Reading Comprehension Proficiency of English Major Students

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Abstract

This study aims to investigate the reading comprehension ability of English major students using the online Thai Reading Evaluation and Decoding System (Thai-READS) and to examine educational levels and gender as predictors of EFL students' reading comprehension ability. The system comprises three components: the Encoder, the Reading Matrix and the Decoder to map reading comprehension ability using a cross-reference of the Reading Matrix and the Decoder. The participants consisted of 362 English major students from one public university in Bangkok, Thailand. Descriptive statistics (i.e., percentage, mean, and standard deviation) was used to describe students' general reading performance while inferential statistics (i.e., t-test and one-way ANOVA) was used to test the hypotheses. The main findings revealed that a majority (59.94%) of the students performed satisfactorily at Band 4. However, only a small number of students were categorized into Band 5 (25.16%) and Band 6 (3.04%). The findings from one-way ANOVA affirmed that there were statistically significant differences in the Thai READS scores among all educational levels (Year 1–Year 4), $F_{(3, 358)} = 20.42$, $p = 0.00$). An independent-samples t-test was then conducted to compare the scores for males and females. There was no significant difference in the scores for males (M = 44.0, SD = 7.07) and females (M = 42.80, SD = 5.95; t (353) = 1.49, $p = 0.14$, two-tailed). Although the students' average reading performance was at Band 4, effective teaching interventions need to be implemented to enhance their reading comprehension ability.

Keywords: Thai Reading Comprehension Evaluation and Decoding System (Thai-READS), Reading Comprehension, English as a foreign language (EFL)

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Introduction

Reading comprehension ability in the English language is a vital skill to be mastered by the university students for academic and future occupational purposes (Hui, Saeed, & Khemanuwong, 2020). Despite its significance, Thai students have often experienced considerable difficulties in reading (Chomchaiya & Dunworth, 2008). It has been evidenced that without effective reading strategies and assessment− foreign language learners found it problematic to overcome reading difficulties and achieve comprehension. In the Programme for International Student Assessment (PISA) in 2018, Thai 15-year-old students' average score (393 points) was lower than an average of 487 points in OECD countries (OECD, 2018). This infers that reading comprehension among the Thai students would be at an unsatisfactory level. The low performance of Thai high school students in their reading achievement suggests that in advancing to the tertiary level, undergraduates would still need ample guidance to improve their reading comprehension ability.

Moreover, Educational Testing Service (ETS), the world's largest organization for educational testing and assessment based in Princeton, New Jersey, USA. ETS has issued reports on the results of TOEFL Internet Based Test. In TOEFL IBT, the details of sections and total score means for Thailand in 2010, 2012, 2014, and 2017 are presented in Table 1.

Table 1: Results of TOEFL Internet-Based Test (IBT)

Years	Reading (30)	Listening (30)	Speaking (30)	Writing (30)	Total (120)	Rank	Total Countries (Asia)
2010	18	19	18	20	75	21	33
2012	18	19	19	20	76	23	35
2014	18	19	19	19	74	22	35
2017	19	20	19	20	78	20	35

Source: ETS's reports in four different years

As shown above, among the four English skills, reading seems to be the weakest skill for Thai students. Most of the Thai undergraduates are reported to be experiencing difficulties in employing reading strategies (Akkakoson & Setobol, 2009). In addition, Chomchaiya and Dunworth (2008) found that while the students appeared to be motivated to improve their reading comprehension ability, they have not yet fully developed their reading skills.

Like other EFL undergraduates, English major students are expected to process and comprehend a large volume of texts in English from sources of journals and textbooks. As supported by a study of Chairat (2016), the workplace required business reading and translation skills to perform their jobs. Due to this reason, it is undeniable that English reading skills are important and highly expected by businesses and organizations. The stark findings of the level of reading comprehension ability of Thai students further warrant a closer scrutiny into benchmarking English major undergraduates' reading performance more accurately.

Literature Review

Schema Theory and Contextual Bias in Reading Comprehension Ability

As previously discussed, reading comprehension ability is a vital skill for English learners. In the endeavour to identify students' reading comprehension ability, the reading literature

identifies schema as the basis for cognition and information processing (Axelrod, 1973). Comprehension refers to the ability to perform reading tasks of going beyond the words, understanding the ideas and the relationships between ideas conveyed in a text (McNamara, 2007). The readers' comprehension ability could be differentiated into high and low reading performers depending on how well the readers could perform the comprehension tasks. Readers are often guided by their previous experience and knowledge of the content area of a text in their attempt to comprehend the written text, which is regarded as content schemata (Khemanuwong, Kho, Mohamed, Ismail, Saeed, & Uampittaya, 2020). The schema theory assumes that a written text does not carry meaning by itself (An, 2013). It rather gives a direction to the readers in the retrieval and construction of meaning from their prior knowledge or schemata (Rumelhalt, 1980).

Apart from the readers' ability to activate content schemata, students' reading comprehension ability mainly relies on how well readers could relate the text to their cultural schemata and culturally based clues (Floyd & Carrell, 1987). In test-taking, the literature has identified the positive effects of addressing cultural schemata in improving test-takers' reading comprehension ability. Sasaki (2000) conducted a study on Japanese first-year university students in answering cloze text to examine how cultural schemata could be activated to influence students' comprehension and test-taking processes. Regarding the undergraduates' effort to understand a text, the study suggested that the students who answered culturally familiar version of the test could perform significantly better than those who received culturally unfamiliar version of the test.

Hence, the present study is based on the widely accepted argument that readers perform better with culturally familiar texts. We argue that when readers are given texts fitting to their cultural schema, contextual bias which could confuse or mislead readers' comprehension ability would be reduced. In our study, we employ the Thai-READS, which eliminated the contextual bias in the instrument. By providing the test instrument designed to address the contextual bias, the test-takers' mastery could be enhanced (Khemanuwong, Mohamed, & Ismail, 2018).

Research Objectives

This study primarily aims to investigate the reading comprehension proficiency of English major students which are assessed by the Thai-READS. More specifically, the study addressed three research objectives (ROs) as follows:
RO1: To investigate general reading comprehension ability of English major students.
RO2: To determine a statistically significant difference in scores on reading comprehension ability among English major students in different years of study.
RO3: To determine a statistically significant difference in scores on reading comprehension ability between male and female English major students.

Research Questions

The following research questions (RQ) are guided to achieve the aims of the present study:
RQ1: What is general reading comprehension ability of the English major students measured by the Thai-READS?
RQ2: Is there a statistically significant difference in mean scores on reading comprehension ability among English major students in different years of study?

RQ3: Is there a statistically significant difference in mean scores on reading comprehension ability between male and female English major students?

Hypothesis

Null hypotheses (H_0) for the two corresponding with the last two research questions are formulated as follows:

$H_0 1$: There is no statistically significant difference in mean scores on reading comprehension ability among English major students with different years of study.

$H_0 2$: There is no statistically significant difference in mean scores on reading comprehension ability between male and female English major students.

Research Methodology

The present study used quantitative research approach to determine reading comprehension ability of English major students. In the SPSS program, some statistical techniques including descriptive (i.e., mean, standard deviation, and percentage) and inferential statistics (i.e., t-test and one-way ANOVA) were used to analyse the data.

Participants

A total of 362 English major students of King Mongkut's Institute of Technology Ladkrabang (KMITL) participated in this study by purposive sampling. There were 85 males (23.48%) and 277 females (76.52%) participating in the present study. They were made up of 53 first-year students (14.64%), 52 second-year students (14.36%), 198 third-year students (54.70%) as well as 59 fourth-year students (16.30%).

Research Instrument

The online Thai-READS was employed to determine the English major students' reading comprehension ability. The Thai-READS eliminated the contextual bias to address differences in cultural, background and worldly knowledge. According to Khemanuwong et al. (2018), the content validity of the Thai-READS was high with 0.92 of the index of item objective congruence (IOC). Moreover, the Thai-READS had a high reliability of the test with 0.91 in the KR-20 coefficient. According to Boopathiraj and Chellamani (2013), questions in a test should indicate a level of difficulty. In the Thai-READS test, 60 MCQ questions are distributed with three difficulty levels− easy (25%), average (50%) and difficult (25%), with three sub-skills of reading comprehension− literal, reorganization, and inferential, which are incorporated in Barrett's taxonomy of reading comprehension (Lim, Eng, & Mohamed, 2014). As supported by the study of Hui, Saeed, and Khemanuwong (2020), the Thai-READS is suitable to assess university students' reading comprehension ability at any levels. By administering the Thai-READS to the English major students, the analysis of the reading comprehension ability could provide insights on which specific sub-skills of reading comprehension that the students would need to improve (Khemanuwong, Hui, Mohamed, Ismail, Saeed, & Uampittaya, 2020).

Data Collection Procedure

Prior to the onset of data collection, we requested an official permission from the university and the participants' consent. The steps were taken to ensure an ethical consideration in

conducting this research. Before the participants took the online test, we had a brief orientation session presenting the main purpose of the research. The participants were informed that their information was kept confidential and anonymous. To conduct the test, we have followed a guideline of time allocation in Mohamed et al.'s (2010) study which provided 70 minutes for the test-takers to complete the online test.

Research Findings

RQ1 aimed to explore general reading comprehension ability among English major students. As shown in Figure 1, it was found that most of the students (85.10%) showed their performance in English reading comprehension in Meet Standard group; 59.94% in Band 4 and 25.16% in Band 5. Furthermore, the results from quantitative data analysis using descriptive statistics revealed students' performance that there was three percent of the students clustered in Band 6 or as Above Standard achievers.
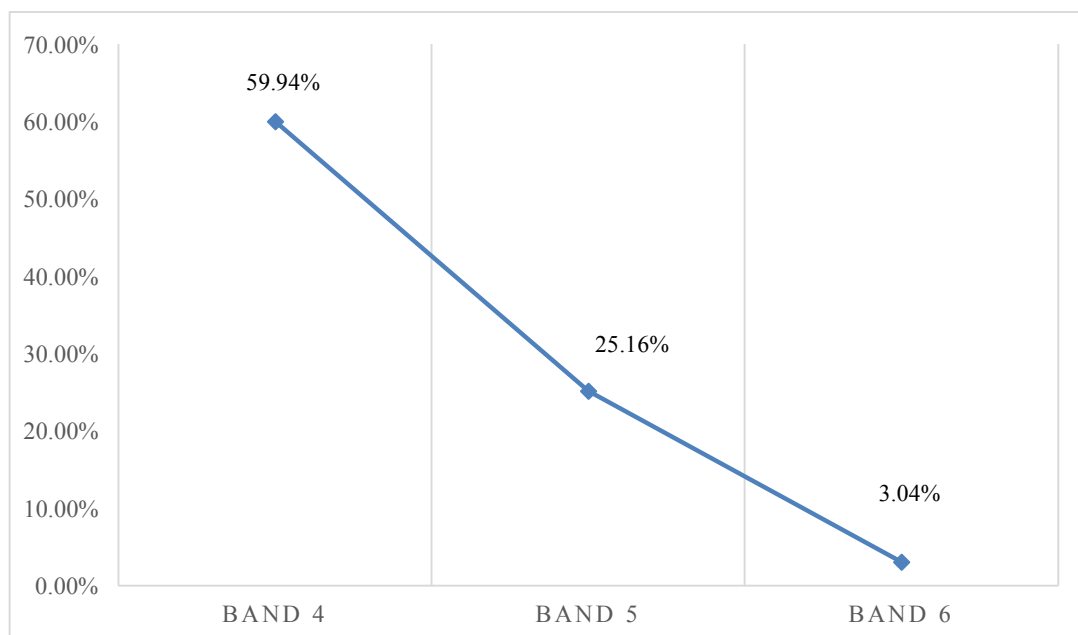

Figure 1: Students' Reading Comprehension Abilities in Different Bands

RQ2 aimed to determine whether there is a statistically significant difference in mean scores on reading comprehension ability between male and female English major students. The results in Table 2 showed that there was no statistically significant difference in mean scores on reading comprehension ability between male and female English major students, $t(353) = 1.50$, $p = 0.14$.

Table 2: Results of Independent Samples T-Test

		Levene's Test for Equality of Variances		T-Test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Scores	Equal variances assumed	0.482	0.488	1.50	353	0.14
	Equal variances not assumed			1.36	109.59	0.18

Supporting the results in Table 1, the analysis of descriptive statistics in Table 3 indicated that mean scores of male students (M=44, SD=7.08) and female students (M=42.81, SD=5.96) were not significantly different. Therefore, the first null hypothesis failed to be rejected.

Table 3: Results of Mean Scores

Gender	Mean	Standard Deviation	Number of students
Male	44.00	7.08	85
Female	42.81	5.96	277

RQ3 examined if there is a statistically significant difference in mean scores on reading comprehension ability among English major students in four different years of study. Before using the one-way ANOVA, a preliminary assumption of homogeneity of variances was tested and the results showed that homogeneity of variances was not violated since p value was greater than 0.05 as shown in Table 4.

Table 4: Results of Homogeneity of Variances

Levene Statistics	df1	df2	Sig
1.670	3	358	0.173

Table 5 reported the results of the one-way ANOVA and indicated that there was a statistically significant difference in mean scores on reading comprehension ability among English major students in the four different years of study, $F(3, 358) = 20.42$, $p = 0.00$. Thus, the second null hypothesis was rejected.

Table 5: Results of the ANOVA

	Sum of Squares	df	Mean of Squares	F	Sig.
Between groups	2061.160	3	687.053	20.422	0.000
Within groups	12043.933	358	33.642		
Total	14105.094	361			

As illustrated in Table 6, the results of multiple comparison using Tukey HSD indicated that mean scores between first-year and second-year students, between first-year and third-year students, between first-year and fourth-year students, between second-year and third-year students, between second-year and fourth-year students, as well as between third-year and fourth-year students showed significant differences since p values were less than 0.05. However, it was also detected that mean scores of second-year and third-year students did not show a significant difference.

Table 6: Results of Multiple Comparison Using Tukey HSD

(I) Years	(J) Years	Mean Difference (I-J)	Standard Error	Sig.
1	2	−3.65*	1.13	0.00
	3	−2.47*	0.90	0.03
	4	3.59*	1.10	0.00
2	3	1.18	0.90	0.56
	4	7.25*	1.10	0.00
3	4	6.06*	0.86	0.00

Note. *The mean difference is significant at the 0.05 level.

The results of the one-way ANOVA further pointed out the extent to which different pairs of year of study were different. As reported in Table 7, first-year students' mean score (M=41.85, SD=6.52) was significantly lower than second-year students' mean score (M=45.50, SD=5.25) and third-year students' mean score (M=44.32, SD=5.97). However, the first-year students' mean score (M=41.85, SD=6.52) was significantly greater than fourth-year students' mean score (M=38.25, SD=4.94). Other than that, second-year students' mean score (M=45.50, SD=5.25) and third-year students' mean score (M=44.32, SD=5.97) was not significantly different. In contrast, second-year students' mean score (M=45.50, SD=5.25) was significantly greater than fourth-year students' mean score (M=38.25, SD=4.94). Also, it was found that third-year students' mean score (M=44.32, SD=5.97) was significantly greater than fourth-year students' mean score (M=38.25, SD=4.94).

Table 7: Results of Scores in Reading Comprehension

Years of Study	Mean	Standard Deviation	Number of Students
1	41.85	6.52	53
2	45.50	5.25	52
3	44.32	5.97	198
4	38.25	4.94	59
Overall	**43.14**	**6.25**	**362**

Conclusion and Suggestion

Generally, this study found that the English major students' abilities in English reading comprehension was in 'Meet Standard' group (M=43.14, SD=6.25) with Bands 4 and 5 as determined by Khemanuwong's (2019) criterion. Besides that, the present study indicated that male and female English major students' mean scores on reading comprehension were not significantly different. The findings in the study are contradictory to Phakiti's (2003) assertion, which suggests that a significant outperformance of males may exist because of the use of reading strategies and metacognitive strategies. Common interest in English is one of the factors that can explain the phenomenon in the present study. Since the participants studied in English major, they are likely to have common interests in English. Therefore, the effect of gender difference may not affect their abilities in English reading comprehension. Interestingly, this study detected that the students' different years of study showed a significant effect on abilities in English reading comprehension. Language learners with more years of study are expected to show better development in language learning. However, fourth-year students in this study showed significant low performance as compared to other different years of study. This is due to mastering of language skills in fourth year may not focus on reading skills. Normally, the students in fourth year have professional practicum in workplace. For this reason, it is suggested that lecturers implement teaching strategies which could improve retention of reading comprehension among the English major undergraduates. Moreover, future research should provide proofs with robust results to show better understanding of whether years of study could consider a factor predicting abilities of reading comprehension of students.

Acknowledgments

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