

## English Reading Proficiency and Problem of Science – Oriented Undergraduate Students at a Thai University ความสามารถและปัญหาในการอ่านภาษาอังกฤษของนักศึกษาระดับปริญญาตรี สาขาวิชาศาสตร์ในมหาวิทยาลัยของไทย

Ditthawat Thongsook

That Phanom College, Nakhon Phanom University

\*e – mail: kengkla17@hotmail.com

ดิษฐวัฒน์ ทองสุข

วิทยาลัยราชภัฏพนม มหาวิทยาลัยนครพนม

Received: February 6, 2022, Revised: May 26, 2022, Accepted: June 6, 2022

### Abstract

Many Thai people are still struggling to read English texts which will create a problem for them as they cannot use this skill effectively. As a result, their English reading proficiency should be developed since information and knowledge sources are mostly printed and presented in English language. In order to develop this skill, problems need to be investigated so that development of their English reading skill will be more effective. The research aims to investigate the level of English reading proficiency of science – oriented undergraduate students at a Thai university, and investigate whether their English reading problems are due to English problem, reading problem or both. A sample of 25 science – oriented undergraduate students at That Phanom College, Nakhon Phanom University participated in this study. The research instruments are reading comprehension tests in both English and Thai versions with the same contents, and translation tests from English to Thai language. The Results showed that mean score of the reading test in English as well as the score of translating a text from English to Thai were at a low level. Additionally, the mean score of a test on reading Thai texts was significantly higher than the mean score of reading English texts at .05 level. This indicates that the students' English reading proficiency was poor. Their English reading problem was mainly due to English language issue rather than reading problem though they did not score quite well. Findings of this study can provide insights for problems analysis and future planning on English reading development, including reading comprehension skills.

**Keywords:** Reading Proficiency, Reading Problem, English Reading Proficiency, English Reading Problem

## บทคัดย่อ

การอ่านภาษาอังกฤษยังเป็นปัญหาสำหรับคนไทยจำนวนมาก ที่ทำให้หลายคนไม่สามารถใช้ทักษะดังกล่าวได้อย่างมีประสิทธิภาพเท่าที่ควร ดังนั้น ความสามารถในการอ่านภาษาอังกฤษจึงควรถูกพัฒนา เนื่องด้วยในยุคปัจจุบัน แหล่งข้อมูลและความรู้ต่าง ๆ ทั่วโลกโดยส่วนใหญ่ ได้ถูกตีพิมพ์และนำเสนอเป็นภาษาอังกฤษ ซึ่งการที่จะพัฒนาความสามารถดังกล่าวได้นั้น การรับทราบถึงปัญหาจึงเป็นส่วนสำคัญอย่างยิ่งในการพัฒนาทักษะการอ่านภาษาอังกฤษให้มีประสิทธิภาพมากยิ่งขึ้น งานวิจัยนี้มีวัตถุประสงค์เพื่อทดสอบระดับความสามารถในการอ่านภาษาอังกฤษของนักศึกษาระดับปริญญาตรีสายวิทยาศาสตร์ในมหาวิทยาลัยไทย และเพื่อสำรวจว่าสิ่งใด คือ ปัญหาด้านการอ่านภาษาอังกฤษของนักศึกษาดังกล่าว ระหว่างปัญหาด้านภาษาอังกฤษ หรือ ปัญหาด้านการอ่าน หรือ ทั้งสองด้าน กลุ่มตัวอย่างที่ใช้ในงานวิจัย คือ นักศึกษาระดับปริญญาตรีสายวิทยาศาสตร์ของวิทยาลัยราชภัณฑ์มหาวิทยาลัยนครพนม จำนวน 25 คน เครื่องมือวิจัย คือ แบบทดสอบความเข้าใจการอ่านทั้งรูปแบบภาษาอังกฤษและภาษาไทย ซึ่งทั้งสองรูปแบบมีเนื้อหาเดียวกัน และแบบทดสอบการแปลประโยคภาษาอังกฤษเป็นภาษาไทย ผลการศึกษา พบว่า ค่าเฉลี่ยของแบบทดสอบความเข้าใจการอ่านในรูปแบบภาษาอังกฤษอยู่ในระดับต่ำ และค่าเฉลี่ยการแปลประโยคภาษาอังกฤษเป็นภาษาไทยก็อยู่ในระดับต่ำเช่นกัน ในขณะที่ค่าเฉลี่ยของแบบทดสอบความเข้าใจการอ่านในรูปแบบภาษาไทยนั้น อยู่ในระดับที่สูงกว่าค่าเฉลี่ยของแบบทดสอบความเข้าใจการอ่านในรูปแบบภาษาอังกฤษอย่างมีนัยสำคัญที่ระดับ .05 จากผลการศึกษา ซึ่งให้เห็นว่า ความสามารถในการอ่านภาษาอังกฤษของนักศึกษาดังกล่าวอยู่ในระดับที่ต่ำ โดยมีสาเหตุมาจากปัญหาทางด้านทักษะภาษาอังกฤษมากกว่าปัญหาทางด้านทักษะการอ่าน แต่อย่างไรก็ตาม ผลจากแบบทดสอบความเข้าใจการอ่านในรูปแบบภาษาไทยก็อยู่ในระดับปานกลางเท่านั้น ไม่ได้อยู่ในระดับที่น่าพึงพอใจเท่าที่ควร ซึ่งผลของการศึกษานำไปใช้ในการวิเคราะห์ปัญหาและวางแผนในการพัฒนาทักษะทางด้านการอ่านภาษาอังกฤษ รวมทั้งการพัฒนาทักษะความเข้าใจในการอ่านด้วยเช่นกัน

**คำสำคัญ:** ความสามารถในการอ่าน ปัญหาในการอ่าน ความสามารถในการอ่านภาษาอังกฤษ ปัญหาในการอ่านภาษาอังกฤษ

## Introduction

There are various ways to obtain information, but reading is essential for effectively receiving information. This skill is a complex cognitive process of the meaning of the written text. It is the means to access knowledge and thought or ideas (Alderson, 2002). Reading is the most necessary skill for people, especially students, because they have to use this skill for gaining knowledge. It is used approximately 80% of the time as an educational tool in an academic institution (Changpueng, 2005). Reading skill is most emphasized in Thai education (Ministry of Education, 2002).

For education, reading skill, especially reading for comprehension, is significant because university students have to use these skills to understand what they read such as main idea, supporting detail, and conclusion (Nuttall, 2005). These students also need to be efficient in English, because many sources are mainly published in English language, such as articles,

textbooks, journals, magazines, and research. They will undoubtedly obtain usefulness and enhance their education from this skill (Wei, 2005).

However, teaching and learning the English language in Thailand is not as successful as expected. Educational levels showed that the English language is the main problem for Thai students. Their major problem is English reading skill. For the level of university, many students have problems answering factual information, identifying the main idea, making inferences, and to summarize the text read (Phanpruk, & Mahapoonthong, 2007).

This study was designed to investigate science – oriented undergraduate students' English reading proficiency and problem at a Thai university. The teachers' awareness of English reading proficiency and problem could be raised for improving the students' reading skills. The teachers can use the results found to consider how to revise their teaching to enhance the students' reading proficiency.

## Purposes of the Study

1. To investigate the level of English reading proficiency of science-oriented undergraduate students at a Thai university
2. To investigate whether English reading problems of science-oriented undergraduate students at a Thai university due to English problems or reading problems or both of them

## Research Questions

1. What is the level of English reading proficiency of science-oriented undergraduate students at a Thai university?
2. What is the English reading problem of science-oriented undergraduate students at a Thai university, English skills or reading skills or both?

## Hypothesis

1. English reading proficiency of science-oriented undergraduate students at a Thai university was low.
2. English reading problem of science-oriented undergraduate students at a Thai university was due to English skills, not reading skills.

## Scope of the Study

1. This research investigated the English reading proficiency of science-oriented undergraduate students at a Thai university.
2. This research investigated the English reading problem of science-oriented undergraduate students at a Thai university, English problems or reading problems.
3. The participants of this research were science-oriented undergraduate students at a Thai university
4. The duration of this research was from July to September 2021.

## Literature Review

### Reading Definition

There are various definitions of reading. Urquhart, & Weir (1998) defined reading as the process of decoding knowledge of semantic, syntactic, and pragmatic. Reading is understanding the meaning of words or sentences that the readers read. The readers have to understand through knowledge, language skill, and experience. As Anderson (2002) stated, reading is a mental function in which readers create and decode the meaning of words and sentences.

According to the reading definition, the primary key is understanding. If the readers read the contents or information without this, it may lead to ineffective reading or reading problems.

### Reading Problem

Reading problem can lead to misunderstanding and ineffectiveness of reading information or content of the text. According to the concept of Anderson (2002), he showed two leading causes which are reading problems as follows:

1. Background Knowledge: The readers would not be able to understand what the content is about if those readers lack enough background knowledge.
2. Cultural Knowledge: the readers would not be able to understand the content correctly and clearly if those readers lack understanding about unfamiliar cultural content and knowledge about technical terms for a specific purpose.

As Gunning (2000) stated that mainly there are two causes of the reading problem as follows:

1. Knowledge of Vocabulary: If the readers do not have enough vocabulary knowledge, those readers will not know the meaning of vocabulary, which is a cause of the problem of understanding information or the text.

2. Knowledge of the Sentence Structure: If the readers do not have enough knowledge of sentence structure, those readers will not understand

the context clearly, because a lack of enough knowledge of sentence structure leads to the problem of determining the meaning of each sentence. For Good reading, the readers need to understand the structure of phrases and their relationship.

It seems clear that these mentioned reading problems are related to language proficiency. If the readers have low language proficiency, it is not easy to understand a text.

### **Language Proficiency**

Language is a part of the culture. It reflects the value and beliefs of each group of people. Each culture determines a native language (Rosenthal, 1996). There is a distinction between unconscious language acquisition and conscious language acquisition for language acquisition. The native speaker is an obvious example of unconscious language acquisition. A non-native speaker needs to learn a second language taught by a teacher or learn any language from textbooks. Such a non-native speaker is an instance of conscious language acquisition (Krashen, 1981).

Language function plays a vital role in analytical and critical thinking. This function needs to be developed in order to become proficient. People or students who have language proficiency will be able to understand content or information. Students have to learn academic information. Therefore, these students need to systematically use language to analyze and criticize difficult and complicated content (Cummins, 1992).

Reading is an activity to understand the content. Students should have the adequate skill to interpret the meaning of words and sentences (Aebersold, & Field, 1997). Language proficiency is required in the process. The reason is that the primary purpose of reading is to understand content or information. This is called reading for comprehension.

### **Reading Comprehension**

Reading comprehension refers to a mental process of constructing and understanding the meaning of content, which is the expected outcome of reading skill (Smith, & Johnson, 2005).

For the levels of reading comprehension, Aebersol, & Field (1997) specified that there are mainly three level of reading comprehension as follows:

1. Literal Comprehension: It emphasizes information or content in the text. The readers need to use ability to identify specific facts and summarize the details described explicitly.

2. Inferential Information: It is an understanding of the meaning in the text that is implied. The readers need to use the ability to summarize the content which is not mentioned explicitly in the text.

3. Critical Comprehension: It is to find, understand, and discover implied meaning for criticizing and evaluating information or the content read. The reader needs to use the ability to summarize implied content and criticize what they read.

As Nuttal (2005), he mentioned that there are four levels of reading comprehension as follows:

1. Literal Reading: It requires the readers to make a simple understanding of explicitly mentioned information or facts in the text.

2. Interpretative Reading: It requires the readers to use a higher thinking ability to summarize, infer, and predict information or content because some writers describe or explain it indirectly.

3. Critical Reading: It requires the readers to evaluate language and judge information or content read on truthfulness and value. The readers have to collect, interpret, apply, analyze, and criticize information or the content.

4. Creative Reading: It requires the readers to use the highest reading comprehension level. For this level, the readers need to use literal, interpretative, and critical comprehensions to apply or create new information.

From the levels of reading comprehension explained by Aebersol & Field and Nuttal, they are quite similar. The first level of reading comprehension is literal understanding. This level requires the readers to understand explicit or factual information. The second level is implied information understanding.

This level requires the readers to interpret implied information. As the next level, this is critical understanding. This level requires the readers to evaluate and summarize what is read. For the different thing, Nuttal explained more one level which is creative understanding. This level requires the readers to use literal, implied, and critical understanding to create new information.

The concept of reading comprehension involves a thinking process for analyzing the content systematically (Anderson, 2002). Hence, the reading process seems to be a meaningful way of understanding what is read.

### **Reading Processes**

In reading processes, the readers interact with the content to interpret and create meaning by using knowledge relating to linguistic knowledge about words, sentence structures, and cognitive skills. (Alderson, 2002). Reading processes can be divided into three stages. These stages are pre – reading, while – reading, and post – reading.

Pre - reading is the first process called the planning step. The readers think about the topic, consider the text, and predict what they read.

While - reading is a second process called the monitoring step. The readers think and monitor by reflecting on the idea of the content and questioning the text.

After - reading is a final process called evaluating step. The readers reflect, consider, analyze, and conclude the content or information through readers' knowledge and experience for making understanding (Cohen, 1998).

The reading process is the way to comprehend content or information, but reading strategies are also considered the means to understand the contents or information better. These strategies are implemented for more effective reading.

### **Reading Strategies**

Reading strategies can be considered an

essential part of reading. The readers implement them to understand the content transmitted by the writer (Abbott, 2006). Readers need to use reading strategies before, during, and after reading as follows:

Before reading: the first step of using reading strategies, the readers need to use prior knowledge to think about the topic, previewing the text, and predict the content by scanning and skimming.

During reading: this second step of using reading strategies, the readers need to make and monitor through thinking, questioning, and reflecting on the idea of the content.

After reading: in this final step of using reading strategies, the readers need to reflect on the content or information read from the knowledge and experience of those readers, clarify understanding from the content read, extend understanding through creation and analysis, and conclude what the readers read (Cohen, 1998).

From the concept of reading strategies, it may be created as a reading model for developing reading skills. This model can be used for developing reading comprehension.

### **Reading Models**

Reading model is the concept that the readers can use for acquiring words, interpreting sentences, and comprehending a text (Grabe, 2002). Generally, there are numerous and various reading models. However, the reading model can mainly be categorized into four models (Reutzel, & Cooter, 2005). The first model is the top – down model. For this model, readers' knowledge and experience are emphasized as significant parts to comprehend the content. The second model is the bottom – up model. Language knowledge for interpreting the symbols in the content is emphasized so that the reader can comprehend the text from smallest to largest units. This model is started from letter to word, from word to sentence, from sentence to paragraph, from paragraph to text, and from text to the meaning. The following model is the interactive

model. The Importance of knowledge and the content that the readers read are emphasized in this model. The processes of top – down and bottom – up are combined in the interactive model. For this model, the readers apply knowledge and experience to comprehend the meaning of the content. The final model is transactional Model. The reader, content, and social and situational contexts are emphasized for linking and transmitting information to comprehend the meaning of the content.

From all of the above concepts, reading is the construction of meaning from words and sentences. Indeed, a significant thing is language knowledge. If the readers read content or information without this, understanding from reading cannot occur. Simultaneously, the essential thing from reading is understanding. The reason is that reading is not just pronunciation, but it is to understand the content or information through reading skills. Therefore, the reading process, reading strategies, and reading model can be used to comprehend what is read for effective reading.

## Research Methodology

### Research Participants

The participants of this study were twenty - five science – oriented undergraduate students of That Phanom College, Nakhon Phanom University. All of them were students in their third and fourth years studying in the first semester of the academic year of 2021. They were selected by purposive sampling based on the participants' field of study.

### Research Instruments

For this research, two instruments were used for collecting data:

1. The first instrument was the English version of the reading for a comprehension test. This test was adapted from English reading part of Cambridge University (Cambridge University Press, 1996). This test

was divided into two parts. The subjects were asked to read two passages and answer the questions for the first part. This test contained two passages and twenty items by selecting a correct choice in each item. The passages relating to science and social science. For the second part, these participants were asked to translate from English sentences into Thai sentences. This part had ten English sentences selected from the passages of the test.

For content validity of each question in the passages, it was approved by three experts who had experiences in teaching English for at least five years. The Item – Objective Congruence (IOC) was implemented to specify content validity. The Items with scores higher than or equal to 0.5 were used. The items with scores lower than 0.5 were edited according to the experts' comments and suggestion and used for conducting the research. The overall IOC score of this evaluation was 0.83. The reliability of the survey by the instrument was determined to ensure the responses were reliable and consistent. The instrument was pilot examined with twenty third and fourth years studying in the first semester of the academic year of 2021 at That Phanom College, Nakhon Phanom University. This group of participants was not in the group of samples of the main research. For English sentences for translation from English to Thai sentences, the overall sentence content suitability mean score was 4.57, and the standard deviation (S.D.) was 0.16.

2. Second instrument was a Thai version of a reading comprehension test. This test had only one part. The participants were asked to read two passages and answer the questions in this part. This test contained twenty items by selecting a correct answer in each item. The passages and the questions of the Thai version test were translated from the English version. So, it had the same meaning as the English version test.

For correct translation, the researcher consulted three experts who had experiences in teaching English for at least five years. Afterward, the researcher revised the contents according to the experts' comments and suggestion and used them for operating the research.

The English and Thai test were used to investigate whether the English reading problem was due to an

English problem, a reading problem, or both. At the same time, the second part of the English version (translation from English sentences to Thai sentences) was applied to investigate these students' English word and sentence understandings.

The details of the English reading test for both the English and Thai version tests can be illustrated in table 1.

**Table 1:** The types of questions of reading comprehension test

The Types of Questions of Reading Skills	Number of Items
Main Idea	4
Referential Information	4
Inferential Information	4
Factual Information	8
<b>Total</b>	20

For the above table, the test has four types of reading questions. These types of reading questions were based on the concept of Smith, & Johnson (2005). According to these scholars, reading comprehension aims to comprehend the content, so looking for the main idea to specify the point of what is read, finding referential information to connect the parts of content, indicating inferential information to draw the conclusion from the implied content, and understanding factual information to know the explicit content are the parts of reading that the readers need to use to understand what they read. The students' English reading proficiency was assessed using these questions in the English version test. At the same time, the questions in the Thai version test were used to assess the level of reading skill of these students.

### Data Collection

The data were collected by operating two steps:

1. In the first step, the target group studying in the first semester of academic year of 2021 took a reading comprehension test in English. They also

took a translation test from English sentences to Thai sentences.

2. In the second step, these students were asked to take a reading comprehension test in the Thai version.

### Data Analysis

After conducting reading comprehension test in both Thai and English versions, the data were analyzed by using the percentage (%), mean score ( $\bar{x}$ ), standard deviation (S.D.), and statistical significance (t – test).

Then, the scores of the main idea, factual information, inferential information, and referential information were calculated to find a mean score and a standard deviation. Next, the mean score of these skills was changed to percentage. The mean scores of these sub - reading skills from the Thai version and English version tests were calculated to determine the significant differences in scores of sub - reading skills and also identify the problem in sub – reading skills and whether the cause of the problem between language proficiency or reading skill or both of them.

## Result of the Study

In this part, the study results were presented in two parts. These parts were the proficiency of English reading proficiency and problem of science – oriented undergraduate students at That Phanom College, Nakhon Phanom University.

### Proficiency and problems in English Reading of Science – Oriented Undergraduate Students at That Phanom College, Nakhon Phanom University

The purposes of this research were related

in this part. The first purpose of the study was to investigate the English reading proficiency of science – oriented undergraduate students at That Phanom College, Nakhon Phanom University. The second purpose was to investigate whether the English reading problem of these students due to English problems or reading problems. The English reading comprehension test scores can be distinguished into four skills, which are based on Smith and Johnson's concept (2005). These scores will be shown in table 2.

**Table 2:** The Scores of Reading Comprehension Test (English Version)

Types of Questions	Main Idea	Factual Information	Inferential Information	Referential Information	Average of All Types of Questions
( $\bar{X}$ )	0.92	2.96	0.96	2.04	
S.D.	0.64	0.73	0.68	0.45	
%	23.00	37.00	24.00	51.00	34.40

According to table 2, the English reading proficiency of science – oriented undergraduate students at That Phanom College, Nakhon Phanom University was at a low level (34.40%). The result specified that their skill in finding the main idea was at a very low level (23.00%), their skill in finding factual information was at a low level (37.00%), their skill in finding inferential information was at a very low level (24.00%), and their skill in finding referential information was at a moderate level (51.00%). Averagely, the students' proficiency in English reading comprehension from all reading types was at a low level (34.40%).

#### The result from the translation part

For the translation part, the result specified that

the score of the translation from English sentences to Thai sentences was low. The overall mean score of this test was 2.88. As the percentage of correct translated sentences, it was 28.80%.

From the above result, it can be concluded that the students could not translate English sentences well because they did not understand what appeared in those sentences well. Indeed, it can lead to the problem of reading comprehension.

#### Comparison of science – oriented undergraduate students' reading scores between the English version and Thai version

A Comparison of the reading scores from the English version and Thai version is shown from table 3 – 7.

**Table 3:** The statistical comparison of mean scores of the main idea between the English version and the Thai version

Main Idea	Reading Comprehension Test	
	English Version	Thai Version
( $\bar{X}$ )	0.92	2.12
S.D.	0.64	0.53
t – value = 2.89		
p < .05		

This table specifies that the English version's mean score of main idea was 0.92. In the Thai version, it was 2.12. The mean score for the English version was lower than the Thai version. The difference

between the mean scores of the main idea for the English version and the Thai version was significantly different at  $p < .05$  level ( $t = 2.89$ ).

**Table 4:** The statistic comparison of mean scores of inferential information between English version and Thai version

Factual Information	Reading Comprehension Test	
	English Version	Thai Version
( $\bar{X}$ )	2.96	5.12
S.D.	0.73	0.88
$t - \text{value} = 5.34$		
$p < .05$		

This table specifies that the English version's mean score of factual information was 2.96. In the Thai version, it was 5.12. The mean score for the English version was lower than the Thai version.

The difference between the mean scores of factual information for the English version and the Thai version was extremely significantly different at  $p < .05$  level ( $t = 5.34$ ).

**Table 5:** The statistic comparison of mean scores of factual information between English version and Thai version

Inferential Information	Reading Comprehension Test	
	English Version	Thai Version
( $\bar{X}$ )	0.96	2.40
S.D.	0.68	0.85
$t - \text{value} = 2.65$		
$p < .05$		

This table specifies that the English version's mean score of inferential information was 0.96. In the Thai version, it was 2.40. The mean score for the English version was lower than the Thai version. The

difference between the mean scores of inferential information for the English version and the Thai version was significantly different at  $p < .05$  level ( $t = 2.65$ ).

**Table 6:** The statistic comparison of mean scores of referential information between English version and Thai version

Referential Information	English Reading Test	
	English Version	Thai Version
( $\bar{X}$ )	2.04	2.76
S.D.	0.45	0.44
$t - \text{value} = 2.29$		
$p > .05$		

This table specifies that the English version's mean score of referential information was 2.04. In the Thai version, it was 2.76. Although the mean score of the English version was lower than the Thai

version, the difference between the mean scores of referential information for the English version and the Thai version was not significantly different at  $p > .05$  level ( $t = 2.29$ ).

**Table 7:** The statistic comparison of mean scores of all reading skill between English version and Thai version

All Reading Skills	Reading Comprehension Test	
	English Version	Thai Version
( $\bar{X}$ )	6.84	12.40
S.D.	1.57	2.07
$t$ – value = 9.57		
$p < .05$		

This table specifies that the mean score of all reading skills for the English version was 6.84. In the Thai version, it was 12.40. The mean score for the English version was significantly lower than

the Thai version. The difference between the mean scores of all reading skills of the English version and the Thai version was significantly different at  $p < .05$  level ( $t = 9.57$ ).

**Table 8:** Comparison of mean score between the English version and Thai version of reading comprehension tests in each type of question

Types of Question	English Version Test	Thai Version Test
	Percentage (%)	Percentage (%)
Main Idea	23.00	51.00
Factual Information	37.00	63.50
Inferential Information	24.00	53.00
Referential Information	51.00	70.00
All Types of Questions	34.40	60.20

This table shows that the percentage of the English version of reading comprehension test (34.40%) was lower than the Thai version test (60.20%). For the part of the main idea, the percentage of the English version test (23.00%) was lower than the Thai version test (51.00%). For factual information, the percentage of the English version test (37.00%) was lower than the Thai version test (63.50%). In the part of inferential information, the percentage of the English version test (24.00%) was lower than the Thai version test (53.00%). Finally, in the part of referential information, the percentage of the English version test (51.00%) was lower than the Thai version test (70%).

Although, the mean score of the reading comprehension test in the Thai version showed that the score of the test in the Thai version was higher than the test in the English version, the overall score in the Thai version was just moderate level.

The overall score of the test in the English version was low level. Besides, the score on the test of translation from English sentences to Thai sentences was also low.

The above results indicated that the main problem of English comprehension was English skills. As for reading skills, it was not at a good level. These skills should also be improved for more effective reading.

## Discussion

In investigating these students' English reading proficiency, the researcher found that the science – oriented undergraduate students' English reading proficiency was low. The finding was that the main idea, inferential information, and factual information were the problems of English reading. The most problematic sub – reading skill was identifying the main idea, factual information, and inferential information. Although the students could pass half of the total score in finding referential information, the result was only at the moderate level. Moreover, the students might choose the correct answers by observing the words' location. They probably did not need to know or understand the meaning of what they read to choose the correct answer to this type of question.

The result of this study was consistent with a previous study (Sutta, 1994), which indicated that Thai students' reading proficiency was at a low level. These students could not specify the main idea, author's purpose, and conclusion. These causes were the problems leading to difficulty understanding a reading text. Lacking skills in finding the main idea was the main problem in understanding content or information because the main idea was an essential part of a reading text.

As part of the comparison between the English and Thai test, the result specified that the students did not have reading problem, but the English skill was the problem. The reason was that the subjects did not pass the English version test, but they passed the Thai version test. Besides, poor performance in the translation test supported this result. This finding showed that their reading problem stemmed from low English skills. The primary reasons were English linguistic and vocabulary knowledge. From this points, the subjects did not understand the meaning of English sentences adequately. The result of this study was in line with the study conducted by Sritamai (1993). This study showed that

the students had English reading problems because they had limited English competence. Their English competence was deficient, especially English linguistic and vocabulary knowledge, which were the causes of their English reading problem, not reading skill. Moreover, the result of this study was similar to the study of Glenn Ole Hellekjaer (2009). The students had difficulty in reading content or information in the English language. English reading was more difficult than reading in their first language. The main problem was poor English proficiency leading to an English reading problem. However, although the students passed in Thai version test, the point level was only fair, not high. This result indicated that their reading skill might also be a thing that should be improved or developed for more understanding of reading.

## Conclusion

The current study aimed to investigate English reading proficiency and the problem of science – oriented undergraduate students at That Phanom College, Nakhon Phanom University. Also, this research investigated the cause of English reading problem of the subjects. In this research, the English version test and the Thai version test were compared. This comparison shows that the students' English reading proficiency was low. The cause of this problem was English skills, not reading skills because they could pass the Thai version reading test, but could not pass both the English reading version and English to Thai translation. From the instruments, especially the translation test, it clearly pointed out that their English reading problem was English linguistic and vocabulary knowledge. This limitation affected the students' English reading understanding.

According to the above mentioned English reading problems, the students should be emphasized in the use of English vocabularies and reading strategies. For the use of English vocabularies, this is considered as a very essential part for English reading comprehension since it is used to determine word

meaning and understand what is read (Graves, & Ryder, 1994). As the use of reading strategies, this can be applied to improve English reading comprehension such as using context clue to guess the meaning of unfamiliar words, using affixes to infer the new meanings from familiar words, and using keywords or synonyms to guess the meaning of the passage etc. Moreover, the use of strategies also enable the readers to understand how to specify the main idea, identify inferences, and drawing conclusions (Nuttall, 2000). Thus, these ways should be used for improving and enhancing English reading comprehension.

## Recommendation

The recommendations for future research are presented as follows:

1. Future research should cover various programs to be compared and contrasted in the result.
2. Interviews should be used for future research so that the subjects can specify more causes or factors relating to the result.

## References

Abbott, M.L. (2006). *ESL Reading Strategies: Difference in Arabic and Mandarin Speaker Test Performance: Language Learning*. Malden: University of Alberta.

Aebersol, J.A., & Field, M.L. (1997). *From Reader to Reading Teacher: Issues and Strategies for Second Language Classroom*. New York: Cambridge University Press.

Alderson, C. J. (2002). *Assessing Reading*. The United Kingdom: Cambridge University Press.

Cambridge University Press. (1996). *Cambridge Practice Tests for IELTS*. Cambridge University Press.

Changpueng, P. (2005). The power of narrow reading. *Journal of English Studies*, 9(2), 88 – 99.

Cohen, A.D. (1998). *Strategies and Learning and Using Second Language*. New York: Addison Wesley Longman.

Cummins, J. (1992). *Language Proficiency, Bilingualism and Academic Achievement*. In P.A. Grabe, W., & Stoller, F.L. (2002). *Teaching and Researching Reading*. London, England: Education.

Graves, M. F., & Ryder, R. J. (1994). *Reading and Learning in Content Areas*. New York: Macmillan College Publishing Company.

Gunning, T.G. (2000). *Assessing and Correcting Reading and Writing Difficulty*. Boston: Allyn & Bacon Education Company.

Hellekjaer, G.O. (2009). Academic english reading proficiency at the university level: a Norwegian case study. *Reading in a Foreign Language*, 21(2), 198 – 222.

Krashen, S. (1981). *Second Language Acquisition*. Oxford, England: Pergamon.

Ministry of Education. (2002). *Education Reformed*. Bangkok: Kuruspa Press. [in Thai]

Nuttall, C. (2005). *Teaching Reading Skills in a Foreign Language*. Oxford, UK: Macmillan Education.

Phanpruk, S., & Mahapoonthong, M. (2007). A study of English language proficiency, language using problems and language needs among graduate and post graduate students at King Mongkut's Institute of Technology North Bangkok. *Journal King Mongkut's Institute of Technology North Bangkok*, 3(5), 12 – 15.

Reutzel, D.R., & Cooter, J.R. (2005). *Essentials of Teaching Children to Reading: The Teacher Make the Difference*. Pearson Publishing.

Rosenthal, J.W. (1996). *Teaching Science to Language Minority Students*. England: Multilingual Matters Ltd.

Smith, R.J., & Johnson, D.D. (2005). *Teaching Children to Read*. Springfield, Massachusetts: Addison-Wesley Publishing.

Sritamai, R. (1993). *English Linguistic Competence of Mathayom 6 Students in School under the Jurisdiction of the General Education Department* (Master's Thesis), Chulalongkorn University. [in Thai]

Sutta, N. (1994). *An Investigation of the Ability in Using Reading Comprehension Skills in Reading Expository Text of the First Year Graduate Students in the Master of Arts in Teaching Program of Kasetsart University* (Master's Thesis), Kasetsart University. [in Thai]

Urquhart, A.H., & Weir, C.J. (1998). *Reading in a Second Language: Process Product and Practice*. New York: Addison Wesley Longman.

Wei, Y. (2005). *The Relationship between Phonological Awareness and Reading Ability of Thai Students in English and Thai Primary Schools of Thailand* (Doctoral Thesis). University of Maryland.