L2 Reading in Thailand: Vocational College Students' Application of Reading Strategies to their Reading of English Texts

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ABSTRACT

This study aims to explore the application of reading strategies to the reading of English texts by Thai vocational college students. Data were collected via questionnaire surveys, think-aloud experiments and semi-structured interviews. The research results reveal different typologies of reading strategies adopted by lower and higher level English proficient students, illuminating how they utilized these strategies differently. Typologies of reading strategies utilized between students of higher and lower English proficiency levels were similar. There was no significant difference in the overall use of reading strategies between the higher and lower level English proficient students, excluding retrieval strategies that were employed more frequently by higher level students than those students with lower English proficiency. The higher level students utilized almost all subscales of strategies (excluding memory strategies) more frequently than their lower level counterparts.

INTRODUCTION

Reading ability is viewed as an essential skill for students of English as a foreign language (EFL) in Asia in their learning of English (Zare & Mobarakeh, 2011). Therefore, this paper investigates the use of reading strategies among Thai EFL students at a vocational college in Thailand with the intention of contributing to this aspect of this country's development.

The Kingdom of Thailand is a core member country of the Association of South East Asia Nations (ASEAN) and English functions as an official *lingua franca* at ASEAN, enabling numerous speakers with different first languages to communicate with one another (Baker, 2012). To help prepare for the ASEAN Economics Community (AEC) that will be inaugurated by the end of 2015, the learning of English as a foreign or second language (EFL/ESL) is essential for Thais to communicate with those from other member states of ASEAN, achieve academic success and develop in their professions. The AEC will allow the free flow of skilled labor across national borders in some sectors including: accountants, architects, dentists, engineers, medical practitioners, nurses, and tourism workers. These workers will be permitted to seek employment

across ASEAN and thus the use of English in their respective workplaces will concomitantly increase.

More than a million Thai students currently study in 421 vocational schools and colleges around Thailand, governed by the Vocational Education Commission of the Ministry of Education in Thailand (Harirak, 2012). Furthermore, approximately 380,000 students attend 401 privately-owned vocational schools and colleges. Among these Thai vocational students, a great number from across a wide range of fields of study are required to enroll in English language courses as English language ability is regarded as a key factor in the success of vocational students' further education and careers within the framework of the up-coming AEC.

Adding to this, on the basis of the reading test administered by the Education Ministry of Thailand, high numbers of Thai students confront reading failures and possess poor reading abilities nationwide including vocational students (Rodklai, 2014). Numerous less proficient Thai students, hence, are in need of assistance to improve and develop their English reading skills.

Problem Statement

In recent decades, the field of language pedagogy research has seen a great deal of interest in the study of reading strategies (Zare & Mobarakeh, 2011). Reading researchers have concentrated on reading strategies in terms of the enhancement of text comprehension. In other words, their attention has been paid to the types of reading strategies and how they positively affect desired reading comprehension (Cantrell & Carter, 2009). While reading strategy research into second language learners has so far addressed the extent to which readers, particularly elementary, secondary and undergraduate students, interact with texts, there is apparently a paucity of studies focused primarily on vocational students and their reading behaviors with printed or written materials.

It is fair to say that reading strategies adopted by vocational students are an under-explored research area, particularly in Thailand. The lack of research in this area (i.e., the use of reading strategies by EFL/ESL vocational students in their reading of English texts) has been consistently conspicuous because of its absence. After an exhaustive search of Bangkok-based university libraries and online scientific databases it was found that there was no research published that investigated English reading strategies employed by vocational students in Thailand. Although this area of reading research has been overlooked by Thai reading scholars, it is undeniable that vocational education (and the production of vocational graduates to join the Thai workforce and AEC job market) has a great impact on the development of Thailand and will have an impact upon the development of the AEC as a whole.

There has been growing interest in integrating the subject of English into the curricula of Thailand's vocational education (Ngamsa-ard, 2011). However, in regards to accountancy programs in Thailand's vocational schools and colleges, there is only a small handful that include English as a subject in their curricular (The Office of Vocational Education Commission, n. d.). This is one of the reasons why accountancy major vocational students encounter problems concerning the use of English during the job application process and/or in their workplaces.

In response to the dearth of literature reporting on Thailand's second language (L2) reading research at the country's vocational colleges, the present study aims to make a contribution to this under-explored area. The findings generated by the current study could potentially make a contribution by means of offering guidelines, suggestions and pedagogical implications for Thai vocational students and their English teachers, particularly in regards to providing a repertoire of

English reading strategies for Thai vocational students. By doing this, this study may help improve the existing teaching practices and help teachers develop new teaching techniques, thus improving Thai vocational students' application of reading strategies.

Purpose of the Study

This contribution to L2 reading is intended to shed light on L2 reading strategies adopted by Thai vocational college students in order to comprehend English texts. The purpose of the study is twofold: 1) to examine the extent to which reading strategies are adopted by vocational college students in their reading of printed English materials; and 2) to ascertain the discrepancies in the use of reading strategies between lower and higher English-proficient vocational college students in said reading.

LITERATURE REVIEW

Reading Comprehension and Reading Strategy: An Overview

Among the four language skills (i.e., listening, speaking, reading and writing) reading is likely to be the most attainable skill for EFL students (Dubin, 1982). Carrell (1984) claimed that reading is the most important skill needed for EFL/ESL learners. Reading involves word recognition and comprehension (Alderson, 2000).

Reading comprehension is concerned with one's thinking and understanding of the text. One's reading comprehension is affected by his or her prior experience and knowledge (Booth & Swartz, 2004). Goodman (1968) viewed reading comprehension as an active, dynamic and growing process of interrelationships between the reader and the text. As such, comprehension is the ultimate goal of reading and the essence of daily reading.

Reading strategies are defined as a set of cognitive and purposeful actions that help readers construct and maintain meanings and make sense of the texts when they are engaged in reading tasks. Reading strategies are employed to help readers increase their comprehension of the texts before, during and after they read. Typologies (categories and subcategories) of reading strategies for this study have been adapted from the work of several researchers, particularly Sheorey and Mokhtari (2001) and Phakiti (2006). Without adequate reading skills, readers struggle and encounter a number of problems in regards to their comprehension and this results in a profound sense of disengagement. Intervention can take place to help struggling adolescent readers to enhance their reading comprehension by means of the adoption of sufficient and appropriate strategies. For this reason reading strategies can be taught (Ernesco et al., 2008; Zhang, 2008), and efficient reading strategy instruction results in the less proficient students becoming more active, fluent and constructively responsive readers.

Reading Strategies Used by Skilled vs. Unskilled Readers

In terms of the reading processes in regards to the construction of meanings and the increase of text comprehension, reading strategies are the tools employed to improve reading

ability of readers and these strategies are vital skills for readers. Huang et al. (2009, as cited in Amer et al., 2010), reveals that the effective use of reading strategies is recognized as an important means to enhance reading comprehension. Reading strategies, combined with the actual utilization, enable readers to comprehend the texts they read during the pre-, while, and post-reading tasks. The readers engage actively with an array of strategies in reading texts. Likewise, as Abidin and Riswanto (2012) asserted, successful readers adopt various reading strategies in order to comprehend texts. Moreover, Raftari et al. (2012) demonstrated that successful readers employ reading strategies more actively and make use of a greater variety of strategies to assist their comprehension.

Similarly, readers who are consciously aware of various reading strategies are able to employ and learn to choose the appropriate strategies to construct meanings from texts they are engaged in reading (Amer et al., 2010). The relationship between reading strategies and comprehension of texts lies in the fact that strategies function to help readers to overcome reading problems in the process of reading comprehension. From a reader's understanding of reading strategies the characteristics and discrepancies between the skilled and unskilled readers can also be implied. Reading strategies are thus utilized to indicate the level of English language reading proficiency. These strategies positively affect reading comprehension (Cantrell & Carter, 2009) and substantially contribute to the better reading ability of EFL/ESL learners. It is of equal or greater importance to foster awareness of reading comprehension strategies by learning what strategies to use, when, why and how to engage alternate strategies appropriately and effectively (Cheng, 1998). Successful readers are able to understand and employ the information from reading English in different contexts via a repertoire of strategies that they draw upon.

Classification of Reading Strategies: Cognitive Strategies vs. Metacognitive Strategies

A number of studies have been carried out to explore cognitive reading strategies in the comprehension of texts. Based on the field of cognitive psychology, O'Malley and Chamot (1990) classify the two contrastive groups of reading strategies according to the general consensus of numerous reading experts. The classification is clustered as the most fundamental orientation in the following typologies of strategies: cognitive and metacognitive reading strategies.

Cognitive strategies function to examine the extent to which readers engage purposefully in their mental and physical process regarding the information. O'Malley and Chamot (1990) proposed that this type of strategy deals with how to acquire information, inferring meanings from the context, consulting dictionaries, memorizing and repetition. Flavell (1981) meanwhile states that cognitive strategies are aimed at the direct goal of making cognitive process. It is truism that they are in relation to individual reading process. In this respect, the cognitive strategies can be further broken down into three categories:

(1) Comprehension strategies are adopted in a multitude of ways such as identifying author's main ideas, purposes and attitudes, summarizing information, conjecturing meanings of the text and unknown words, utilizing dictionaries, uttering contextual clues, making inferences and translating the text into one's first language.

(2) Memory strategies are employed to help readers remember the content stemming from the text, e.g., taking notes, underlining, highlighting, paraphrasing, and rereading the text. Memory strategies are employed by means of typographical organizers inserted in the text, e.g., illustrations, photos, graphics, figures, pictures and tables, labels and captions, italics, fonts and boldfaced words.

(3) Retrieval strategies are concerned with relevant background knowledge and/or experiences that the reader utilizes, e.g., recalling reading purposes, applying knowledge of word stems, and utilizing grammatical rules to comprehend the text.

In summary, cognitive reading strategies encourage the reader to focus more on main ideas than every word stemming from the text so as to grasp meanings of the text as a whole. The cognitive strategies are employed to comprehend new concepts and words, dependent on the reader's background knowledge.

In contrast to cognitive strategies, metacognitive strategies are literally defined as "thinking about thinking" (Carrell, 1998, p. 9). While O'Malley and Chamot (1990) mentioned that metacognitive strategies refer to self-management, e.g., setting objectives of reading, monitoring and self-evaluation that are involved in the thinking process and planning. Moreover, metacognitive strategies are techniques that the reader employs for managing and monitoring cognitive strategies (Flavell, 1981).

In light of this view, Cohen (1998) proposed that the strategies are divided into three categories: (1) pre-reading strategies (planning), e.g., conjecturing the information from its context and scanning; (2) while-reading strategies (monitoring), e.g., self-questioning, self-monitoring, and solving problems; and (3) post-reading strategies (evaluating), e.g., evaluations of reading behaviors and responses to evaluations.

According to Fogarty (1994) and Pressley (2002), metacognition consists of a three-part process: (1) to develop a plan before reading, e.g., a reflection on the topic of the text and contemplate the ways in which the text might be organized; (2) to monitor and control the plan or comprehension of the text during reading; to utter "fix-up" strategies when meanings are broken down, e.g., making connections, making predictions, making inferences, utilizing contextual clues, uttering textual features, identifying textual structures, adopting graphic organizers to pinpoint particular types of text information, writing comments and/or questions on self-stick notes or in the margins; and (3) to evaluate the plan or the reflection of the reader after reading. The reader reflects on strategies they adopted as well as strategies they did not employ to determine whether their plan succeeded or whether they should employ the same plan the next time.

Along similar lines, Keene and Zimmerman (1997) suggested that metacognitive strategies encompass eight ways of processing: (1) planning before, during and after reading, (2) uttering prior or background knowledge, (3) determining what point is of importance or the key information stemming from the text, (4) creating mental frameworks or imaging and visualizing, (5) self-questioning, (6) inferring meanings, (7) synthesizing or retelling, and (8) employing fix-up strategies for problems that occurred during the reading task.

To sum up, metacognitive strategies are utilitarian tactics and effective techniques and/or actions that the reader combines deliberately to the textual comprehension before, during and after a reading task. Metacognitive reading strategies help the reader plan, organize, monitor, control, evaluate and remediate the reading process.

EFL Reading Strategies

Over the past three decades, research to examine reading comprehension strategies among EFL/ESL readers has attracted overwhelming interest from scholars (e.g., Alsheikh & Mokhtari, 2011; Anderson, 2003; Block, 1992; Sotoudehnama & Azimfar, 2011; Zare, 2013; Zare & Othman, 2013). A great quantity of research has been conducted to explore the extent of the use of reading comprehension strategies in the field of English language teaching (ELT). In this line

of research, for example, Sotoudehnama and Azimfar (2011) have found that the high-proficiency learners adopted more reading strategies than the low-proficient learners. According to Alsheikh and Mokhtari (2011), who examined reading strategies and metacognitive awareness of advanced proficient readers (of the English language) in Iran, the readers of English texts greatly employed reading strategies. Moreover, Zare (2013) explored the use of reading strategies in relation to the success of reading comprehension among EFL learners and found that Iranian EFL learners' achievement of reading comprehension is related to the use of reading strategies.

There is abundant evidence to support that the employment of reading strategies has a direct relationship with the improvement of reading comprehension (Ozgungor & Guthrie, 2004; McNamara, 2007) in first language reading practices. However, no studies focus on the use of the reading strategies in handling their English reading tasks among Thai EFL vocational students. What now follows is a review of the few articles drawn from the body of literature on EFL reading strategy research in Thailand.

Sri-sunakrua (2007) conducted a study of English language reading strategies of proficient and less proficient readers. The objectives of the study were to examine the reading strategies as well as the pattern of the strategies employed. The target population of this study was first-year undergraduate students at King Mongkut's University of Technology Thonburi. Ten participants were divided into two groups based on their language proficiency: low and high. They attended think-aloud sessions during three reading task. The findings indicated that both typologies and frequencies of reading strategies used were the same between the high and low proficiency students. Nonetheless, there was a difference in terms of the quality of reading strategies applied.

In the same vein, Akkakoson and Setobol (2009) carried out a study to investigate Thai EFL students' utilization of reading strategies in a variety of reading tasks among 207 tertiary-level EFL students in science and technology at King Mongkut's University of Technology, northern Bangkok. Tests of English reading skills and comprehension (pre- and post-test), an achievement test (final exam), and pre- and post-instructional strategy use questionnaire were adopted to obtain the data. The questionnaire was employed to report the extent to which the participants utilize the described strategies. It was found that the EFL readers in the group consisting of lower-reading proficiency employed reading strategies in a more similar style than the group consisting of higher-reading proficiency students. Among and across three English proficient groups of EFL readers under investigation, there was no difference with respect to their choices of typologies of reading strategies. By the same token, the three groups with varied English proficiency were found to employ similar typologies of reading strategies (including conventional and metacognitive models). Furthermore, the research results of the study in question indicate that the Thai EFL readers' reading proficiency was positively affected by the strategies-based instruction.

Additionally, Oranpattanachai (2010) investigated the employment of reading strategies and the effect of reading proficiency on reading processes by utilizing metacognitive and top-down strategies among Thai pre-engineering EFL readers at a Thai university. The participants consisted of 90 Thai pre-engineering EFL readers which the researcher divided the participants into low and high level. The data of the study were gathered by means of a survey questionnaire. The researcher found that both high and low level groups shared similarities and differences in regards to their reading processes. First, the similarities appeared in the rank of perceived reading strategies adopted and the styles of text processing. Second, the differences were measured statistically in respect to the frequency of perceived strategy use and the frequency of perceived top-down strategy use among participants.

These studies indicate that both lower and higher level English proficient student at the university level in Thailand used similar categories of reading strategies during their reading process. However, the frequency and the quality of their strategies among and across students of higher and lower level groups were different. With their emphasis of this research leaning heavily towards undergraduate students, the current researcher considered that a study should be conducted that focuses on reading strategies of vocational students.

METHODOLOGY

Site and Sample

The target population for this study consisted of Thai vocational EFL students. The criteria for the inclusion of the site and the sample for the study are as follows. There are estimated to be more than 800 vocational schools and colleges in Thailand with over 1 million students enrolled in eight programs of vocational education. These vocational schools and colleges are aimed at preparing students for further studies and/or employment among and across various sectors, including agriculture, fishery, ship building, arts and crafts, gems and jewelry, trade and industry, textiles, commerce and business administration, tourism and hospitality, home economics, and information technology (Ngamsa-ard & the Office of Vocational Education Commission, n.d.).

In order to obtain information that is representative of typical Thai vocational colleges, data were collected from a vocational college located in the Bangkok metropolis—where state vocational institutes are governed by the Vocational Education Commission of the Ministry of Education. The selected vocational college has a good reputation for its academic rigor due to it being a recipient of prestigious academy awards, among other factors. Each year approximately 300 students join the department of accountancy from where the researcher recruited the participants.

The target population was recruited by a non-probability sampling technique instead of adopting a random sample. That is to say, the participants of this study were selected by means of convenience sampling. During phase I of data collection, 162 students were recruited as the sample for the study, however, only 121 of them returned their questionnaire responses. All participants (n = 162) in the sample were majored in accountancy and enrolled in a regular English course in the previous semester (during the summer semester in the academic year 2013). While the research was being carried out, the students were in the beginning (the first two weeks) of the first (fall) semester in the academic year 2014. During phase II, think-aloud reading tasks and interviews to collect data was employed. A total number of 24 participants consisting of 12 higher and 12 lower level English language proficient students was selected (the criteria of selection include scores of the English courses they took in the previously two semesters, their responses to the questionnaire, and their willingness to participate in the study) from the sample studied during phase I, but only 18 participants provided in-depth data, which consisted of higher level English language proficient students (n=9) and lower level students (n=9). Of these 24 students, six participants failed to provide valid data.

Data Collection and Analysis

The following instruments and materials were employed during the data collection: the three English reading texts/passages, the survey questionnaire, the think-aloud protocol, and the interview protocol/the retrospective interview questions.

Printed English Reading Materials

The printed English texts were employed in the reading tasks during the implementation of the think-aloud experiment. The criteria of the selection of English texts were as follows. Firstly, the three reading passages derived from the articles in "English World" English newspapers were of interest to the participants. The topics of these selected articles were up-to-date and familiar to the majority, if not all, of participants studied. Secondly, the reading instructor at the vocational college was requested to help choose and examine these three articles.

The length of the first text was approximately 200 words, titled "Thunderstorms" that was related to the issue of "English for Kids". The first passage was employed for initial trial-run of the think-aloud reading task. The trial-run was adopted to train participants to be familiar with the think-aloud experiment. The second and third texts contained approximately 300 words and 400 words, respectively. The second text was titled "Facebook Is Used More Often than the Bible". Lastly, the third text was titled "Jefferson Davis" which was concerned with the issue of "Reading Comprehension".

The second and the third texts were administered to assess differences in the employment of reading strategies among the participants studied. In order to examine reading abilities of participants, the second and the third texts were different in length from each other.

These texts were provided to the participants individually to collect data in respect to the strategies employed by them. The researcher also requested that the instructors examine whether the readability of these selected texts was appropriate for the various levels of proficiency of the participants. The data obtained herein were concerned with reading strategies utilized by the participants during pre-reading, while-reading, and post-reading periods.

Questionnaire Survey

The questionnaire was conducted to retrospectively self-report reading strategies employed by the participants. The questionnaire was adapted from Phakiti (2006), which has been widely adopted for a number of studies by researchers to measure awareness of reading strategies in use. In the present study, the questionnaire was divided into two sections. The first section was to elicit demographic information (age, gender, number of years in studying the English language, grade point average [GPA], frequency of reading English materials, and contact information) of the participants surveyed. The second section contained 33 randomly ordered items aimed to measure the employment of reading strategies. All items were adapted from the classification of Phakiti (2006), which was subdivided into two main categories, cognitive strategies consisting of 18 items (i.e., comprehending, memory, and retrieval strategies) and metacogitive strategies including 15 items (i.e., planning, monitoring and evaluating strategies).

A Likert-type scale was used to assess the participants' reading engagement and to measure their reflection on their behaviors and performances pertaining to reading strategies and reading skills.

Every participant completed the questionnaire without discussion with their fellow participants. The English version of the questionnaire was translated into the Thai version by the researcher, helping participants understand and respond to the 33 items. While translating from English to Thai, numerous items stemming from the questionnaire were slightly adjusted to enhance their clarity and were shortened by eliminating non-essential items, making them easier for the participants to understand and respond to.

According to Phakiti's categorization, the overall number of items and the categories of cognitive strategies and metacognitive reading strategies are as follows.

Table 1. Items and categories of cognitive strategies and metacognitive strategies in the questionnaire

Reading strategies	Items specified in the questionnaire
Cognitive strategies (18 items)	
1. Comprehending strategies (10 items)	3, 6, 7, 10, 16, 17, 21, 24, 27, 31
2. Memory strategies (3 items)	13, 19, 29
3. Retrieval strategies (5 items)	1, 4, 9, 15, 23
Metacognitive strategies (15 items)	
1. Planning strategies (4 items)	2, 5, 14, 25
2. Monitoring strategies (10 items)	8, 11, 12, 18, 20, 22, 26, 28, 30, 32
3. Evaluating strategies (1 item)	33

The Think-Aloud Protocol

The think-aloud experiment is an approach to test readers and elicit their thinking while they are engaged in a reading task. This method is commonly adopted to obtain information regarding how the readers view their reading processes. The readers reflect on their own behaviors (e.g., how to read and ways to solve problems) by means of thinking out loud.

Additionally, data obtained from the think-aloud experiments are concerned with reading processes and strategies performed by readers tested as well as how the readers reacted. The first stage of the implementation of the think-aloud task is to ask readers to read a text. Thereafter, readers are asked to speak out loud with respect to their perspectives and feelings toward the task. During the think-aloud task, the researcher play the role of reminding the readers to keep expressing themselves and to ask questions to probe the readers.

Numerous foreign/second language reading researchers employ the think-aloud protocol as an instrument to monitor readers' awareness of strategies while reading academic texts. For example, Ebrahimi (2012) conducted a comparison of different strategies employed by EFL readers who read English poems at a university in Malaysia. The think-aloud protocol was utilized as the main instrument to collect data, complemented by interview data, revealing readers' beliefs with respect to their understanding of English poetry.

The think-aloud protocol essentially provides a direct perspective of readers' thought process during the reading task (Cohen, 1987, as cited in Akyel & Ercetin, 2009). Commonly, it is referred to as a verbal report in which the researcher elicits data by means of verbalization. It is a means by which the reader directs his or her own behaviors and problem-solving processes to solve reading-related problems faced (Tinzmann et al., 1990). It is adopted to investigate the reading process while the participants employ various strategies. Data obtained from the implementation of the think-aloud protocol are the sources to provide the key information in regards to the mental reasoning process of participants. A number of reading researchers adopt the think-aloud protocol, e.g., Ebrahimi (2012) who drew a comparison of different reading strategies with respect to reading English poems among EFL readers in Malaysia by implementing the think-aloud protocol as the research instrument. The utilization of the think-aloud protocol for the present study is complemented by interview data so as to ensure the veracity of the data obtained from the verbal reports regarding the participants' thinking processes, and identify their employment of reading strategies.

Interview Questions

After think-aloud tasks were completed, the in-depth and semi-structure interview was employed to gather data during the final phase of data collection. The interview protocol was adapted from Creswell (1998). A face-to-face interview was administered to each participant. All participants were required to provide additional data concerning what reading strategies were employed and how they applied these strategies to actual utilizations. The interview was also utilized to clarify ambiguous points and ensure consistency of data gained from the participants' verbal reports.

The 15 interview questions were composed of both open-ended and closed questions. All questions were asked by the first author in the Thai language. A list of questions was employed to guide interviewers and these questions were flexibly worded during the interviews. It should be acknowledged that the interviews took place outside of the classroom at the selected vocational college.

The first author asked participants to freely express their honest opinions before the interviews were held. Each individual interview lasted approximately 30-40 minutes. Both lower and higher level English language proficiency group members of the sample were asked the same interview questions. The participants were requested to clarify any unclear answers during follow-up interviews. The interviews were audio-taped and transcribed immediately after each interview ended.

RESULTS

The results showed that the sample studied (including both lower and higher level English language proficiency readers) adopted all six subscales of strategies (but with a moderate frequency of overall use). In particular, they employed cognitive strategies and metacognitive strategies respectively. The students used cognitive reading strategies (comprehending strategies, memories strategies and retrieval strategies) more often than metacognitive reading strategies (planning strategies, monitoring strategies and evaluating strategies). Retrieval strategies and memory strategies were the most often employed, whereas monitoring strategies were the least

frequently adopted strategy. The strategies that were the most often used across all participants throughout their reading process were to preview the text before reading, to use Thai-English dictionary, to visualize information, word-by-word translation, and to ask themselves questions.

Table 2. Reading strategies used during the think-aloud sessions

Reading Strategies	Strategies used in Passage I "Facebook is used more often than the Bible"	Strategies used in Passage II "Jefferson Davis"
Cognitive Strategies Comprehending strategies	Using Thai-English dictionary, translating English into Thai	Using Thai-English dictionary, translating English into Thai
Memories strategies	Underlining and highlighting information	Visualizing information read, underlining and highlighting information
Retrieval strategies	Previewing text before reading, using prior knowledge	Previewing text before reading, using prior knowledge, using context clue to ascertain the meaning
Metacognitive Strategies Planning strategies	Pausing and thinking about reading, trying to stay focused on reading, skimming and scanning the text	Pausing and thinking about reading, trying to stay focused on reading, read slowly and carefully, skimming and scanning the text, determining what to read
Monitoring strategies	Rereading the text, paying attention to reading	Rereading the text, asking oneself question, paying attention to reading
Evaluating strategies	--	--

Table 2 shows that the participants employed a greater number of reading strategies while reading the second passage in comparison with the first passage.

It was surprising to see that the typologies of reading strategies utilized among and across students of higher and lower level English language proficiency levels were similar except the employment of retrieval strategies. There was no significant difference (at the confidence level of

0.05) in the overall use of reading strategies between the higher and lower level students, excluding retrieval strategies that were employed more frequently by higher level students than those with lower level proficiency. Unsurprisingly, the higher level students utilized almost all subscales of strategies (excluding memories strategies) more frequently than their lower level counterparts. Qualitative data also revealed that both higher and lower level students researched adopted similar reading strategies while reading academic texts, although the strategies employed were not completely the same. The lower level students studied were evidently not able to apply a number of strategies to the full potential.

The five most used reading strategies of the higher proficiency students were cognitive strategies (excluding pausing and thinking about reading), namely, previewing the text before reading, using Thai-English dictionary, visualizing information, asking oneself questions, using prior knowledge, pausing and thinking about reading (metacognitive strategies), translating English into Thai, and making connections.

The five most employed strategies of the lower proficiency students were also cognitive strategies, namely, previewing the text before reading, word-by-word translation, using Thai-English dictionary, visualizing information, and asking oneself question.

Table 3. Reading strategies used most and least by Thai vocational college students

Total number of students (*n*=121)	
Low (*n*=67) High (*n*= 54)	
Strategy	Strategy
1. Previewing text before reading (Cog.)	1. Previewing text before reading (Cog.)
2. Word-by-word translation (Cog.)	2. Consulting a Thai-English dictionary (Cog.)
3. Consulting a Thai-English dictionary (Cog.)	3. Visualizing information read (Cog.)
4. Visualizing information read (Cog.)	4. Pausing and thinking about reading (Met.)
5. Self-monitoring (Cog.)	4. Self-monitoring (Cog.)
6. Translating English into Thai (Cog.)	4. Using background knowledge (Cog.)
7. Making use of typographical aids (Cog.)	5. Translating English into Thai (Cog.)
7. Using context clues (Cog.)	5. Making connections (Cog.)
8. Underlining and highlighting (Cog.)	6. Trying to stay focused on reading (Met.)
9. Using background knowledge (Cog.)	7. Paying close attention to the meaning of each word (Cog.)
10. Noting text characteristics (Met.)	8. Word-by-word translation (Cog.)
11. Pausing and thinking about reading (Met.)	9. Re-reading for better understanding (Met.)
12. Reading slowly and carefully (Cog.)	10. Consulting an English-English dictionary (Cog.)
12. Trying to stay focused on reading (Met.)	10. Evaluating what is read (Met.)
13. Paraphrasing for better understanding (Cog.)	11. Making use of typographical aids (Cog.)
14. Paying close attention to the meaning of each word (Cog.)	11. Using context clues (Cog.)
15. Re-reading for better understanding (Met.)	12. Predicting or guessing text meaning (Cog.)

16. Using grammatical knowledge to help ascertain meaning (Met.) 16. Decoding (Met.) 16. Evaluating what is read (Met.) 17. Predicting or guessing text meaning (Cog.) 18. Paying close attention to every detail (Met.) 19. Paying close attention to the implicit meaning of the text (Met.) 20. Asking oneself questions (Met.) 21. Using grammatical structure (Cog.) 22. Making connections (Cog.) 23. Consulting an English-English dictionary (Cog.) 24. Grammatical analysis (Met.) 25. Determining what to read (Met.) 25. Adjusting reading rate (Met.) 26. Reviewing the text (Met.) 26. Skimming and scanning the text (Met.) 27. Making bridging inferences (Cog.)	13. Underlining and highlighting (Cog.) 14. Paying close attention to every detail (Met.) 15. Grammatical analysis (Met.) 15. Paying close attention to the implicit meaning of the text (Met.) 16. Paraphrasing for better understanding (Cog.) 17. Reading slowly and carefully (Cog.) 17. Using grammatical structure (Cog.) 18. Decoding (Met.) 19. Reviewing the text (Met.) 19. Asking oneself questions (Met.) 20. Determining what to read (Met.) 21. Adjusting reading rate (Met.) 22. Using grammatical knowledge to help ascertain meaning (Met.) 23. Making bridging inferences (Cog.) 24. Skimming and scanning the text (Met.) 24. Noting text characteristics (Met.)

According to the arithmetic mean score, table 3 above illustrates the most often used (the top five) to least used (the bottom five) individual reading strategy preferences arranged in descending order of the questionnaire respondents with reference to overall, higher level group, and lower level group. It was found that both groups employed cognitive reading strategies more frequently than metacognitive reading strategies. The differences between the two groups were statistically significant ($P<0.05$, $t = -2.06$) in the use of retrieval strategies, as the data show that higher level students tend to use more retrieval strategies than their lower level counterparts.

Based on the data analysis shown above, the five most often used reading strategies of the participants in the lower level group were: 1) to preview text before reading, 2) word-by-word translation, 3) consulting a Thai-English dictionary, 4) visualization, and 5) self-monitoring. Meanwhile, eight reading strategies most favored by the higher English proficiency group were: 1) previewing text before reading, 2) consulting a Thai-English dictionary, 3) visualizing information, 4) pausing and thinking about reading, 5) self-monitoring, 6) using background knowledge, 7) translating English into Thai, and 8) making connection.

Discussion

It is found that the higher level English language proficiency readers employed both cognitive strategies and metacognitive strategies more often than the lower level readers. In other words, based on the statistical measurement, the frequency of the use of reading strategies was different between the two groups. However, during the reading process, reading strategies (typologies) employed among and across readers of different levels of English language proficiency was similar.

The results seem to concur with previous studies regarding the use of reading strategies to achieve comprehension (Sri-sunakrua, 2007; Akkakoson & Setobol, 2009; Oranpattanachai, 2010). That is, it was found that participants utilize several strategies to effectively achieve their reading comprehension. Before, during and after reading, they used both cognitive and metacognitive strategies. The participants' engagement of reading strategies helps to solve and ameliorate many reading problems resulting from their insufficient knowledge of the English language. Both lower and higher level readers who participated in the study seem to have preferred cognitive reading strategies over metacognitive reading strategies.

Nonetheless, there is a surprising finding derived from data (mean scores) in the present study: the lower level readers tended to use memory strategies more often than their higher level English counterparts.

CONCLUSION

Although both higher and lower level English proficiency readers studied adopted similar strategies (typologies), the higher level readers tended to use these strategies more frequently than their lower level counterparts except the use of memory strategy.

Limitations of the Study

As this study is a pilot project exploring reading strategies' use of Thai vocational students, three obstacles were observed. Firstly, the data collection was carried out during the summer session when the participants attend their college in order to attend the class one or two days per week, thus they occasionally had little time to commit to extra activities and they may have rushed through the readings. This might have affected the accuracy of data obtained. Thus, future research should be conducted during regular semesters (spring and fall). In addition, many vocational colleges offer an internship program to their accountancy major students during summer semesters. This also caused difficulty for the first author to gather data due to absences of intern students.

The second limitation is the printed English reading materials used in this study. These materials are modified articles adapted from English newspapers to cater for students. Therefore they are short paragraphs (multi-paragraph passages would not be of interest to students). Further, although the first author requested the English instructor of the college to examine the appropriateness of these materials in terms of vocabulary and grammar for the different levels of English language proficiency of the students, they were not checked for their comparability with respect to the rhetorical structures, level of difficulties, the number of vocabularies contained and the length of passages.

Thirdly, the criterion for grouping and clustering the students is a limitation. The first author deemed that the participants' grade of the regular English courses served as the indicator of their levels of English proficiency. However, the grades of participants were not derived from a standardized test (e.g., IELTs, TOEFL and TOEIC).

Recommendations for Further Research

Future research should be conducted in a regular semester, instead of a short summer semester. The length of the period of time of data collection should be longer. Also, it would be

interesting to study students at different vocational levels with different majors and programs (e.g., tourism and marketing). A larger-scale research area is also needed that covers more vocational colleges and their students in Thailand, instead of one single college. In addition, future researchers could explore the use of reading strategies in different genres and modalities of reading materials (e.g., online academic texts or electronic/digital texts), instead of printed reading materials.

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