THE RELATIONSHIP BETWEEN SELF-EFFICACY AND READING COMPREHENSION OF SECONDARY SCHOOL STUDENTS

BY

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ABSTRACT

This study aimed to investigate the relationship between self-efficacy in reading comprehension and reading comprehension test performance in Thai EFL students. The study investigated 44 grade 12 students studying in a Mathematics and Arts (English) program at a Thai government school. A quantitative method of data collection was applied to answer the research questions. The data were gathered using a questionnaire survey to examine the learners' beliefs about their reading abilities and using the reading part of the English O-NET test to measure students' reading ability. The findings indicate that the level of self-efficacy among participants was moderate but participants' overall reading test results were at a high level. The statistical correlation analysis revealed a strong relationship between Thai learners' self-efficacy in reading and reading competence in a significant level.

Keywords: Self-Efficacy, Reading Comprehension, Learners' Beliefs, Reading Subskill

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Miss Natthakitta Nonsawang

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LIST OF ABBREVIATIONS

Symbols/Abbreviations	Terms
BALLI	Beliefs about Language Learning
EFL	English as a Foreign Language
GPA	Grading in education
NIETS	National Institute of Educational Testing Service
OC	Observational Comparison
O-NET	The Ordinary National Educational Test
PR	Progress
PS	Physiological States
RSPS	The Reader Self-Perception Scale
SF	Social Feedback
TALL	Test of Academic Literacy levels

CHAPTER 1

INTRODUCTION

1.1 Background

Reading is generally recognized as the most crucial skill in the EFL context. Anderson (1999) indicated that reading is a complex cognitive process of decoding symbols for the creation or obtaining of meaning (reading comprehension) that leads to the understanding of printed and graphic texts through an active process. Processing any text demands some endeavour of learners since reading is a particularly complicated process. Moreover, students have to recognize over ninety-five percent of the vocabulary to comprehend the context without opening a dictionary (Lightbown & Spada, 2017, p. 64). Students need to persevere and stay reading longer so as to understand the text. From a worldwide perspective, previous studies conducted in many different countries have suggested that EFL students face difficulties in reading comprehension. Evidences were found in Oman (Al Seyabi & Tuzlukova 2015), Taiwan (Chen & Chen, 2015), South Korea (Cho & Brutt-Griffer, 2015), Philippines (Guimba & Alico, 2015) and Indonesia (Hamra & Syatriana, 2015).

The research has indicated that if the readers believe in their capability to comprehend the text, they perform reading tasks persistently (Solheim, 2011; Unrau et al., 2018). Self-efficacy beliefs instils motivation among people to obtain success in required tasks (Bandura 1986, 1997; Pajares, 2002; Alias, Lashari, Akasah, & Kesot 2018). Moreover, an endeavor and persistence on tasks are considerably linked with self-efficacy (Bandura & Cervone, 1983, 1986; Schunk & Pajares, 2009). People with high level of self-efficacy, once facing a problem, tend to exert a lot of effort and persist through the situation as they believe that they have the ability to attain the task. However, individuals low in self-efficacy are likely to give up as they believe that their effort would lead to failure instead of accomplishment as they think they are not holding the required skills to complete the task (Bandura, 1994; Schunk, Meece & Pintrich, 2014).

In previous literature, the relationship between self-efficacy and each language skills (listening, speaking, reading, and writing) was explored (e.g., Kitikanan and Sasimonton, 2017; Pakampai, 2018; Puthikanon, 2015; Simasangyaporn, 2016).

However, in Thailand, there is a scarceness of research related to the relationship between learners' self-efficacy and reading comprehension. For this reason, this study aimed to investigate the correlation between self-efficacy and reading comprehension of learners in secondary school.

1.2 Research Questions

There are three main research questions:

1.2.1 What is the level of the reading comprehension proficiency of Thai grade 12 learners?

1.2.2 What is the self-efficacy in reading comprehension among Thai EFL learners?

1.2.3 Is there a relationship between Thai learners' reading self-efficacy and reading comprehension ability?

1.3 Objectives of the Study

The objectives of this study are as following.

1.3.1 To find out the level of the reading comprehension proficiency of Thai grade 12 learners.

1.3.2 To investigate the self-efficacy in reading comprehension among Thai grade 12 learners.

1.3.3 To explore any relationship between Thai learners' reading self-efficacy and reading comprehension ability.

1.4 Scope of the Study

The study focuses on 12^{th} grade Thai learners at a government school. As mentioned above, this study focuses only on the recently learners' reading self-efficacy and reading comprehension ability of Thai learners on grade 12 at government school.

1.5 Significance of the Study

A correlation can shed the light of how self-efficacy relates to reading comprehension ability and how schools or teachers can support the students to achieve the reading skill effectively. The findings indicated that the causes leading to low reading efficacy in students need to be investigated further.

CHAPTER 2
REVIEW OF LITERATURE

This section presents the theories and frameworks which were employed to investigate relationships between Thai learners' reading self-efficacy and reading comprehension competence. There are three main areas of literature review, including reading comprehension, a definition of self-efficacy, and relevant research.

2.1 Reading Comprehension

Reading is an extremely complex process which involves the perceptions and decoding capabilities of the reader, drawing upon their language abilities, personal experiences, ability to reason, and overall frame of mind.

One of the complex cognitive tasks is comprehending text. The process includes decoding each word, recognizing connections between the words, and combining the meaning in structure at the level of the clause, then the sentence, and finally the paragraph. It is possible for reading comprehension models to distinguish between different relevant processes to explain how a reader obtains meaning from the text. The different cognitive processes contributing to differences in comprehension outcomes have been investigated to identify the reading comprehension process (Zwaan & Radvansky, 1998; McNamara & Magliano, 2009).

Several studies examined reading comprehension analysis from varying perspectives. Therefore, this allows the generation of a number of theories which can explain the reading comprehension process.

Reading can be based on bottom-up processing which begins with the smallest units of language, such as words that activate particular knowledge schemas. Then it extends to bigger units, from sentences to paragraphs, and ultimately to the passage as a whole. For a paragraph to be interpreted, the meaning depends on each sentence, which must first be interpreted through the initial interpretation of each of the individual words.

The idea of top-down processing uses an opposing approach which holds that understanding begins from a very broad basis, considering the title, and the basic ideas

contained within each paragraph, while smaller linguistic units are only considered later. A majority of these models (Goodman, 1967; Smith, 1971) have their basis in psycholinguistic theory, which focuses on the relationship between language and thought. This means that language processing must rely upon the reader's prior knowledge or background understanding. Text comprehension begins with decoding the meaning of a paragraph, followed by considering the meaning of the sentences, and finally the words. As a consequence, top-down processing invokes high level schemas which support the comprehension of complex texts, and provide further guidance for the process of reading. The structure of the process means that the previous knowledge and the expectations of the reader will determine the extent to which they are quickly able to comprehend a written text. When encountering a text, background knowledge quickly shapes the process of comprehension (Kendeou, van den Broek, White & Lynch, 2007).

However, nowadays there is another approach that most researchers believe to be the best view of the comprehension process called interactive process. This approach combines both elements from both the bottom-up and top-down processes. Kintsch (2005, p. 126) explains that "both top-down and bottom-up processes are integral parts of perception, problem solving, and comprehension".

The top-down and bottom-up methods are new key elements in all studies examining reading comprehension. There are, however, a number of alternative theories which have been developed which can begin to explain the relationships between reading comprehension and memory.

To comprehend a text is a difficult and onerous cognitive activity which involves the simultaneous extraction and construction of meaning (Snow & Sweet, 2003). In the course of reading activity, the information is stored and decoded (Kintsch, 1998). The processes required to read and understand a written text demand a constant process of manipulation within the working memory in order to hold information on a temporary basis, or to hold thoughts in memory while performing a task (Baddeley & Hitch, 1974).

Kintsch (2005), believed that reading comprehension is a complex process, involving the initial visual text perception, the capacity to hold parts of the text in the working memory for decoding, the development of mental schemas, and the extraction from long-term memory of prior knowledge.

Using this model, reading is not a single skill, but a combination of connected skills which are developed over long periods of time. In this manner, the perception and understanding of systems of written symbols will be determined by the perception, decoding ability, language experience, reasoning skills, and frame of mind of the reader.

2.2 Self-Efficacy

Self-efficacy describes the belief of an individual that they have the ability to undertake a particular action successfully (Bandura, 1986). It is a form of self-belief and confidence which can affect an individual's behavior in terms of the feeling of engagement in the task. It helps estimate the effort and duration people are spending while performing the task (Pajares, 1996).

The concept of self-efficacy should be defined in order to understand its use in this study. In the 'Social cognitive theory', presented by Bandura (1986, 1997), the idea of self-efficacy is first developed, indicating that self-efficacy beliefs affect level of motivation via the effort to exert in an endeavor and the perseverance encountering any hurdles. The more believing in their ability, the more persistent are their efforts (Bandura, 1989).

According to Bandura (1997), being the most influential factor in human action and influencing role in making decisions, self-efficacy is considered as a more consistent predictor of achievement and behavior than other variables.

Effort and perseverance with a task are closely linked to self-efficacy (Bandura & Cervone, 1983; 1986; Schunk & Pajares, 2009). Those people whose self-efficacy is high will tend to make more effort when faced with a challenge, and will continue to work at a task if they believe they have the skills necessary to complete it. Salomon (1984) reported increased levels of cognitive engagement in students with high levels

of self-efficacy as long as the task was difficult, but with easy tasks they would become less likely to show cognitive engagement. In addition to the amount of effort invested in a task, self-efficacy also affects the quality of that effort in terms of thought processing depth, and cognitive engagement in learning (Graham & Golan, 1991; Pintrinch & Schrauben, 1992).

Moreover, the anticipatory scenarios that people construct and repeat is influenced by their perceptions of efficacy. People high in efficacy visualize success scenarios leading to positive paradigms for their performance while people low in efficacy tend to visualize failure scenarios that undermine their performance by thinking about how things get worse (Bandura, 1989). It is thus the case that if individuals are able to visualize the successful performance of a task, this cognitive process can improve the actual performance (Bandura, 1986; Corbin, 1972; Kazdin, 1978; Feltz & Landers, 1983).

In addition, Bandura (1989) added that there are four elements which serve to form efficacy cues: mastery experience, vicarious experience, physiological state, and verbal persuasion. Mastery experience includes the individual past experiences of successes and failures, considered as the most influential comparing to the other three sources (Bandura 1986, 1997). Getting boosted by successes, self-efficacy beliefs also get lowered when one faces failures. Moreover, observing other people's success can increase our self-efficacy because of the belief that one can accomplish similar tasks. This source is called 'vicarious experience'. Another source is verbal persuasion, that is, receiving feedback in the social context such as family, friends, and teachers. This kind of response can influence self-efficacy leading to an individual's better performance to do the task. The last source is 'physiological state', regarded as the individual emotion, or feelings like anxiety and stress that can affect people's beliefs (Bandura 1989). These four sources can create and disrupt self-efficacy beliefs that influence individual performance (Bandura 1989, 1997).

It can be argued that self-efficacy is a critical component which determines the academic performance of learners. Those students who have problems do so as a consequence of their own beliefs. Students with low self-efficacy believe that they cannot do the task rather than their lack of ability to perform it. This situation can cause

a lack of motivation, poor performance, low levels of participation and a lack of achievement (Pajares, 2003). Zimmerman (2000) claimed that since self-belief can be a factor which regulates the learning and motivation of students, it will also play a key role in supporting their motivation to succeed. Accordingly, further investigation of the effects of self-efficacy and its relationship with language learning and also reading comprehension is essential.

2.3 Relevant research

In Thailand, while research into self-efficacy in the study of languages remains limited, the work which has been done demonstrates a positive link between motivational factors including self-efficacy and second language learning accomplishment.

Pakampai (2018) indicated that there is a positive correlation between self-efficacy with regard to the English language and English usage performance. Particularly, it was shown that the impacts of self-efficacy on English language performance are slightly more significant among the learners whose self-efficacy levels are lower. In addition, it has been reported by several other research studies that there are links among reading achievement, reading motivation, and self-efficacy (Applegate & Applegate, 2010; Becker et al., 2010; Marinak & Gambrell, 2008; as cited by Hedges & Gable, 2016).

A study by Kitikanan and Sasimonton (2017) explored the relationship between learning achievement in English and each aspect of English self-efficacy using Pearson's correlations. The participants of their research comprised 32 fourth-year English major students from Thailand. The data was collected via a self-efficacy questionnaire and GPA to measure English learning achievement. The research revealed that English self-efficacies of the four key skills of speaking, listening, reading and writing were significantly correlated with achievement levels in English language learning. Those with higher levels of self-efficacy produced higher levels of learning achievement in English. It is therefore suggested that if just one component of self-efficacy can be enhanced, this would potentially lead to better English language performance.

For writing, the example is found from the study of Puthikanon (2015) which investigated different strategies for learning as well as self-efficacy, in the area of writing among students in Thailand. The finding showed that self-efficacy in writing and strategies for learning were strongly correlated. Furthermore, it was revealed by Chi-square testing that those students with high level of self-efficacy applied learning strategies with greater frequency than those learners who had lower levels of self-efficacy. These findings thus confirm the importance of both learning strategies and self-efficacy when developing foreign language writing skills in English.

Moreover, a number of other research studies have also reported the connection between reading motivation, self-efficacy, and reading achievement (Applegate & Applegate, 2010; Becker et al., 2010; Marinak & Gambrell, 2008 as cited in Hedges & Gable, 2016).

The links between self-efficacy and proficiency were also explored in the context of reading in various further studies. One case where a positive relationship was reported was in the work of Boakye (2014) who examined the self-efficacy connection with proficiency through the use of the Test of Academic Literacy levels (TALL). That study was carried out in South Africa in the tertiary education sector and involved first-year students. A questionnaire on self-efficacy about reading was distributed to the participants, then they were tested with TALL. The finding revealed that self-efficacy in reading was significantly correlated to the reading proficiency. However, although self-efficacy beliefs relate to reading achievement, it does not mean that reading self-efficacy causes reading proficiency.

The study of Ghabdian and Ghafournia (2016) showed evidence of the relationship between individuals' self-efficacy and their performance in reading comprehension. They adapted the reading self-efficacy part of the Beliefs about Language Learning (BALLI) questionnaire to test the relationship between reading self-efficacy and reading comprehension through the reading part of the Michigan Test. Their finding from Pearson correlation demonstrated that there was significant positive correlation between self-efficacy in reading, and reading comprehension ability, such that those learners with greater self-efficacy in reading would be better able to achieve good results in answering questions on reading comprehension. Furthermore, the

findings also show that there is no effect from gender upon the influence of self-efficacy beliefs.

Another study regarding self-efficacy and reading achievement was carried out by Mills, Pajares and Herron (2006), who explored the influence of self-efficacy and of anxiety in the context of the French language reading and listening performance of French students. Their findings revealed that self-efficacy in reading in French had positive correlation to the reading proficiency while reading anxiety had no correlation.

In addition, Fitri E, Sofyan and Jayanti (2019) also found that correlation was significant among students in twelfth grade between self-efficacy in reading, and reading comprehension. The findings imply that higher levels of self-efficacy in reading result in superior performance in reading comprehension.

Barjesteh, Manoochehrzadeh and Hosseini, (2019) have examined the relationship between self-efficacy in reading comprehension and reading comprehension test performance in young learners of foreign languages. The study investigated 60 first-year university students studying English, and the data were gathered using a questionnaire survey designed to develop an understanding of the learners' beliefs about their reading abilities. The goal was to examine how high and low levels of reading self-efficacy will influence reading proficiency. The reading proficiency of the students in the study was measured using a test of reading comprehension test derived from the paper-based Longman TOEFL test. The research demonstrated a significant direct link between the study participants' learning self-efficacy beliefs and their level of language proficiency.

CHAPTER 3
METHODOLOGY

3.1 Introduction

This chapter describes the methodology designed for this study, including description of the participants, the materials, the procedures, and the data collection and analysis. The materials consist of two types of instruments: reading comprehension test and reading self-efficacy questionnaires. The development of these instruments and characteristics are explained in this chapter. The procedures for collecting and analyzing quantitative data are described in detail. Next, validity, reliability and replicability are discussed. Finally, ethical issues are defined. The research instruments explained in this chapter were designed to answer the following
research questions:

1. What is the participants' level of reading comprehension proficiency?
2. What is the self-efficacy in reading comprehension among Thai EFL learners?
3. Is there a relationship between Thai learners' reading self-efficacy and reading
comprehension ability?

3.2 Design of the Study

This research was conducted as a correlational study with a quantitative data collection method being employed in order to provide responses to the research questions. The Thai learners' reading comprehension through the use of tests for reading comprehension is the dependent variable of this study, whereas the beliefs regarding reading self-efficacy of Thai learners is the independent variable. The study's design is ex post facto due to the research not including any experimental treatment (Bailey & Nunan, 2009).

3.3 Context of the Study

The school in the present study is one of the top government schools in Nonthaburi and received the second ranking in Nonthaburi for the English O-NET exam administered annually by NIETS to Grade 12 students in Thailand.

3.4 Participants and Sampling

The participants comprised of 44 Thai EFL students in grade 12 studying in a Mathematics and Arts (English) program at a government school in Nonthaburi. Convenient sampling was applied to select the participants in the study. There were 29 males and 15 females. The participants had different levels of English proficiency and had never taken the O-NET test before.

The study was conducted in a school in Nonthaburi, Thailand. The participants were students attending a Mathematics and Arts (English) program. The program comprises of English courses as follows.

Course Title	Credit	Teacher
Foundation English VI	4	Thai
Advanced English reading and writing	4	Thai
Creative English	4	Thai
Advanced English listening and speaking	1	Filipino

The courses are taught in grade twelve. It is to be noted that all of the participants were taught by the researcher in a Foundation English VI course in order to maintain the consistency regarding their exposure to English teaching methods. Moreover, they had an equal amount of time spent with the teacher. Consents were granted from the participants before the collection of data.

3.5 Research Instruments

The instruments that were utilized in this study are as following:

3.5.1 Reading Comprehension Tests

Since all participants were students in grade twelve (Matthayom 6), the highest upper-secondary education level, they have to take the O-NET (Ordinary National Educational Test) to determine qualification of students for universities. Moreover, the O-NET has become an important tool to enhance the standard of learning and teaching in the Thai educational system for the upper secondary level. Then, the achievement of students on the O-NET test should reflect the quality of education the students obtain.

The O-NET (Ordinary National Educational Test) is a state-mandated test in Thailand, the design of which is based on the 2008 Basic Education Core Curriculum's

framework, in which the learning standards and indicators for each of the academic obligatory levels are defined.

In the design adapted from the 2008 Basic Education Core Curriculum, four major curriculum domains are covered by the English O-NET (upper secondary level) test, which include language and culture, language for communication, language and its relationship to communities and the world, and language and its relationship with additional learning areas. It consists of three main parts, which are language use and usage, writing ability, and reading (Adunyarittigun & Nipakornkitti, 2018). This research utilized the reading part of the English O-NET test to measure students' reading ability. However, there is a limitation to the use of the test as only textual reading parts were employed in order to explore the interaction between students and the text and the extent of their comprehension.

Table 1 Learning Indicator of Reading Part in O-NET Test

O-NET's part	**Curriculum domain 1: Language for Communication**	
Reading	Standard F 1.1	Understanding and capacity for interpreting what has been heard and read from various types of media, and ability to express opinions with proper reasoning.

According to the test, Standard F 1.1 (as seen in Table 1 in the previous page) was designed to measure the students' understanding when they listened to and read a variety of texts, and they were asked to provide opinions about what they listened to and read. The O-NET reading test items employed in this study intended to assess their capacity when reading. This test was chosen as a reading test to precede the self-efficacy questionnaire since the O-NET was not only a test which the participants was familiar with but it also has high significance in the participants' future. Therefore, it would be easier for them to relate their experience to their self-efficacy rating in the questionnaire.

The test items employed in this study were the 2018 and the 2017 O-NET tests publicized on the NIETS (National Institute Educational Testing Service) website (www.niets.or.th), at the time when this research was conducted. The test consists of five comprehension passages, 30 items with 5 multiple-choices. The test items could be categorized by the intended reading skills and subskills which they were intended to

elicit. According to Davis (1968), reading skills and subskills were defined in eight areas. The distribution of test items is presented in Table 2 below.

Table 2 Reading Skills and Subskills Adapted from Davis (1968)

Reading Comprehension Subskill		
Keywords	**Skills**	**Items**
Vocabulary	1. Recalling the word meaning	3, 10, 14, 17
Word Inference	2. Drawing inferences about the meaning of the word in the context	12
Detail	3. Finding answers to questions answered explicitly	1, 2, 8, 13, 15, 20, 22, 26, 29
Main Idea	4. Weaving ideas in the content	6, 7, 11, 27, 28
Content Inference	5. Drawing inferences from the content	5, 18, 21, 25
Tone, Purpose	6. Recognizing a writer's purpose, attitude, tone and mood	19, 30
-	7. Identifying a writer's technique	-
Reference	8. Understanding pronoun reference	4, 9, 16, 23, 24

Three experienced English teachers proofed the reading subskills identified in each testing items. A sample of items measuring each of the skills is shown in Appendix D. All texts represented different text types, including news report, information report, and explanation text. The participants were given 60 minutes to finish the test.

The comprehension of a test text was divided into three levels in the system outlined by Alderson (2000), the first of which concerns the text's literal meaning. The inferred meanings comprise the second level, and the critical evaluations of the text by the readers is the third level.

Table 3 Levels of Understanding of a Text

	Levels of understanding of a text	**Reading Comprehension Subskill Items**	**Total Testing Items**	**Percentage**
1	Literal meaning of text	1, 3	13	43%
2	Inferred meanings	2, 4, 5, 8	15	50%
3	Readers' critical evaluations of text	6, 7	2	7%
	Total		30	

The definition of processing difficulty is the cognitive effort that an item's solution process requires. In theory, the source of the item difficulty, which is a parameter with calculation based on observed data, should be the processing difficulty. The model of the relationship between the items' physical characteristics, reading subskills (Table 2), and observed item difficulty estimates using hierarchy of levels of understanding are shown in Table 3.

Then, the model and reading materials were piloted, adjusted appropriately to the target group, and finally implemented in the classroom.

3.5.2 The Reading Self-Efficacy Questionnaires

This study employed a quantitative approach that utilised a questionnaire to examine the reading self-efficacy of learners, the adaptation of which was based on the Reader Self-Perception Scale (RSPS) (Henk & Melnick, 1995). For the assessment of the beliefs of the students regarding reading competences, a development of the items was conducted in order to reflect the graded levels of the reading task requirements from each of the four factors of Bandura (1977), including Progress (PR), Observational Comparison (OC), Social Feedback (SF), and Physiological States (PS). In accordance with Henk and Melnick (1995), a range of scale alphas from .81 to .84 were indicated by the reliability analyses with contributions from all of the items to the overall reliability of the scale.

After carefully reading the items of the previous questionnaires, the researcher decided to remove seven irrelevant items about social feedback factor and created new statements based on progress factor to align with the tasks in the reading comprehension test. Because self-efficacy is a task specific phenomenon, this was done to ensure that the instrument for self-efficacy precisely matched the measures of performance applied in the reading assessment (Bandura, 1994). For example, having the students locate the passage's main idea was one of the reading tasks. The related self-efficacy measure involved asking the students to assess their ability to identify the main idea in a text. In this way, the development of the statements in the measure of self-efficacy was achieved.

Therefore, the adapted RSPS consisted of 33 items with 32 items representing the four sources of self-efficacy plus 1 general item based on the items of the previous questionnaires and some added ones by the researcher. The number of items was divided as shown in Table 4.

Table 4 The number of sources of self-efficacy

Scales	Number of items
Progress (PR)	16
Observational Comparison (OC)	6
Social Feedback (SF)	3
Physiological States (PS)	7
General	1
Total	33

This scale includes 33 5-point Likert type items ranging from “strongly agree” to “strongly disagree”. A value of 1 was assigned to "strongly disagree" and 5 to "strongly agree". Moreover, parallel structure was used to guarantee uniformity and consistency. However, the previous questionnaire was created for L1 children as a result of changing some words such as ‘other kids’ to be ‘other students’.

The questionnaire was then translated into Thai to ensure that the participants whose English proficiency was not very high understood the questionnaire items thoroughly. The translated version of the questionnaire was accepted by three experienced English teachers who checked it in order to ensure the correctness of the translations. There was also the recommendation about language, formulation of questions, and sequencing format.

Then the questionnaire was piloted by 10 students to verify the terms, ideas and content of the questionnaire – whether it was comprehensible, appropriate and accurate. The results from the pilot test suggested the areas to be revised, such as ambiguous language and irrelevant questions.

After the pilot study, the questionnaire was modified into an appropriate version. An internal reliability test (Cronbach’s α) was performed to certify that the self-efficacy instrument is reliable. As seen in Table 5, the instrument’s high internal consistency was demonstrated, and the reliability index was found to be .968 ($\alpha = 0.968$).

Table 5 Reliability Index of Self-efficacy Instrument

Reliability Statistics	
Cronbach's Alpha	Number of Items
0.986	33

The questionnaire was divided into two parts.

Part 1: The general information of the participants

This part of questionnaire covered the students' demographic information and provided questions in the form of a check and gap filling to specify the participants' genders, grades of English foundation course from previous semester, and reading scores.

Part 2: Reading self-efficacy

This part provided questions related to reading self-efficacy of participants in terms of reading comprehension. The questionnaire included a five-point Likert scale with the ranking as follows: 1.00 – 1.49 = strongly disagree, 1.50 – 2.49 = disagree, 2.50 – 3.49 = neutral, 3.50 – 4.49 = agree, and 4.50 – 5.00 = strongly agree.

3.6 Procedures

3.6.1 Data Collection

This study was designed in two phases as follows:

The data collection was conducted by using questionnaires. The questionnaires were distributed in Thai language to make it more comprehensible. These questionnaires had been piloted with 10 students to check the suitability and understanding of the questions as well as the reliability. The O-NET reading test was used to analyze their individual reading comprehension performances.

Before answering the test and questionnaire, the structures, the purpose of the test, and the way to answer them were explained to participants. Moreover, the participants were assured that all the information would be kept confidential. Then the researcher provided O-NET reading comprehension tests, consisting of 30 items to measure the level of reading competence, to 45 Thai students in grade 12 studying in a Mathematics and Arts (English) program at a government school. There was a time

limitation of 60 minutes, participants were asked to wait in silence until the whole class had finished the test.

Then the questionnaires were distributed. The participants were informed about the purpose of the survey and were told that, in order to avoid response bias, it was especially vital to provide sincere answers to the questions. In addition, they were requested to provide information about their background and a rating of their self-efficacy regarding English reading. Extra support was given by the researcher, in the role of teacher, to the students who experienced difficulties with reading the items. This session took approximately 15 minutes.

3.7 Data Analysis

Analysis with the SPSS 23 version for Windows was applied to the data that was collected from the questionnaire and the test. For the questions on self-efficacy, descriptive statistics and Cronbach's coefficients were obtained. Moreover, the research question regarding the relationship between reading comprehension achievement and reading self-efficacy was answered by using the descriptive and inferential statistics. However, in reading comprehension, there was a lowest score outlier (six out of thirty). To ensure that the data best represented the correlation, an outlier was dropped. To assess normality of the data, tests of normality were calculated.

Table 6 Tests of Normality

	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
Reading	0.137	45	0.033
Efficacy	0.103	45	.200*

*This is a lower bound of the true significance.
a. Lilliefors Significance Correction
P>.05

As shown in Table 6, the test of normality result for the reading test was .033, which denotes that the data greatly differed from normal; thus, to determine the robustness of the relationship between the variables of the study, both the Pearson Coefficient-Moment Product and Spearman's rank correlation coefficient were applied. (In cases where interval scales are used to measure two variables, calculation of the

numerical index that indicates the relationship is conducted using the Pearson's correlation statistic; Bailey & Nunan, 2009). Lastly, the correlation was interpreted by employing the product moment correlation interpretation, as seen in Table 7 (Evans, 1996).

Table 7 The Interpretation of Product Moment Correlation

Magnitude of Correlation	Description of Strength
0.01 to 0.19	Very Weak
0.20 to 0.39	Weak
0.40 to 0.59	Moderate
0.60 to 0.79	Strong
0.80 to 1.00	Very Strong

3.8 Summary

This chapter explains the methodology used in this study, including design of the study, the context of the study, participants and sampling. Then, the materials were described in detail: reading comprehension test and reading self-efficacy questionnaires. The development of these instruments and characteristics are explained in this chapter. The procedures for collecting and analyzing quantitative data are described in detail. Finally, validity, reliability and replicability are discussed.

CHAPTER 4
RESULTS

4.1 Introduction

This study aimed to investigate the relationship between Thai learners' reading self-efficacy and reading comprehension competence. In this chapter, the results obtained from the analyses of collected data are presented to answer the research questions. To answer each research question, descriptive and inferential statistical analyses were applied in order to explore the nature of the participants' levels of reading self-efficacy and reading comprehension competence and to see whether there is a relationship between the two variables.

4.2 Descriptive statistics

For the evaluation of the data distribution and to provide an overview of the participants' general information, the generation of descriptive statistics was performed. Forty-five learners learning English as a foreign language in a government school in Nonthaburi participated in the present study. All participants studied in a Mathematics and Arts (English) program and accessed the same English courses at their school.

Table 8 Demographic characteristics of the participants based on gender

Gender	Number of participants	Percent
Male	29	65.9
Female	15	34.1
Total	44	100

Table 8 presents demographic characteristics of the participants based on gender. In this study, there were 29 male (65.9%) and 15 female (34.1%) participants with different levels of English competence in terms of their English subject grades from the previous semester. It is to be noted that gender is not used as a variable.

Table 9 The participants' English grades rank

	Grade	Number of Participants	Percent
Valid	2.00	1	2.27
	2.50	3	6.82
	3.00	7	15.91
	3.50	8	18.18
	4.00	25	56.82
	Total	44	100

Table 9 shows descriptive statistics of participants' grades in their English subject from their previous semester. According to Table 9, more than half of the participants obtained an English grade of 4.00 (56.82%), followed by 3.50 (18.18%), 3.00 (15.91%), 2.50 (6.82%), and 2.00 (2.27%) respectively, in the previous semester. The participants who obtained the grade of 3.00-4.00 were considered as having high level of competence in English, whereas the participants who reported grade of 2.00-2.50 or lower were considered as having a low level of competence in English.

Table 10 Reading subskills descriptive statistics

Reading Subskills	Percentage of correct responses
1. Recalling the word meaning	57%
2. Finding answers to questions answered explicitly	64%
3. Drawing inferences about the meaning of the word in the context	41%
4. Weaving ideas in the content	57%
5. Drawing inferences from the content	51%
6. Understanding pronoun reference	70%
7. Recognizing a writer's purpose, attitude, tone and mood	61%
8. Identifying a writer's technique	-

Table 10 reveals the descriptive statistics of reading subskills. Out of 44 participants, 70 percent of the participants achieved understanding pronoun reference

from reading subskills. Sixty-four percent of the participants could find the answers to questions answered explicitly. The percentage of participants who recognized a writer's purpose, attitude, tone and mood was sixty-one, and more than fifty percent of the participants were able to recall the word meaning, find ideas, and draw inferences from the content. Forty-one percent of participants were able to draw inferences about the meaning of the word in the context.

Table 11 Levels of understanding of text descriptive statistics

	Levels of understanding of a text	Percentage of correct responses
1	Literal meaning of text	60%
2	Inferred meanings	55%
3	Readers' critical evaluations of text	61%

As shown in Table 11, the third level of item difficulty, readers' critical evaluations of text, resulted in a slightly higher percentage of correct responses (61%) than the first level of item difficulty, literal meaning of text (60%). Fifty-five percent of the participants could infer meaning which is the second level of item difficulty.

Table 12 Sources of self-efficacy descriptive statistics

Sources of Self-efficacy	PR	OC	SF	PS
Mean	3.42	3.18	3.33	3.15
Std. Deviation	0.19	0.2	0.06	0.14

As can be seen from Table 12, sources of self-efficacy with the highest means were Progress (PR), Social Feedback (SF), Observational Comparison (OC) and Physiological States (PS) with the mean of 3.42 (*SD* = 0.19), 3.33 (*SD* = 0.06), 3.18 (*SD* = 0.2) and 3.15 (*SD* = 0.14), respectively.

4.3 Analysis and results relating to research questions

4.3.1 What is the participants' level of reading comprehension proficiency?

The first question is concerned with the participants' level of the reading comprehension. To answer the question, descriptive statistics were applied to analyze

the collected data. Table 13 shows descriptive statistics for reading comprehension. The test consisted of five comprehension passages with 30 total scores.

Table 13 Reading comprehension scores descriptive statistics

	Minimum	Maximum	Mean	Std.Deviation
Total reading score	9	30	20.41	6.70

As shown in Table 13, the lowest score and highest score which the participants achieved were 9 and 30 respectively. From the total of 30 points, the mean score of reading comprehension was 20.41 (*SD* = 6.70). The mean shows that this group of participants had a tendency to have moderately high scores in this set of tests. Regarding the mean of reading comprehension scores, the participants who obtained scores higher than the mean scores, 20.41, were considered as having a high level of reading proficiency, whereas the participants who reported the scores lower than the mean were considered as low level of reading proficiency.

Table 14 Participants' levels of reading proficiency

Level of Reading Proficiency	Number of Participants	Percent
Low	23	52.3
High	21	47.7
Total	44	100

Table 14 provides information about participants' levels of reading proficiency based on their scores in reading comprehension of the O-NET test. Out of 44 participants, 23 of them considered as low level of reading proficiency (52.3%). Twenty-one participants are reported as high level of reading proficiency (47.7%).

4.3.2 What is the self-efficacy in reading comprehension among Thai EFL learners?

The second part of the questionnaire searched for the reading self-efficacy of the participants. The results were reported by descriptive statistics shown in Table 15.

Table 15 Descriptive statistics of self-efficacy questionnaire

	N Statistic	Mean Statistic	Std. Deviation Statistic	Variance Statistic
Total efficacy	44	3.31	.76	.57

As shown in Table 15, the mean of participants' reading self-efficacy was 3.31 (*SD* = .76). To check the normality, a test of normality was carried out, as shown in Table 6. The result reported of the test of normality in self-efficacy was .200 which indicated that the data was not significantly different from normal.

4.3.3 Is there a relationship between Thai learners' reading self-efficacy and reading comprehension ability?

The third question is concerned with whether there was a relationship between Thai learners' self-efficacy and their reading comprehension. To answer the question, correlation coefficients were calculated. Since the data are not normally distributed, both Pearson coefficient moment product and Spearman's rank correlation coefficient were applied. Table 16 demonstrates the results from Pearson-product statistics and Spearman's rank correlation.

Table 16 The correlations between self-efficacy and reading comprehension

		Pearson Correlation		Spearman's rho	
		Reading	Efficacy	Reading	Efficacy
Reading	Correlation Coefficient	1	.813**	1.000	.807**
	Sig. (2-tailed)		.000	.	.000
Efficacy	Correlation Coefficient	.813**	1	.807**	1
	Sig. (2-tailed)	.000		.000	.

**Correlation is significant at the 0.01 level (2 tailed).

The Pearson correlation coefficient between Thai learners' self-efficacy in reading and reading competence suggested that the two variables had a strong relationship (r = .813, p <.01) in a significant level. The Spearman Rho correlation coefficient indicated a strong relationship (r = .807, p < .01) between Thai learners' self-efficacy in reading and reading competence in a significant level.

The results concerning the participants' level of reading proficiency, divided from Table 14 on the correlations between self-efficacy and reading comprehension, are provided in Table 17.

Table 17 The correlations between self-efficacy and reading comprehension divided by levels of reading proficiency

Level			Pearson Correlation		Spearman's rho	
			Reading	Efficacy	Reading	Efficacy
Low	Reading	Correlation Coefficient	1	.609**	1	.567**
		Sig. (2-tailed)		.002		.005
	Efficacy	Correlation Coefficient	.609**	1	.567**	1
		Sig. (2-tailed)	.002		.005	.
High	Reading	Correlation Coefficient	1	.756**	1	.805**
		Sig. (2-tailed)		.000		.000
	Efficacy	Correlation Coefficient	.756**	1	.805**	1
		Sig. (2-tailed)	.000		0	.

**Correlation is significant at the 0.01 level (2-tailed).

Regarding high levels of reading proficiency group, the result from performing both Pearson Product Moment analysis and Spearman Rho correlation coefficient indicated a strong relationship (r = .756 and r = .805, $p < .01$) between Thai learners' self-efficacy in reading and reading competence in a significant level. For the low levels of reading proficiency group, the Pearson Correlation Coefficient suggested a significant relationship between self-efficacy and reading comprehension and the relationship is strong (r = .609, p = .002), while the Spearman Rho correlation coefficient indicated a moderate relationship (r = .567, p = .005) between the two variables in a significant level.

The data analyses show that there is a positive significant correlation of students' reading self-efficacy and their reading comprehension for the 12th grade students of Mathematics and Arts (English) program at the targeted government school. The strong correlation coefficients indicate that the two variables move together in the same direction. It is to be noted that the participants in this study were moderate to high-achiever learners as seen in the moderately high mean in reading competence.

4.4 Summary

This chapter reported the results from quantitative analyses. The first part illustrated the general information of the participants, including gender and previous English grade, by descriptive statistic. The second part was the findings of the three research questions. The first question concerning participants' level of the reading comprehension revealed from the total of 30 points, produced the mean score of reading comprehension of 20.41 (*SD* = 6.70). The second question regarding the self-efficacy in reading comprehension indicated the mean of participants' reading self-efficacy was 3.31 (*SD* = .76). The finding of the last question pointed out the very strong relationship between reading self-efficacy and reading comprehension. In the next chapter, discussion of the result, conclusions, and recommendations for further study have been provided.

CHAPTER 5
CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS

This chapter presents a summary of the study, a summary of the findings, discussion of the results, conclusions, and recommendations for further research.

5.1 Summary of the study

5.1.1 Objectives of the study

This study aimed to investigate the level of the reading comprehension proficiency and the self-efficacy in reading comprehension of Thai grade 12 learners in order to find any relationship between Thai learners' reading self-efficacy and reading comprehension ability.

5.1.2 Subjects, materials, and procedures

The participants for this study were 44 Thai EFL students in 12th grade studying in a Mathematics and Arts (English) program at a government school in Nonthaburi, Thailand. These participants were selected by means of convenient sampling technique. There were two instruments utilized in this study including, reading comprehension tests and the reading self-Efficacy questionnaire. The reading comprehension tests were adopted from 2018 and the 2017 O-NET tests used to qualify students for universities. The reading self-efficacy questionnaires adapted from the Reader Self Perception Scale (RSPS) (Henk & Melnick, 1995) were rewritten in Thai to ensure that the participants understood the questionnaire items thoroughly. The two parts of questionnaire consist of general background information and reading self-efficacy measurement. Then the questionnaire was piloted with 10 students to check the suitability and understanding of the questions. After the pilot study, then the researcher provided O-NET reading comprehension tests to 45 participants and later, the questionnaires were collected by researcher. The data obtained were computed by descriptive and inferential statistics to answer the research questions concerning the relationship between reading self-efficacy and reading comprehension achievement. An outlier of the lowest reading score was removed in order to obtain the exhibition data.

5.1.3 The findings

The results of the study can be concluded as follows.

5.1.3.1 General background information

The majority of the students were males; those taking part consisted of 29 male (65.9%) and 15 female (34.1%) participants with different levels of English competence, ranked from their English subject grades from their previous semester. The findings showed that most participants got a grade of 3.00-4.00, considered as high level of competence in English. Moreover, from the total of 30 points, the mean score of reading comprehension was 20.41 (*SD* = 6.70). Form the descriptive statistics, it can be seen that 70 percent and 64 percent of participants could understand pronoun reference and find the details from the passages while 41 percent could draw inferences about the meaning of a word in context. In addition, participants obtained the first level and the third level of item difficulty with nearly percentage of correct responses (60% and 61%). Fifty-five percent of the participants could infer meaning, which was the second level of item difficulty.

5.1.3.2 Reading self-efficacy

The quantitative data analyses indicated that participants had moderate levels of self-efficacy. Moreover, it can be seen that sources of self-efficacy with the highest means were Progress (PR), Social Feedback (SF), Observational Comparison (OC) and Physiological States (PS) with the mean of 3.42 (*SD* = 0.19), 3.33 (*SD* = 0.06), 3.18 (*SD* = 0.2) and 3.15 (*SD* = 0.14), respectively. To answer the given questions, both Pearson coefficient-moment product and Spearman's rank correlation coefficient were applied. The results pointed out that there was a positive significant correlation for students' reading self-efficacy and their reading comprehension amongst these 12th grade students of the Mathematics and Arts (English) program at their government school.

5.2 Discussion

According to this study, participants gained reading self-efficacy from Progress (PR), Social Feedback (SF), Observational Comparison (OC) and Physiological States (PS), respectively. This finding is similar to earlier works of Bandura (1997), Mendida (2012), and (Sağırlı & Okur, 2017). As described in the review of literature, the source

for building the sense of self-efficacy the most is the learner's actual achievement, or mastery, including the learner's past successes or failures (Bandura 1986, 1997). However, the results in the present study differ from the result of Conway (2017) that Observational Comparison was highly correlated with reading ability. Then, followed by social feedback, it could imply that the teacher should emphasize positive feedback and encourage students in order to enhance their efficacy. While it is certainly possible for an individual's self-efficacy to be lifted by persuasive words from others, including teachers, this new confidence will dissipate if the learner then attempts a task without success. Eventually, every individual will encounter criticism and failure, and this results in discouragement. It is therefore important for teachers to find strategies which can help students to address such problems which they will certainly face.

As for the level of reading comprehension, the results showed that the participants had rather high level of reading proficiency. The results reveal that participants appeared to be able to manage the third level of item difficulty, critical evaluation of text, as well as the first level of item difficulty, which is literal meaning of the text. Therefore, to investigate rigorously in reading subskills, it seems that the strongest subskill is understanding pronoun reference while drawing inferences in the context is the weakest reading subskill. However, both reading subskills are considered as the second level of understanding any text.

Therefore, the findings suggest the sub-skill that the participants find most difficult and should be improved which is inferred meanings. The result in the present study is in the line with the result in (Warnidah et al., 2019) which found the students' difficulty in making inference in reading narrative passages was inferences about the author's attitude. Additionally, Oakhill (1993) also suggested that that the poor readers had difficulty in making inferences and combining information in a text. It was stated by Kispal (2008) that, in reading comprehension, inferencing is considered to be an ability to employ several pieces of textual information to obtain an additional piece that is implicit. Not only is the capability to decode the obscure meanings of the texts implied by making inferences from texts, but also ability in the appropriate use of world or background knowledge to draw conclusions about these meanings is suggested as well.

Moreover, overall, the results indicate that participants' overall reading test (M = 20.41, SD = 6.70) was at high level and self-efficacy (M = 3.31, SD = .76) was at a medium level. In this study, participants studied in a Mathematics and Arts (English) program, so they were exposed to a lot of English subjects. As a result, the test of normality also showed a significant result in reading test scores. Almost all students had mediated to high reading ability on O-NET tests. Only some of the students had low reading scores. Moreover, according to general information, the majority of the participants obtained a grade of 3.00-4.00, considered as indicating high level of competence in English. Therefore, these participants had a good background of English proficiency which could explain the high level of reading scores.

In order to assess the links between self-efficacy in reading and the application of reading proficiency, the analysis made use of the Pearson correlation coefficient and Spearman's rank correlation coefficient. Upon calculation, it could be observed that there was a significant positive correlation between self-efficacy in reading and reading proficiency (r = 0.813, 0.807, $p < .01$). To investigate the relationship more clearly, the participants were divided into low and high levels of reading proficiency, based on the reading test. There was a strong relationship between self-efficacy in reading and reading proficiency of participants considered at high levels in reading proficiency (r = .756 and r = .805, $p < .01$). Also, a moderate to strong relationship was found in the group of low level reading proficiency participants, in a significant level (r = .609 and r = .567, $p < .01$). The correlation findings clearly indicate self-efficacy in reading has a direct relationship upon student achievement in tests of reading comprehension. There is a definite possibility that when students are confident in their abilities to compete reading tasks successfully, their reading comprehension levels are higher.

Regarding the third question, the results revealed a positive relationship between the participants' self-efficacy in reading comprehension and their reading achievement. The findings of the study are in agreement with those of Fitri , Sofyan & Jayanti (2019) which also found a significant level of correlation between self-efficacy in reading and reading comprehension in a study investigating students in the twelfth grade. The works of Mills, Pajares and Herron (2006), Boakye (2014), Ghabdian and Ghafournia (2016), and Barjesteh, Manoochehrzadeh and Hosseini (2019) lend further support to this conclusion, having demonstrated in their own experiments that there was

a significant correlation between self-efficacy in reading and performance in reading comprehension.

That the highly efficacious students demonstrate high levels of effort and persistence in reading and have strong cognitive engagement with academic tasks, in this case reading, may be the cause of this significant correlation. At the same time, unwillingness, resignation, or inability to apply much effort are shown by students with low self-efficacy. They will give up on difficult tasks and are unwilling to try (Schunk, Meece & Pintrich, 2014).

On the other hand, it has been found that students whose self-efficacy levels are high will tend to attempt the kind of tasks which can support the development of new skills (Bandura, 1997). If people have powerful self-efficacy beliefs they can also, however, sometimes attempt tasks which they cannot possibly achieve, thus leading themselves into dangerous situations (Schunk & Pajares, 2009).

While students receive academic instruction, the task may have certain engagement variables, which involve both situational and personal elements. These can cover the instruction purpose, the difficulty of the content, the strategy of following instructions and processing information, feedback on performance, attributional feedback, and also models, rewards, and goals (Schunk, 1989).

One critical factor is content difficulty, since people who take the view that they are capable in the required skills will perceive a higher level of efficacy towards learning than people who have a certain degree of self-doubt. In addition, information processing is also a task which is affected by the learner's motivation levels and self-efficacy (Winne, 2001; 2011). As seen from Table 11 (p.20), the participants in this study were able to correctly respond to more than half of the questions in all levels, which means that the levels of difficulty may not negatively affect the self-efficacy in a significant level. The medium level of overall self-efficacy confirmed that the participants were not completely demotivated by the items. Nevertheless, their beliefs of their capability were lower than the levels of their actual performance, which could results from having to complete a series of difficult question items.

Another two factors might also influence the significant correlation. First, it could be because of the O-NET test. The test items utilized in this study were available

online so some participants probably used to do it before and this could bring about high scores in the reading test. Last, it could be due to the fact that participants also had a good background of English proficiency because they studied in a Mathematics and Arts (English) program which emphasizes English subjects and the various skills. Therefore, it could also lead to the high reading scores of the participant majority.

5.3 Limitations

This research study did, however, have certain limitations. The sample participants were drawn from a government school in Thailand, and comprised learners in a select Mathematics and Arts (English) program. It is not, therefore, possible to generalize the findings to learners in other programs or in private educational institutions in other countries. Furthermore, the reading comprehension measurements were taken only through the reading of texts to examine the way the student interacted with the text, along with the level of their reading comprehension for the O-NET test. Finally, this research was quantitative, and accordingly there remains a gap to be filled by qualitative study, or a mixed-method approach, in order to develop a deeper understanding of the issue.

5.4 Conclusions

This study aimed to investigate the correlation between self-efficacy and reading comprehension of learners in secondary school. According to the findings, the overall reading comprehension proficiency of Thai grade 12 learners was high and the self-efficacy in reading comprehension among Thai EFL learners was moderate. From the data analysis examining the correlation between self-efficacy in reading and reading comprehension performance, the scores for the Pearson Coefficient-Moment Product and Spearman's rank correlation coefficient were 0.813 and 0.807, respectively. Significant correlation was confirmed between the students' self-efficacy in reading and their reading comprehension. This implies that higher levels of self-efficacy will relate with superior reading comprehension. This correlation could be categorized at a high level, suggesting that self-efficacy in reading is influential in determining outcomes in reading comprehension.

5.5 Recommendations for further research

In the case of the third of the research objectives, the self-efficacy in reading of Thai students was demonstrated to have significant positive correlation with reading comprehension. It is possible that the findings in this study might serve to guide the strategies used by learners when developing their reading skills. Such strategies would help the learners to improve their reading performance. For future study, it is recommended that interviews should be carried out with the study participants in order to learn more about the links between the variables in the study and how they exert their influence on reading performance.

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Appendix A

The Reader Self-Perception Scale

Part1: General Information

1. Gender: ☐ Male ☐ Female
2. What is your grade of English foundation course from previous semester? _____
3. What is your reading test scores? _____

Part2: Beliefs about Reading Ability/ Reading Self-Efficacy

Listed below are statements about reading. Please read each statement carefully. Then circle the letters that show how much you agree or disagree with the statement. Use the following:

5 = Strongly Agree
4 = Agree
3 = Undecided
2 = Disagree
1 = Strongly Disagree

For example:

I think pizza with pepperoni is the best. 1 2 3 (4) 5

General	1	I think I am a good reader.	1	2	3	4	5
PR	17	I can recall the word meaning .	1	2	3	4	5
SF	31	My teacher thinks that my reading is fine.	1	2	3	4	5
PR	18	I can draw inferences about the meaning of the word in the context.	1	2	3	4	5
OC	2	I read faster than other students.	1	2	3	4	5
OC	3	When I read, I can figure out words better than other students.	1	2	3	4	5
PR	19	I can find the main idea of paragraph.	1	2	3	4	5
PS	24	I feel good inside when I read.	1	2	3	4	5
SF	32	My classmates think I can read pretty well.	1	2	3	4	5
PR	8	When I read, I don't have to try as hard as used to.	1	2	3	4	5
OC	4	I seem to know more words than other students when I read.	1	2	3	4	5
PR	20	I can find the answer expressing explicitly in the paragraph.	1	2	3	4	5
PR	9	I am getting better at reading.	1	2	3	4	5
OC	5	I understand what I read as well as other students do.	1	2	3	4	5
PR	10	When I read, I need less help than I used to.	1	2	3	4	5
PS	25	Reading makes me feel happy inside.	1	2	3	4	5

PR	21	I can draw inferences about the content.	1	2	3	4	5
PR	11	Reading is easier for me than it used to be.	1	2	3	4	5
PR	12	I read faster than I could before.	1	2	3	4	5
OC	6	I read better than other students in my class.	1	2	3	4	5
PS	26	I feel calm when I read.	1	2	3	4	5
OC	7	I read more than other students.	1	2	3	4	5
PR	13	I understand what I read better than I could before.	1	2	3	4	5
PR	14	I can figure out words better than I could before.	1	2	3	4	5
PS	27	I feel comfortable when I read.	1	2	3	4	5
PS	28	I think reading is relaxing.	1	2	3	4	5
PR	15	I read better now than I could before.	1	2	3	4	5
PR	16	When I read, I recognize more words than used to.	1	2	3	4	5
PS	29	Reading makes me feel good.	1	2	3	4	5
SF	33	Other students think I'm a good reader.	1	2	3	4	5
PR	22	I can recognize a writer’s purpose, attitude, tone and mood when I read.	1	2	3	4	5
PS	30	I enjoy reading.	1	2	3	4	5
PR	23	I can understand when a word refers to other elements in the text.	1	2	3	4	5

Comment

_____

_____

_____

Appendix B

แบบสอบถามวัดการรับรู้ความสามารถการอ่านภาษาอังกฤษของตนเอง

ตอนที่ 1: ข้อมูลส่วนตัว

1. เพศ: ☐ ชาย ☐ หญิง

2. นักเรียนได้เกรดในรายวิชาภาษาอังกฤษพื้นฐานเทอมล่าสุดเท่าไหร่ _____

3. นักเรียนได้คะแนน Reading Comprehension Test เท่าไหร่ (เต็ม 30 คะแนน) _____

ตอนที่ 2: แบบสอบถามวัดการรับรู้ความสามารถการอ่านภาษาอังกฤษของตนเอง

คำชี้แจง โปรดพิจารณาข้อความแต่ละข้อต่อไปนี้ว่าเป็นจริงสำหรับตัวนักเรียนเพียงไร แล้ววงกลม ◯ ให้ตรงกับระดับความคิดเห็นที่ตรงกับนักเรียนมากที่สุด ดังนี้

5 = เห็นด้วยอย่างยิ่ง
4 = เห็นด้วย
3 = ไม่แน่ใจ
2 = ไม่เห็นด้วย
1 = ไม่เห็นด้วยอย่างยิ่ง

ตัวอย่าง

ฉันคิดว่าพิซซ่าแป้งบางกรอบดีที่สุด 1 2 3 (4) 5

1	ฉันคิดว่าฉันเป็นผู้อ่านที่ดี	1	2	3	4	5
2	ฉันรู้ความหมายของคำศัพท์ในภาษาอังกฤษ	1	2	3	4	5
3	คุณครูคิดว่าทักษะการอ่านภาษาอังกฤษของฉันพอใช้ได้	1	2	3	4	5
4	ฉันสามารถคาดเดาความหมายของคำศัพท์ที่ไม่รู้จากบทความที่อ่านได้	1	2	3	4	5
5	ฉันอ่านได้เร็วกว่านักเรียนคนอื่น	1	2	3	4	5
6	ฉันรู้คำศัพท์มากกว่านักเรียนคนอื่นเมื่ออ่านบทความ	1	2	3	4	5
7	ฉันสามารถจับใจความสำคัญของบทความได้	1	2	3	4	5
8	ฉันรู้สึกดีเมื่อฉันได้อ่าน	1	2	3	4	5
9	เพื่อนของฉันคิดว่าฉันอ่านภาษาอังกฤษได้ดี	1	2	3	4	5
10	ฉันไม่ต้องพยายามอ่านหนักเท่าเมื่อก่อน	1	2	3	4	5
11	ฉันเหมือนจะรู้คำศัพท์มากกว่านักเรียนคนอื่น	1	2	3	4	5
12	ฉันสามารถตอบคำถามที่สามารถหาคำตอบได้อย่างชัดเจนจากเรื่องที่อ่าน	1	2	3	4	5
13	ฉันอ่านได้ดีขึ้น	1	2	3	4	5
14	ฉันเข้าใจเรื่องที่อ่านเหมือนกับนักเรียนคนอื่นๆ	1	2	3	4	5
15	ฉันต้องการความช่วยเหลือขณะที่อ่านน้อยลงกว่าแต่ก่อน	1	2	3	4	5
16	การอ่านทำให้ฉันมีความสุข	1	2	3	4	5

17	ฉันสามารถสรุปความจากเรื่องที่อ่านได้	1	2	3	4	5
18	ฉันรู้สึกว่าการอ่านง่ายขึ้นมากว่าเมื่อก่อน	1	2	3	4	5
19	ฉันอ่านได้เร็วกว่าเมื่อก่อน	1	2	3	4	5
20	ฉันอ่านได้ดีกว่านักเรียนคนอื่นในห้อง	1	2	3	4	5
21	ฉันรู้สึกสงบเมื่อได้อ่าน	1	2	3	4	5
22	ฉันอ่านมากกว่านักเรียนคนอื่น	1	2	3	4	5
23	ฉันเข้าใจเรื่องที่อ่านได้ดีกว่าเมื่อก่อน	1	2	3	4	5
24	ฉันรู้คำศัพท์มากกว่าเมื่อก่อน	1	2	3	4	5
25	ฉันรู้สึกสบายใจเมื่ออ่าน	1	2	3	4	5
26	ฉันคิดว่าการอ่านทำให้ฉันผ่อนคลาย	1	2	3	4	5
27	ปัจจุบันฉันอ่านได้ดีกว่าเมื่อก่อน	1	2	3	4	5
28	ฉันรู้คำศัพท์มากกว่าเมื่อก่อน	1	2	3	4	5
29	การอ่านทำให้ฉันรู้สึกดี	1	2	3	4	5
30	นักเรียนคนอื่นคิดว่าฉันเป็นผู้อ่านที่ดี	1	2	3	4	5
31	ฉันเข้าใจวัตถุประสงค์ ทัศนคิ และความรู้สึกของผู้เขียนได้ขณะที่อ่าน	1	2	3	4	5
32	ฉันชอบอ่าน	1	2	3	4	5
33	ฉันเข้าใจคำศัพท์ที่ถูกอ้างถึงจากบทความ	1	2	3	4	5

ข้อเสนอแนะ

_____

_____

_____

Appendix C

Reading Comprehension Test

Extract 1 (ONET 61)

SAN JOSE, CALIFORNIA: An office worker cleaning a refrigerator full of rotten food created a smell so **noxious** that **it** sent seven co-workers to the hospital and made many others ill. Firefighters had to evacuate the building in Central San Jose after the fumes led someone to call emergency services. What crews found was an unplugged refrigerator crammed with moldy food. Authorities say an enterprising office worker had decided to clean it out, placing the food in a conference room while using two cleaning chemicals to scrub down the mess. The mixture of old lunches and disinfectant caused 28 people to need treatment for vomiting and nausea.

1. According to the news report, firefighters were called to ____.
   1. extinguish a fire in the building
   2. clean the rotten food in an office
   3. take people in the office to hospital
   4. remove the refrigerator from the building
   5. help deal with the odor in the building
2. According to the news report, the smell was caused by the ____.
   1. mess in a refrigerator
   2. spoiled lunches in the conference room
   3. rotten food and the cleaning chemicals
   4. chemicals used in cleaning the refrigerator
   5. spoiled food in an unplugged refrigerator
3. The word **noxious** (line 2) could best be replaced by ____ .
   1. rotten
   2. messy
   3. fragrant
   4. harmful
   5. urgent
4. The pronoun **it** (line 2) refers to the ____ .
   1. food
   2. smell
   3. hospital
   4. building

5. refrigerator

5. From the news report, it can be inferred that the ____ .
   1. refrigerator must have been used recently
   2. firefighters took 28 people out of the building
   3. office workers cleaned the food in the conference room
   4. worker who cleaned the refrigerator was not ill
   5. refrigerator mustn't have broken
6. The best headline for this news report is"____".
   1. Stink sends workers to hospital
   2. Leftovers in fridge causing illness
   3. Rotten food creates noxious smell
   4. Rotten food causing stink in fridge
   5. Workers cleaning fridge get ill

Extract 2 (ONET 61)

The earliest known birds learned to fly by running fast and flapping their wings, not by leaping from tall trees, researchers said last week. Exactly how birds began to fly has been hotly debated by scientists since the 1800s. Most agree that birds evolved from dinosaurs, but how they took to the skies has been a mystery. Critics of the running theory argued that early birds could not have gained enough speed to build up the velocity to become airborne by flapping their wings. But paleontologists at the Natural History Museum of Los Angeles County used aerodynamic calculations and fossil records to show that the oldest known bird, the 150-million-year-old Archaeopteryx, was quick enough to get a running start.

"We went back and analyzed previous ideas about how Archaeopteryx could have flown," Dr. Luis Chiappe said in a statement. "We discovered that some important aerodynamic issues had been overlooked and that when **these** were considered, Archaeopteryx could indeed run fast enough to achieve the necessary speed to take off from the ground."

15 Dr. Chiappe and his colleague Dr. Phillip Burgers showed that Archaeopteryx reached its minimum flying speed by means of the thrust and residual lift produced by flapping its wings.

"We regard thrust, and not lift, as the primordial force ultimately responsible for **sustained flight**," the researchers said in the Nature paper. As a flier, Archaeopteryx probably represents a late stage in the evolution of bird flight.

7. The extract is about ____.
   1. a theory on how early birds were able to fly
   2. a study on how birds were related to dinosaurs
   3. a solution on the flying ability of the dinosaurs
   4. evidence on how winged dinosaurs evaded enemies
   5. the way aerodynamic calculations were applied to flying
8. It has been recently discovered that the early birds ____ .
   1. jumped from tall trees and flapped their wings to fly
   2. flapped their wings to lift off and moved forward
   3. ran fast, flapped their wings and took off
   4. lifted off, pushed themselves forward and flew
   5. ran faster than winged dinosaurs to get enough speed to fly
9. The word **these** (line 11) refers to ____.
   1. researchers
   2. paleontologists
   3. fossil records
   4. issues
   5. birds
10. The phrase **sustained flight** (line 15) means ____ .
   1. residual lift
   2. flying speed
   3. staying airborne
   4. primordial force
   5. aerodynamic calculation
11. The best title for this extract is "_____".
   1. I low early birds achieved lift-off
   2. Winged dinosaurs, plant-eating creatures
   3. Why only winged dinosaurs became extinct

4. Important evidence shown by critics
5. How dinosaurs flew before Archaeopteryx

Extract 3 (ONET 61)

East Anglia's water supply has the highest nitrate concentration in the country. Anglian Water, the **authority** which covers an area stretching from Essex to Lincolnshire, has 35 water sources which exceed the European Commission's nitrate limit of 50 milligrams a liter.

In some areas, consumers, alarmed by health warnings about the effects of nitrates, regularly filter their household supplies, despite protestations from the authority that the water ' is perfectly safe to drink. However, routinely over the region, nitrates are in excess of safety levels. Nitrates are a bigger problem for Anglian Water than any of the other 10 water authorities.

It is claimed that there are three factors that have contributed to East Anglia's unwanted nitrate problem. Firstly, a large quantity of water comes from underground sources and the **water table is heavily loaded with nitrates** created by years of intensive agriculture, encouraged by Common Market farm policies. Secondly, fertilizers running off the land have added to the problem, with some 50 per cent poorly applied by farmers. High nitrate levels are also caused every winter by the natural breakdown of roots and vegetation in the soil, but the **process** causes more problems in East Anglia because of **the intensive use of the land**.

12. In the extract, the word **authority** (line 2) means ____.
    1. power to give orders to people
    2. the power to influence people
    3. official permission to run a public service
    4. the power or right to administer an organization
    5. organization responsible for a particular public service
13. According to the European Commission, ____ .
    1. nitrates in water supplies must not be higher than 50 milligrams per liter
    2. nitrates must be reduced in 50 water sources all over the country

3. more than 50 milligrams of nitrates in one liter of water is safe for consumption

4. consumers should filter their household supplies before drinking the water

5. despite high levels of nitrates in water supplies, the water is still safe enough for drinking

14. According to the extract, **the water table is heavily loaded with nitrates** (lines 9-10) means ____.

1. nitrates in underground water are heavy

2. underground water has a lot of nitrates

3. underground water is heavy because of nitrates

4. heavy nitrates are loaded into underground water

5. nitrates are removed from underground water sources

15. According to the extract, one cause of East Anglia's nitrate problem is the ____.

1. use of underground water for too many agricultural products

2. large quantity of underground water used for agriculture

3. incorrect use of chemical fertilizers for intensive agriculture

4. Common Market limiting the use of fertilizers for agriculture

5. poor quality of fertilizers used in agriculture

16. The word **process** (line 13) refers to ____ .

1. regularly filtering household supplies

2. water coming from underground sources

3. fertilizers running off the land to water sources

4. health warnings about the effects of nitrates

5. natural breakdown of roots and vegetation in the soil

17. The phrase **intensive use of land** (line 14) means ____ .

1. having a large farming area

2. repeatedly using too much fertilizer

3. planting various kinds of crops in one area

4. using too many farming techniques

5. growing as many crops as possible on the same land

18. It can be inferred from the extract that ____.

1. Anglian Water urgently needs to reduce nitrates to acceptable levels
2. water sources in East Anglia are safe for household uses
3. people in some areas are not afraid to drink water from household supplies
4. Anglian Water is facing the biggest problem about the quality of its agricultural products
5. over the region of East Anglia, the main problem is that there is not enough water

19. The tone of this extract is____.

1. humorous
2. persuasive
3 positive
4. critical
5. instructive

Extract 4 (ONET 60)

Aardvark means 'earth pig', but this strange African mammal **seems to have no close relatives in the animal kingdom**. 'Earth pig' is an appropriate name as it conceals itself below ground in burrows. Its powerful limbs and sharp claws enable it to dig rapidly if threatened. The aardvark emerges only at night to search for the ants and termites on **which** it feeds. Its claws can rip open the toughest termite mound, bringing the insects to the surface. Its sticky, narrow tongue- 45-cm-long - then probes through the opening as the aardvark's tough skin protects it against the termite bites.

The female gives birth to a youngster. For the first fortnight, it remains below ground nursing. Aardvarks may live for 10 years or more although they are hunted for their meat and their teeth, which are considered lucky by some African tribes.

20. The author says that an aardvark ____ .

1. is commonly eaten by man
2. is considered a lucky animal
3. feeds on all kinds of insects
4. lives and feeds itself only in a hole
5. appears above the ground after the sun sets

21. The writer implies that____.

1. after two weeks, a young aardvark can come above the ground
2. a baby aardvark must live underground for a long time

3. a female aardvark can have more than one baby
4. an aardvark cannot live longer than ten years
5. aardvarks can be found anywhere

22. According to the extract, an aardvark____ .

1. protects its baby against termite bites by its tough skin
2. uses its claws to help insects to the ground surface
3. gives birth to a baby and feeds it for a week
4. uses its tongue to destroy termite mounds
5. will go underground when in danger

23. The aardvark "**seems to have no close relatives in the animal kingdom**" (lines 1- 2) probably means that___.

1. the aardvark likes to live alone
2. the aardvark is a strange-looking animal
3. young aardvarks do not stay with their mothers
4. the aardvark is very different from other animals
5. the aardvark cannot live on the ground like other animals

24. The word **which** (line 4) refers to ____ .

1. limbs and claws
2. burrows
3. aardvarks
4. relatives
5. ants and termites

25. It can be inferred from the extract that a newborn aardvark feeds on____.

1. insects
2. milk
3. meat
4. ants
5. termites

26. An aardvark is called an earth pig because it ____ .

1. eats everything
2. likes to live in the ground
3. is not a very strong animal
4. is closely related to the pig
5. is a slow-moving animal

Extract 5 (ONET 59)

It's important to make eye contact when you are conversing, and it's one skill you must master if you are going to become a fully 'active listener'. A voiding eye contact sends out very strong messages to the person that you are speaking with that you don't want to speak to them, that you feel inferior, that you lack confidence, or (worse still) all three at once. It makes both 'the avoider' and 'the avoided' feel uncomfortable- and it's catching, resulting in the two of you desperately avoiding eye contact in an ever more tense conversation doomed to failure. **An exchange like that** would affect anyone's confidence, so take a breath, break the cycle, and meet those eyes! If you find this very difficult, concentrate instead on every word the other is saying. Forget about your eyes. In time, you will fall naturally into attentive eye contact, and the other person will reciprocate, making both of you feel more confident. Go with your instincts; when it feels natural to break eye contact for a second, it probably is the right time- don't let your gaze turn into an unsettling stare. Feel free to look away for a moment when you are changing a subject, offering a verbal nod, recalling information, or when the other person does.

27. The extract is mainly about____.
    1. misunderstanding caused by too much eye contact
    2. failure in conversation resulting from lack of confidence
    3. characteristics of a good speaker and an active listener
    4. the importance of eye contact between conversation partners
    5. ways to avoid eye contact when tired of tense conversation

28. The best topic of this extract would be____.
    1. A void feeling inferior in conversation
    2. Make appropriate eye contact
    3. Build confidence by conversing
    4. Make eye contact to gain superiority
    5. Listen more when communicating

29. Avoiding eye contact____.
    1. increases speakers' confidence
    2. leads to tense conversation

3. reduces inferiority
4. indicates speakers' tiredness
5. results from conversation partners' interests

30. The purpose of this extract is to ____.

1. inform of a new means of communication
2. give advice on improving the conversation atmosphere
3. persuade people to converse more
4. make comments on conversation techniques
5. describe effective speaking techniques

Appendix D

1. *Remembering word meanings*
   1. guffaw
      A make fun of
      B sneeze
      C cough
      D laugh
2. *Inferring word meanings from context*

   Into the muddy pool of my heart some healing drops had fallen—from the music of the passing birds, from the crimson disc that had now dropped below the horizon, the darkening hills, the rose and blue of infinite heaven; and I felt purified and had a strange apprehension of a secret innocence and spirituality in nature—a foreknowledge of some bourn, incalculably distant perhaps, to which we are all moving.

   2. "Apprehension" (line 8) most nearly means
      A fear
      B perception
      C recollection
      D seizure
3. *Understanding content stated explicitly*

   All program changes must be recorded on blanks furnished by the Registrar and filed with him after they have been approved by the student's advisor, or, in the case of applicants for advanced degree, by the Director of the School of Education or the Dean of the College of Liberal Arts.

   3. Program changes are to be filed with the
      A Registrar
      B Student's adviser
      C Director of the School of Education
      D Dean of the College of Liberal Arts
4. *Weaving ideas in the content*

   One early April I visited a man who had an outdoor swimming pool. The first night my host asked, "Are you a morning plunger?"

   Thinking he referred to a tub plunge in a warm bathroom, I glowed and said, "You bet!"

   "I'll call for you at seven, then, and we'll go out to the pool."

   It was evidently his morning custom, and I wasn't going to have it said that a middle-aged man could outdo me. My visit lasted five days, and I later learned from one to whom my host confided that they were the worst five days he had ever gone through. "But I couldn't be outdone by a mere stripling," he said, "and the boy surely enjoyed it."

   4. The writer and his host both
      A liked to swim
      B disliked swimming
      C were amused by the other's behavior
      D misunderstood the other's real feelings
5. *Making inferences about the content*

   The delight Tad had felt during his long hours in the glen faded as he drew near the cabin. The sun was nearly gone and Tad's father was at the woodpile. He was wearing the broadcloth suit that he wore to church and to town sometimes. Tad saw his father's hands close around a bundle of wood.

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He was doing Tad's work—and in his good clothes. Tad ran to him. "I'll git it, Pa."

5. When Tad saw his father, he felt
   A disappointed
   B impatient
   C angry
   D guilty

6. *Recognizing the author's tone, mood, and purpose*

The golf links lie so near the mill
That almost every day
The laboring children can look out
And see the men at play.

6. This verse was written about 1915 and refers to a social problem of the period—child labor. The tone of the verse is
   A resigned
   B belligerent
   C bitterly ironic
   D mournful

7. *Identifying the author's literary techniques*

Thomas Girard once remarked of George V: "King George does not reign; he merely sprinkles."

7. Girard was making use of
   A exaggeration
   B understatement
   C a play on the word "reign"
   D a play on the word "sprinkles"

8. *Following the structure of the content*

Only the adult male cricket chirps. On a summer night, they sing by the thousand in unison, so that the forest seems to pulsate and the tiny unseen orchestra becomes its very voice.

8. "Its" (last line) refers to
   A "adult male cricket"
   B "summer night"
   C "forest"
   D "tiny unseen orchestra"

BIOGRAPHY

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