Baker, W., & Boonkit, K. (2004). Learning strategies in reading and writing: EAP contexts. *RELC Journal,* 35 (3), 299-328.

[4]. Berkowitz, E., & Cicchelli, T. (2004). Metacognitive

strategy use in gifted high achieving and gifted underachieving middle school students in New York city. *Education and Urban Society*, 37 (1), 37-57.

[5]. Carrell, P.L., Gajdusek, L., & Wise, T. (1998). Metacognition and ESL/EFL reading. *Instructional Science: An International Journal of the Learning Sciences*, 26, 97–112.

[6]. Chang, H. H. (2005). *The relationship between extrinsic/intrinsic motivation and language learning strategies among college students of English in Taiwan*. Available at: http://ethesys.lib.mcu.edu.tw/ETD-db/ETD-search/getfile?URN=etd-0725105-105417&filename=etd-0725105-105417.pdf.

[7]. Chumpavan, S. (2000). A qualitative investigation of metacognitive strategies used by Thai students in second language academic reading. *SLLT,* 9. Available at:http: // mulinet10.li.mahidol.ac.th/e-thesis/2551/ cd 416/ 4836 447.pdf

[8]. Cohen, A.D. (1998). *Strategies for learning and using a second language*. New York: Longman.

[9]. Collins, N. (1994). *Metacognition and Reading to Learn*. Available at:http://www.eric.ed.gov/PDFS/Ed37 6427.pdf

[10]. Çubukçu, F. (2008). How to enhance reading comprehension through metacognitive strategies. *The Journal of International Social Research,* 1(2). Available at: http://www.sosyalarastirmalar.com/cilt1/sayi2/sayi2 pdf/cubukcu_feryal.pdf.

[11]. Farrell, T.S. (2001). Teaching reading strategies: "It takes time!" *Reading in a Foreign Language,* 13, 631–646.

[12]. Goh, C. (2008). Metacognitive instruction for second language listening development: Theory, practice and research implications. *RELC Journal,* 39(2), 188-213.

[13]. Hammandou, J. (1991). Interrelationship among prior knowledge, inference, and language proficiency in foreign language reading. *The Modern Language Journal,* 75(1), 27-38.

[14]. Hoang, V.V., Hoang, T.X.H., Dao, N.L., Vu, T.L., Do, T.M., & Nguyen, Q.T. (2007). *Tieng Anh 11* [English 11]. Hanoi, Vietnam: Education Publishing House.

[15]. Hudson, T. (2007). *Teaching second language reading*. Oxford, England: Oxford University Press.

[16]. Liu, J. (2010). Language learning strategies and its training models. *International Education Studies,* 3(3), 100-104.

[17]. MOET (2006). *Chuong trinh giao duc pho thong: Mon tieng Anh* [English curricula for secondary schools]. Hanoi, Vietnam: Education Publishing House.

[18]. Mokhtari, K. & Reichard, C.A. (2002). Assessing students' metcognitive awareness of reading strategies. *The Journal of Educational Psychology*, 94 (2), 249-295.

[19]. Nguyen, Q.T., Hoang, T. H. H., Hoang, T. X. H., Tran, T. M., & Nguyen, H. M, (2007). *Kiểm tra và đánh giá kết quả học tập tiếng Anh 11* [Testing and Evaluation of Student's Progress of English 11]. Hanoi, Vietnam: Education Publishing House.

[20]. Noels, K.A., Clement, R., & Pelletier, C.G. (2001). Intrinsic, extrinsic, and integrative orientations of French Canadian learners of English. *The Canadian Modern Language Review*, 57(3), 425-442

[21]. Oxford, R. & Crookall, D. (1988). *Learning strategies, you can take it with you: Helping students maintain second language skills*. Englewood Cliffs, NJ: Prentice-Hall.

[22]. Oxford, R.L. (1989). Use of language learning strategies: A synthesis of studies with implication for strategy training. *System,* 17 (2), *235-247.*

[23]. Oxford, R. & Burry-Stock, J. (1995). Assessing the use of language learning strategies worldwide with the ESL/EFL version of the strategy inventory for language learning SILL. *System,* 23, 1–23.

[24]. Phakiti, A. (2003). A closer look at the relationship of cognitive and metacognitive strategy use to EFL reading achievement test performance. *Language Testing,* 20(1), 25-56.

[25]. Rasekh, Z.E. & Ranjibary, R. (2003). Metacognitive strategy training for vocabulary learning. *TESL-EJ*, 7(2). Available at: http://tesl-ej.org/ej26/a5.html.

[26]. Shmais, W.A. (2002). Identifying the metacognitive strategies of Arab university students: A case study. *An-Najah Univ.J.Res. (H. Sc.).*16 (2). Available at: http://www. najah.edu/researches/44.pdf.

[27]. Song, M. (1998). Teaching reading strategies in an ongoing EFL university reading classroom. *Asian Journal of English Language Teaching*, 8, *41-54*. Available at: http://www.cuhk.edu.hk/ajelt/vol8/art3.htm

[28]. Subaşı, G. (2009). *What is the relationship between the use of cognitive and metacognitive strategies and L2 reading test performance of Turkish EFL learners*. Unpublished master's thesis, Anadolu University, Eskişehir, Turkey.

[29]. Truong, H.P. (2007). *Bài tập củng cố và thực hành tiếng Anh 11* [English 11 Review and Practice Exercises]. Hanoi, Vietnam: Education Publishing House.

[30]. Zhang, L.J. & Wu, A. (2009). Chinese senior high school EFL students' metacognitive awareness and reading strategy use. *Reading in a Foreign Language,* 21, (1) 37-59.

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