

# Thai Third-Year Undergraduate Students' Frequent Use of Reading Strategies with a Focus on Reading Proficiency and Gender

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## ABSTRACT

This article analyzes the differences in the reported use of reading strategies of Thai third-year students when reading academic material. The aims of this study were to determine how the frequent use of reading strategies is varied by the student's reading proficiency level and gender. Participants were 549 third-year students studying at Khon Kaen University, Thailand, who completed a survey of three categories of reading strategies: Global Reading Strategy, Problem Solving Strategy, and Support Strategy. The results of the study indicated that problem solving strategies were the most frequently used, followed by global reading strategies and support strategies. Significant variation in the frequency of students' use of strategies in the three main categories were found according to the level of reading proficiency. Gender also played a role in affecting the frequency of strategy use; female students used problem solving strategies and support strategies significantly more frequently than male students.

**Keywords:** reading strategies, academic reading, gender, reading proficiency

## บทคัดย่อ

การวิจัยในครั้งนี้ มีวัตถุประสงค์เพื่อศึกษาความถี่ของการใช้กลวิธีในการอ่านเชิงวิชาการของนักศึกษา ที่มีระดับความสามารถและเพศที่ต่างกัน การวิจัยในครั้งนี้ประกอบด้วยนักศึกษาระดับปีที่ 3 ในมหาวิทยาลัยขอนแก่นจำนวน 549 คน โดยนักศึกษาเหล่านี้ตอบแบบสอบถาม (SORS) กลวิธีการอ่านในแบบสอบถามนี้แบ่งออกได้เป็น 3 กลุ่มใหญ่ ๆ คือ Global Reading Strategies, Problem Solving Strategies และ Support Strategies ผลการวิจัยในครั้งนี้พบว่า กลวิธีการอ่านแบบ Problem Solving

Strategies เป็นกลวิธีที่นักศึกษาใช้บ่อยที่สุด รองลงมาคือ กลวิธีแบบ Global Reading Strategies และ Support Strategies จากการศึกษาข้างพบอีกว่า กลวิธี การอ่านทั้ง 3 กลุ่มนั้นมีความสัมพันธ์อย่างมีนัยสำคัญกับระดับความสามารถในการอ่านของนักศึกษา เพศของนักศึกษาก็มีบทบาทสำคัญกับความถี่ของการใช้ กลวิธี การอ่าน โดยพบว่า นักศึกษาหญิงจะใช้กลวิธี การอ่านแบบ Problem Solving Strategies และ Support Strategies อย่างมีนัยสำคัญ และมีความถี่ของการใช้มากกว่านักศึกษาชาย

**คำสำคัญ:** กลวิธีในการอ่าน การอ่านเชิงวิชาการ เพศ ระดับความสามารถในการอ่าน

## INTRODUCTION

In a review of the current developments in second language reading research, Grabe (1991) pointed out that the crucial importance of reading skill in academic contexts has led to considerable research on reading in a second language. The last two decades, in particular, have been a time of much first- and second-language research, resulting in many new insights for reading instruction.

Reading has been defined as the process of constructing meaning through the dynamic interaction among: (1) the reader's existing knowledge, (2) the information suggested by the text being read, and (3) the context of the reading situation (Pikulski, 1997). This concept has offered great insights as to how learners achieve comprehension while reading. Research works on L2 (a second language) reading indicated that reading is an interactive meaning-making process in which readers utilize a large number of strategies to achieve the goal of reading comprehension (Carrell, 1988; Anderson, 1999; Alderson, 2000). Consequently, many L2 researchers have made attempts at identifying various reading strategies (Block, 1986; Anderson, 1991; Zhang & Wu, 2009). They have begun to recognize the significant role of reading strategies in reading comprehension.

Studies on reading strategy use have discovered that successful readers generally reported employing a higher frequency of reading strategy (e.g. Hosenfeld, 1977; Sheorey & Mokhtari, 2001; Lau, 2006), which may enable them to use reading strategies more effectively and efficiently than their unsuccessful peers. Farrell (2001) and Zhang (2008) have pointed out that reading strategies can be taught and that as students' knowledge about reading strategies and strategy use is developed, they will become better readers.

At present, the educational system in Thailand is undergoing reforms. According to the National Education Act B.E. 2542 (Office of the National Education Commission [ONEC], 1999), a

student-centered learning process should be arranged for classrooms. Specifically, Section 24 of the Education Act outlines what must be done to improve education performance by: 1) providing substance and arranging learning activities in line with the students' interests, aptitudes and individual differences; 2) training students in thinking abilities; and 3) enabling students to learn at all times and in all places. In short, Thai students should be encouraged to be autonomous learners. Reading is a very important skill to achieving autonomous learning. Subsequently, students who have good reading skills should be more successful in learning in an autonomous environment. Thus, the findings from this study can help teachers identify appropriate strategies to facilitate Thai students reading in a foreign language. Teachers of English should implement reading strategy instruction in order to help students form good reading habits and be autonomous readers. When teachers know what strategies students are employing and how they are using them in different contexts, teachers can better understand the sources of students' problems with reading strategies and be able to decide on students' learning needs and adjust teaching procedures (Cohen, 1998; Zhang & Wu, 2009). Although reading strategy use has been recognized in previous research work, very few studies in this area have been conducted in Thailand, particularly with undergraduate students.

This study was conducted in Thailand, where the English language now plays an important role as in many other developing countries. New technology and the adoption of the internet have resulted in a major transition in terms of business, education, science, and technological progress, all of which demand high proficiency in English (Wiriyachitra, 2002). In the Thai educational system, English is a foreign language that students must study in schools as a compulsory subject from primary school onwards (Ministry of Education [MOE], 2002). Moreover, passing an English examination is a prerequisite for further education,

especially for a tertiary degree. Many university courses require students to read academic material written in English, so English proficiency is an extremely important requirement for the students. Students studying at the tertiary level begin reading lengthy and authentic academic texts starting from the second year of their study. In spite of its importance, Thai students' proficiency in English is low because students rarely use it outside the classroom. According to Silapasatham (1999), teaching and learning in Thailand is in crisis because a great number of university graduates cannot use English effectively.

Recently, some researchers investigated how male and female learners differ in L2/EFL (English as a foreign language) reading comprehension and strategy use (e.g. Bügel & Buunk, 1996; Phakiti, 2003; Poole, 2005). It is hoped that a better understanding of the ways in which the strategic reading behavior of male and female students influences EFL reading comprehension will result in the formulation of EFL teaching procedures for reading. Chavez (2001) has pointed out that the ultimate goals of understanding gender differences in strategy use are: 1) to make us aware of how gender can affect development and achievement in L2 reading; 2) to enable L2 teachers to use this awareness to help their students of either gender to achieve gains in L2 reading comprehension; 3) to encourage further research into the role of gender in L2 reading; and 4) to accommodate individual students' needs, given that males and females deserve an equal chance in the learning process. Even though we know of the importance of reading strategies, little research exists on whether or not ESL males and females have similar or different strategic reading habits.

For the reasons mentioned, the present study endeavored to fill this void by comparing the academic reading strategy use of three reading proficiency groups of Thai undergraduate students and to determine whether this varied according to gender. The main aim of this study was to identify

the reading behavior tendencies of these groups of Thai students. To be specific, the objectives of the present study were:

1) to explore types of reading strategies which third year students studying at Khon Kaen University generally report employing to comprehend their reading texts; and 2) to examine patterns of significant variation in the frequency of students' reports of reading strategy use at different levels with reference to the two variables.

From this study, it is hoped to better understand students' needs, and to help them develop appropriate strategies that may enhance their reading ability.

## LITERATURE REVIEW

Over the last two decades, most research on L1 (a first language), L2, and foreign language (FL) reading has focused on the strategies that readers deploy in processing written input (Zhang & Wu, 2009). Reading strategies have been defined as "the mental operations involved when readers approach a text effectively and make sense of what they read" (Barnett, 1989, p. 66). Paris, Lipson, and Wixson (1983, p. 293) considered reading strategies as "deliberate cognitive steps that learners can take to assist in acquiring, storing, and retrieving new information and that therefore can be accessed for a conscious use." As a result, employing reading strategies indicates how readers conceive a task, what they do to make meaning of texts, and what they do when encountering reading problems (Block, 1986; Macaro & Erler, 2008; Zhang & Wu, 2009).

### Reading strategy use by reading proficiency

Reading proficiency has been seen as one of the factors that has played a role in influencing the use of strategies. Researchers in foreign language reading (e.g. Hosenfeld, 1977; Kletzien, 1991; Zhang & Wu, 2009) have demonstrated that strategies used by more proficient readers are different from those of less proficient ones, with

greater use of strategies among high proficient readers.

One of the most well known studies of proficiency level and strategy use using a think-aloud procedure was conducted by Hosenfeld (1977) who studied reading strategies used by 40 students (20 successful and 20 unsuccessful readers) in New York, NY, USA. The purpose of this study was to discover the differences that existed between the strategies of these two groups of students. The successful students, for example, kept the meaning of the passage in mind while reading, read in broad phrases, skipped inconsequential or less important words, and had a positive self-concept as a reader. On the contrary, the unsuccessful students lost the meaning of the sentences when decoded, read in short phrases, and seldom skipped unimportant words.

Lau (2006) also employed a think-aloud method to explore the differences between Chinese readers who were good or poor in their strategy use. Lau's findings indicated that good readers used more strategies and had better ability and knowledge of strategy use than did poor readers.

Kletzien (1991) carried out a study on reading strategy use using self-reports with 48 students (24 good students and 24 poor students) studying in the tenth grade in the USA. All subjects reported depending heavily on using key vocabulary, rereading, making inferences, and using previous experience in constructing responses while reading three passages. The findings revealed that the two groups used the same type and number of strategies on the easy passage, but as the passage difficulty increased, good students used more types of strategies and used strategies more often than the poor students did.

### **Reading strategy use by gender**

Gender has also been seen as a factor that is important in influencing the use of strategies. To investigate the influence of gender on students' use of reading strategies may be advantageous to

teachers and researchers because if gender disparities are found, they may lead both the teachers and the researchers to seek ways to minimize them, thus affording both genders maximum opportunities to achieve high levels of L2 literacy (Chavez, 2001).

Several studies on language learning strategy use demonstrate that females are more active strategy users than their male counterparts (e.g. Green & Oxford, 1995; Goh & Foong, 1997). On the other hand, the results of the studies on gender and reading strategy use do not show greatly different results for either males or females (e.g. Sheorey & Mokhtari, 2001; Phakiti, 2003; Poole, 2005).

One of the studies that specifically looked at gender differences in reading strategies is that of Sheorey and Mokhtari (2001), who examined differences in the reported use of reading strategies of native and non-native English speakers when reading academic material. Participants were 302 college students (150 native-English-speaking students from the USA (US students) and 152 ESL students). There were 92 male (60.5%) and 60 (39.5%) female students in the ESL group of students. The sample of US students comprised 73 male (48.7%) and 77 female (51.3%) participants. The data for this study were collected through the *Survey of Reading Strategies* (SORS), which is intended specifically to discover the reading strategies purportedly used by students. The results showed that in the US group, the females reported significantly higher frequency of strategy usage; this gender effect was not reflected in the ESL sample.

Phakiti (2003) examined gender differences in cognitive and metacognitive strategy use in the context of reading comprehension for English as a foreign language. The researcher investigated how 173 male and 211 female Thai university students utilized cognitive and metacognitive strategies while taking a multiple-choice reading comprehension test, then completed a questionnaire on their strategy use. The researcher found that males and females did not

differ in their reading comprehension performance in terms of the cognitive strategy use. Unexpectedly, males reported significantly higher use of metacognitive strategies than females.

In a study carried out by Poole (2005), the results revealed that males and females did not significantly differ in their strategy use. The participants in Poole's study were 248 ESL students (110 females, and 138 males). They were taken from six universities and one community college in the US. The mechanism to carry out this study was the SORS.

Although the results revealed by many researchers (e.g. Hosenfeld, 1977; Block, 1986; Sheorey & Mokhtari, 2001; Phakiti, 2003; Poole, 2005) attempted to discover the relationship between reading strategy use and reading proficiency, as well as gender differences, more studies need to be conducted in order to draw any conclusion on these relationships. Consequently, the current study attempted to discover the relationship between the gender differences and strategy use by comparing the reading strategies employed by male and female undergraduate students studying at government universities in Thailand, as well as to examine how those reading strategies are affected by students' reading proficiency.

### Research questions

The present study was undertaken in order to describe reading strategy use employed by the subjects. The following research questions guided the study:

- 1) What type of reading strategies do Thai

students report employing while reading academic materials?

- 2) Do the reading proficiency level and gender impact the use of reading strategies?

## METHODOLOGY

### Participants

The study was carried out with 549 third-year full-time Thai students studying at Khon Kaen University, Thailand. At the time of data collection, they were all enrolled in at least one English course. Their average age was 20 years and they had previously studied English for at least 13 years. Within this group, there were 338 females and 211 males (Table 1). Before collecting the data, the students were given a brief, informative, oral overview of the purpose of the study. All of them took the ERP-TEST (English Reading Proficiency Test) so that it was possible to group them under three reading proficiency levels: high, moderate, and low.

### Research instruments

There were two research instruments employed in this study: 1) the English Reading Proficiency Test (ERP-TEST), and 2) the Survey of Reading Strategies (SORS). The ERP-TEST was used to determine the reading proficiency of the subjects, while the SORS was used to survey the reading strategies that subjects perceived themselves to be using.

- 1) English Reading Proficiency Test (ERP-TEST)

**Table 1** Distribution of subjects by reading proficiency level and gender

Reading proficiency level	Gender		Total
	Female	Male	
High	75	53	128
Moderate	208	112	320
Low	55	46	101
Total	338	211	549

The ERP-TEST was constructed specifically to use in the present study in order to divide the subjects into three different proficiency groups. The test was designed to measure students' English reading proficiency. The test was made up of four reading passages with 50 comprehension question items. After reading each passage, the students were required to answer the questions for which the question formats varied for each reading task, e.g. sorting events in order, true/false (dichotomous items), and matching. Various types of test formats were selected for use because there is no one best format for reading tests, and each format has its own strengths and weaknesses (Alderson, 2000).

## 2) Survey of Reading Strategies (SORS)

The data for this study were collected through the 'Survey of Reading Strategies (SORS)' which was developed by Mokhtaria and Sheorey (2002). The SORS contains 32 short statements concerning the use of reading strategies, each of which uses a 4-point Likert scale ranging from 1 ("Never or almost never true of me") to 4 ("Always or almost always true of me"). Each statement describes the use of one strategy. These 32 statements are grouped into three main categories: Global (GLOB), Problem Solving (PROB), and Support (SUP). Before actual use, the SORS was translated into the Thai language so that the participants would not misinterpret or misunderstand the questions which may have resulted in inaccurate responses.

## Data collection and data analysis

To collect the data, copies of the REP-TEST with answer sheets and copies of the SORS were prepared for the students. Data collection was conducted in the subjects' regular classrooms during regular class time with the help of the classroom instructor. On the day of data collection, students were informed at the beginning that responses to the ERP-TEST would not affect course grades and there were no right or wrong answers in the questionnaire. All subjects were requested to do the ERP-TEST

first and then complete the SORS immediately after finishing the REP-TEST. They were asked to express their honest opinion on each SORS statement they used while doing the ERP-TEST. They were given one hour and twenty-five minutes for the test, and another ten minutes for completing the questionnaire. The 'Third Technique' as suggested by Madsen (1983) was employed in managing the students' test scores in order to identify the students' level of reading proficiency.

The data obtained through the questionnaire were analyzed using descriptive statistical procedures as well as an analysis of variance (ANOVA) in order to investigate whether significant differences existed between male and female students at different reading proficiency levels with respect to reported reading strategy use while reading academic texts. In examining reading strategy use among these students on the reading strategy questionnaire scale, which ranges from 1 to 4, three levels of strategy use as adapted from the usage levels of Oxford and Burry-Stock (1995, p.12) were identified for general reading strategy use: high (mean of 3.00 or higher), medium (mean of 2.00–2.99), and low (1.00–1.99).

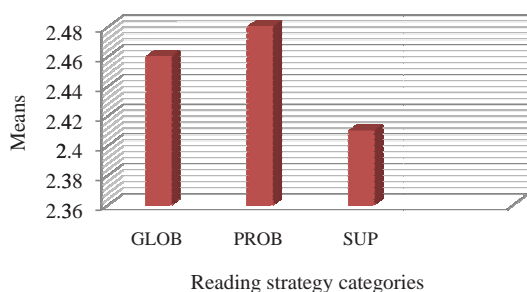
Additionally, chi-square tests were employed to analyze all single questionnaire items for significant variation by gender as well as by reading proficiency. For the chi-square tests, responses of 1 and 2 ("never or almost never true of me" and "somewhat true of me") were consolidated into a single 'low strategy use' category whereas the responses of 3 and 4 ("often true of me" and "always or almost always true of me") were consolidated into a single 'high strategy use' category. The purpose of consolidating the four response levels into two categories of strategy use was to obtain cell sizes with expected values high enough to ensure a valid analysis (Green & Oxford 1995, p. 271).

## RESULTS

The result obtained for the two questions posed in the study are shown below. Figure 1 shows the results obtained for the first question: What type of reading strategies do Thai students report employing while reading academic materials? Based on the mean of the three categories, it was found that problem solving strategies had the highest mean (2.48), followed by global reading strategies (2.46) and support strategies (2.41) respectively. As Figure 1 shows, the means for all strategies within these categories were in the medium range of 2.00–2.99, indicating a medium use of reading strategies.

As Figure 1 shows, Thai students reported using strategies under the problem solving strategies category more frequently than all other categories. Problem Solving Strategies are the procedures that students use while working directly with the text. These strategies were used when problems developed in understanding textual information. Some examples of strategies under this category were getting back on track after losing concentration, guessing the meaning of unknown words, and trying to picture and visualize information to help remember what is read.

Another result from this study, which was interesting, was that taking notes while reading was the least frequently used strategy among the 549 students whereas using dictionaries while reading



**Figure 1** Means results by three reading strategy categories based on respondent's answers to the type of reading strategy they employed while reading academic material

was the most frequently used strategy. This indicates that Thai students give a lot of precedence to vocabulary; that is, students spend much time on the meaning of new vocabulary. This habit causes them to spend more time on reading each word. If they often use this strategy, they will miss practicing some strategies which can help them save time in reading, such as guessing the meaning of unknown words. Although taking notes is one of the most useful techniques which is employed more often in class by university students, it is clear from the findings of this study that the students made very little use of this technique in reading. It may be reasoned that the students knew that taking notes was very necessary in a classroom setting but they did not realize that it was also useful in reading.

The means for all three categories fell between 2.41 and 2.48, which was defined as medium use, indicating that the students, in general, did not apply reading strategies very frequently while reading.

Another objective of this study was to determine whether learners with different levels of reading proficiency and gender employed reading strategies differently. The statistical analysis revealed that some types of strategies were significantly influenced by these two variables. Tables 2 and 3 demonstrate the results obtained for the second research question: Do reading proficiency level and gender affect the use of reading strategies?

### a) Reading Proficiency Level

Based on the results from the ANOVA, the students' reading proficiency level had a significant influence on the use of all three main reading strategy categories.

The students with a high reading proficiency level used more strategies from all three categories compared with the students with moderate and low levels of reading proficiency. The result from a post-hoc Scheffe test showed that significant variations were found with the students with different levels of reading proficiency. The findings

demonstrate that high-proficiency students reported employing reading strategies more frequently than those with moderate and low proficiency levels. Similarly, the moderate proficiency students reported employing more frequent use of those strategies than those with a low proficiency level. Moreover, the result shows that the means of the strategies from the GLOB and PROB categories that the high reading proficiency students employed were only a little different. This means, GLOB and PROB strategies could help students understand the target language. Some strategies that students reported using frequently were: getting back on the track after losing concentration, picturing or visualizing information to help remember what is read, and using typographical aids like bold face and italics to identify key information.

b) Gender

ANOVA was used to determine whether there was a difference in the use of reading strategies between male and female students. The results in Table 3 show that although female students reported using all three strategy categories more frequently than their male counterparts, the

difference was significant in the means of only two categories (the PROB and SUP categories).

Eight strategies were identified under the PROB category: reading slowly but carefully, getting back on the track after losing concentration, adjusting reading speed, paying closer attention to what is being read, stopping from time to time and thinking about what is being read, trying to picture or visualize information, rereading to increase one’s understanding, and guessing the meaning of unknown words or phrases. Support strategies are basic support mechanisms used to help the reader in comprehending the text (Mokhtari & Sheorey, 2002). Some examples of these strategies are: using reference materials such as dictionaries, underlining or circling information in the text, and translating from English into one’s own native language.

**DISCUSSION AND CONCLUSION**

This study was carried out in order to investigate third-year students’ use of reading strategies, which was measured through their responses to a strategy questionnaire. The results

**Table 2** Students’ use of strategies in the three main categories according to levels of reading proficiency

Strategy category	Levels of reading proficiency						Significance level	Pattern of variation
	High (n=128)		Moderate (n=320)		Low (n=101)			
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD		
GLOB	2.74	.47	2.46	.46	2.13	.56	$p < .01$	High>Moderate>Low
PROB	2.75	.48	2.47	.50	2.15	.59	$p < .01$	High>Moderate>Low
SUP	2.63	.46	2.42	.46	2.13	.54	$p < .01$	High>Moderate>Low

Note: GLOB = global reading strategies, PROB = problem solving strategies, and SUP = support strategies

**Table 3** Students’ use of strategies in the three main categories according to gender of students

Strategy Category	Gender				Significance level	Pattern of variation
	Female (n=338)		Male (n=211)			
	$\bar{x}$	SD	$\bar{x}$	SD		
GLOB	2.48	.47	2.44	.59	N.S.	-
PROB	2.52	.53	2.42	.58	$p < .05$	Female > Male
SUP	2.45	.47	2.35	.54	$p < .05$	Female > Male

Note: GLOB = global reading strategies, PROB = problem solving strategies, and SUP = support strategies

indicated that the students used problem solving strategies more often than the other strategies. Support strategies were reported to be the least frequently used. There was a significant variation between genders in the use of PROB and SUP categories, with female students reporting the use of these strategies more frequently than their male counterparts. Moreover, there were significant differences in the use of all three categories by students with high, moderate, and low levels of reading proficiency.

The analysis mentioned earlier has revealed that male and female students differed in their choices of reading strategies. Although female students reported using strategies more often than male students, it cannot be generalized from the findings and concluded that students of one gender always use strategies more frequently than students of the other. Consequently, to reach any statistically valid conclusion on gender and students' reading strategy use needs further study with different groups of participants from various cultures (Green & Oxford, 1995) as male and female students from different environments and cultures may use different approaches to L2 or foreign language reading.

The results are consistent with the general tenor of previous studies on reading strategy use and proficiency level (e.g. Hosenfeld, 1977; Kletzien, 1991; Lau, 2006), as the analysis of the differences in strategy use by reading proficiency showed that high reading proficiency students in general reported employing certain strategies more frequently than did the moderate and low reading proficiency students.

From Figure 1, it can be seen that the reported use of reading strategies in each category was in the medium range, which indicates the respondents on the whole do not use reading strategies very frequently while reading. However, it is important for students to be aware of employing reading strategies when reading academic material. The students would benefit greatly in employing strategies to read; therefore, they would also benefit

from training in the use of reading strategies. Moreover, some of these strategies would be new to some students; it may be the important duty of language teachers to recognize which strategies may be more appropriate for their students. The more the teachers know about the differences among their students, the more the teachers can provide appropriate strategies for their reading classes.

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