Enhancing Reading Comprehension of Thai EFL Undergraduates Using Reading Strategy Instructional Model

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Abstract

The objectives of the present study were: 1) to design a reading strategy instructional model to promote reading comprehension of Thai EFL undergraduates, 2) to develop the reading strategy instructional model to promote reading comprehension of Thai EFL undergraduates, and 3) to implement the reading strategy instructional model to promote reading comprehension of Thai EFL undergraduates. The participants were 27 third year English majors of Sakon Nakhon Rajabhat University. Research instruments included a pre-test and post-test, unit summary writings, a questionnaire of students' perceptions on the reading strategy instruction, and think aloud technique. The quantitative data were analyzed by mean, standard deviation, the t-test for data; the qualitative data were analyzed using content analysis.

The findings were:

1) The reading strategy instructional model consisted of five components: (1) principles, (2) objectives, (3) content, (4) six stages of instructional process including Activating background knowledge, Modelling, Reading with strategies, Summarizing knowledge from reading, Knowledge sharing, and Reflecting, and (5) assessment.

2) The effectiveness of the reading instructional model revealed that the efficiency of the RSI model of the developed model are 77.20/80.06, which meet the 75/75 standard.

3) The extent to which the students' use of reading strategies comprised of (1) the mean score of students' reading comprehension from the post-test was higher than that of the pre-test with the statistical significance at .01, and (2) the students gradually increased using both cognitive and metacognitive strategies throughout the experiment.

4) The students' perceptions on reading strategy instruction were at a high level.

Keywords: reading strategies, reading strategy instruction, reading comprehension, Thai EFL undergraduates

Introduction:

Reading is one of the important skills of language learning. As the reading process is complex, a reader has to cope with the difficult interaction with the texts both consciously and unconsciously (Freebody and Luke, 2003; Grabe, 2009; Kintsch and Kintsch, 2005). The difficulties that students encounter in their reading comprehension process can be explained with the recent influential reading comprehension theory, which is called 'The Construction-Integration (CI) Model (Kintsch, 1998). The CI model has been widely used as the framework by various EFL reading researchers. In reading process, the integration among linguistics knowledge, the background knowledge and experiences of the reader is occurred. Consequently, the new knowledge is constructed from the reading text

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until the reader can use the knowledge in composing new form of discourse which is the result of the integration with the reader's personal experiences. A number of research studies (La-ongthong, 2002; Schmalhofer, McDaniel, and Keefe, 2002) apply Kintsch's (1998) CI model as the framework of their reading instructional research.

Moreover, to promote deeper reading comprehension for EFL students, cognitive and metacognitive strategies are recommended. In Thailand, a number of studies conducted in reading comprehension development obtain the major focus on reading strategies employment for a period of time. To assist students to use reading strategies, explicit instructions of cognitive strategies are widely suggested from previous researchers (Chomthong, 2011; DeBoer, Ho, Stump, and Breslow, 2014; Hayikaleng, Nair, Krishnasamy, 2016; Kongkerd, 2013). However, there are groups of study have further suggested that only cognitive strategy instruction is inadequate. Then, metacognitive strategies become major a focus in research on reading. However, the two types of reading strategies were separately taught to improve EFL students' reading comprehension (e.g. Chanpresert, 2013; Oranpattanachai, 2010; Wichadee, 2011). At present, the reading strategy instructional model is no availability of using a combine set of cognitive and metacognitive strategies. Thus, it is essential to promote the use of cognitive and metacognitive strategies to enhance the reading comprehension of Thai EFL undergraduates using reading strategy instructional model.

Research Questions:

1. What components are to be included in the reading strategy instructional model?

2. What were the efficiency of the reading strategy instructional model?

3. To what extent did the Thai EFL undergraduates use reading strategies in reading comprehension?

4. What were the Thai EFL undergraduates' perceptions of the reading strategies?

Research methodology:

Participants:

The participants of the present study were 27 English majors who studied third year in the Faculty of Education, Sakon Nakhon Rajabhat University. They were selected using purposive sampling method. These students have experiences in taking a TOEIC test in the parts of listening and reading and received the total scores ranked between 325-545. The TOEIC test scores were used to select ten case students for qualitative data collection to investigate students' actual behavior of using reading strategies. All participants were able to write a summary since summary writing tests are used in data collection.

Research Instruments

1. Pre-test and Parallel Post-test

A pre-test and parallel post-test were developed to investigate the students' reading comprehension improvement. The tests comprised of two parts: part a short answers and part B summary writing. A text booklet contains three texts on the same theme which were obtained from various internet websites, and a question booklet were given to all participants. The length and difficulty of each texts were measured using Flesch–Kincaid readability tests (1975). The questions in the tests were constructed based on the purposes of measuring students' comprehension by identifying main ideas, important details and relevant core ideas of the texts. The validity of the test content was checked by three experts who experienced in the field of Applied Linguistics for more than five years, and the reliability was tested with Cronbach's Alpha Coefficient.

2. Unit Summary Writings

The unit summary writings were used at the end of each unit. The summary

questions were generated to be relevant to the particular strategy focused in each unit. Students' summaries were assessed for the main ideas, supporting details, and relevant ideas or core information using the criteria designed for the present study. Content validity of the reading materials was by three experts, and the criteria for scoring was counting from the main ideas, supporting details, and relevant ideas or core information presented in students' unit summaries.

3. Questionnaire

A 28-item questionnaire (5-point Likert's rating scales) was developed to check students' perceptions of the training. It included 3 parts: demographic information of participants, close-ended items related to student's perceptions of reading strategy instruction and an open-ended section. Content validity was checked by three experts, and reliability of the questionnaire was tested by and Cronbach's Alpha Coefficient.

4. Think-aloud technique

The students' actual behaviors while using reading strategies were collected from ten case students. The students' think aloud protocols were coded according to the coding scheme designed for the present study. The collected data were analyzed by the researcher and an inter-rater who was trained to use think-aloud protocol.

Data Collection:

The data collection was conducted within 15 in-class sessions and six hours of pre-test and parallel post-test, totally 51 hours. The first week was the data collection from pre-test data. Then each reading strategy learning sessions of analyzing, synthesizing, summarizing, self-questioning, evaluating, and reflecting were conducted within 2 sessions (3 hours per a session) from session 1 to 12. After the instruction, session

13 and 14 were the reading strategy practice, and course conclusion was conducted in session 15. The post-test was set after the last session.

Data Analysis:

The quantitative data from reading, pre-test and post-test and a questionnaire were analyzed by statistics method and the qualitative data from think-aloud protocols were analyzed by using content analysis of students' utterances.

Results:

1. Components of reading strategy instructional model

These five components were used in designing course materials, reading activities and reading assessment. The five components are:

(1) Principles of reading strategy instruction: the principles are related to reading strategy instruction, Kintsch's (1998) Construction-Integration model and stages of teaching and reading activities in CLT method (Nunan, 2001), which were used in the design and implementation of the reading strategy instruction.

(2) Objectives: the objectives of each strategy focused in the particular unit used to be informed to students before instruction to emphasize and make clear to the students the usefulness of the strategies.

(3) Content: the content of reading texts have to be able to support the objectives and to promote the particular reading strategy in each unit.

(4) Instructional process: six steps of teaching were identified to teach reading strategies for students be applied in the reading activity cycles, which include activating background knowledge, modelling, reading with strategies, summarizing knowledge from reading learned, knowledge sharing and reflecting.

(5) Assessment: students' reading performances are assessed during pre-reading, while-reading and post-reading.

2. The efficiency of the reading strategy instructional model

The efficiency scores of the reading strategy instructional model were 77.20/80.06. The scores achieved the standard of 75/75. The results indicate that the reading strategy instructional model is effective.

Table 1 Efficiency of the RSI Model

Test	E_1	E_2
Efficiency	77.20	80.06

Notes: 1) n = 27; 2) E_1= the efficiency of process, E_2= the efficiency of product

3. The extent to which students used reading strategies :

(1) Students' reading comprehension were improved.

The great difference of students' reading comprehension scores of pre-test and post-test. The mean score of the pre-test was lower than 50% of the full score ($\bar{x}$=46.77). However, after the intervention of the RSI model, the post-test's mean score was higher ($\bar{x}$=72.62). When statistically tested, it was significant at the level of .01 (p $\leq$ .01).

Table 2 Pre-test and Post-test Scores of Students' Reading Comprehension

Scores of Students' Reading Comprehension	Pre-test (100 points)		Post-test (100 points)		t-test	sig.
	$\bar{x}$	S.D.	$\bar{x}$	S.D.		
	46.77	4.539	72.62	4.972	58.27	0.00**

*Notes:*1) p $\leq$ .01; 2) n = 27

(2) *Students' use of reading strategies*

Students' uses of reading strategies were revealed from their think aloud protocols, which is presented in figure 1.
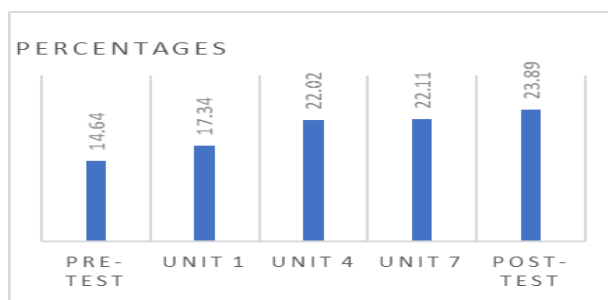

Figure 1. All reading strategies used by case students presented by percentages

The total frequency was 3,252, from pre-test, intervention and post-test. It is noted that the uses of reading strategies were gradually increased. Starting from the pre-test, students used less strategies compared to the other uses in unit 1, 4, 7 and post-test.

To be considered about students' proficiency, it was found that both cognitive strategies were highly used by all case students during pre-test, and were slightly reduced in intervention and post-test. In contrast, the students' uses of metacognitive strategies were gradually increased from pre-test,

intervention and post-test. During post-test, cognitive and metacognitive strategies were not differently employed by both groups of students. The proficient students used cognitive strategies more than less proficient students for only 1.93%. Similarly, the use of metacognitive strategies of proficient students was only 0.53% higher than less proficient students.
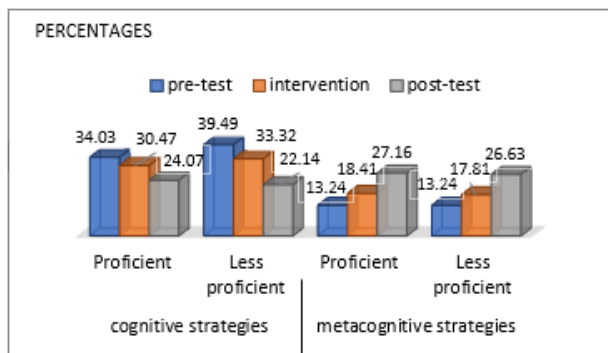

Figure 2 Cognitive and metacognitive strategies used by proficient and less proficient students presented by percentages

Considering the students' use of the six reading strategies, which were focused in the present study, it was found that they applied both cognitive and metacognitive strategies in the present study. The total use of the six reading strategies was during pre-test, intervention and post-test 2,224. Summarizing was the highest used by the students (30.94%), following with, self-questioning (21.22%), analyzing (19.60%), evaluating (12.55%), reflecting (11.24%) and synthesizing (4.45%), respectively.
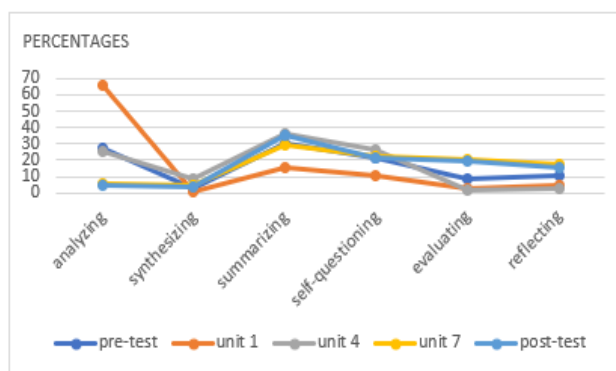

Figure 3 Six reading strategies used during pre-test, intervention and post-test presented by percentages

4. Students' Perceptions of the reading strategy instructional model

Investigating the students' perceptions of the reading strategy instructional model from the questionnaire were conducted in two aspects:

(1) The students' uses of reading strategies

The students perceived that they used both cognitive and metacognitive reading strategies. Among all six strategies, both cognitive and metacognitive were presented as the most

employed from students' perceptions. Evaluating was the most frequently used strategy ($\bar{x}$= 4.28), reflecting ($\bar{x}$= 4.27), summarizing ($\bar{x}$= 4.26), synthesizing $\bar{x}$ = 4.23), self-questioning ($\bar{x}$= 4.21) and analyzing ($\bar{x}$= 4.16), respectively. It is noted that none of reading strategies was rated lower than 'high'. This shows that students highly perceived they employ these strategies intentionally.

(2) The reading strategy instruction

The students were aware of teacher's role and reading strategy instruction at high level ($\bar{x}$=4.35). When considering for each aspect, they realized that reading strategies were useful for them and they learned to make comments and give suggestions logically from reading at high level ($\bar{x}$=4.48). To consider about reading strategy instruction, the students realized the received the effective explanation ($\bar{x}$=4.44) and adequate instruction ($\bar{x}$=4.33).

Discussion:

The five components of the RSI, emphasizes the important of explicit instruction of both cognitive and metacognitive strategies. Explicit instruction is a need in setting a reading strategy instructional model (Block and Duffy, 2008; Pressley, 2006). The in-class teaching and repetition of strategy use by modelling and guided practice to help students independently use strategies before reading, during reading and after reading is necessary (Brevik, 2017; Wattanasuk and Thienpermpool, 2017). To be more specific, students' reading comprehension needs the intervention with a strong emphasis on metacognitive and cognitive strategies (Wanzek, Wexler, Vaughn and Ciullo, 2010; Van Kraayenoord, 2010). Moreover, it should be aware that the reading strategies and materials are relevant and supportive (LaRusso, Kim, and Seiman, 2016; Tzina and Vasso, 2012).

The students' use of reading strategies increased throughout the pre-test, intervention and post-test. From the students' think aloud protocols, the students' use more reading strategy after each strategy was instructed (DeBoer and Dallman, 2014; Sotoudehnama and Azimfar, 2011; Sri-sunakrua, 2007). Considering the use of reading strategies among students from different proficiency, the present study revealed the increased using of both cognitive and metacognitive strategies by the students in both groups. Thus, the possible explanation of the students' reading comprehension improvement is that the increasing of reading strategy employment affects the students' comprehension. The results were similar to Chanprasert's (2018) study. In her study, the students increase using reading both cognitive and metacognitive strategies during the intervention, and the students' post-test scores were also increase. The students used both cognitive and metacognitive strategies in their reading. Consequently, their reading comprehension were improved. The possible explanation is that the increasing of reading strategy employment affects the students' comprehension. The results were similar to Chanprasert's (2018) study. In her study, the students increase using reading both cognitive and metacognitive strategies during the intervention, and the students' post-test scores were also increased.

Moreover, the students' reading strategy use was varied according to their personal interests. The students' think aloud protocols reveal that the students selected the reading strategies according to their preferences in their reading during pre-test, intervention and post-test. According to Williams, Fitzgerald, and Stenner (2013), students selects their choices of reading strategy uses according to their intentions with no sequences. The findings of the students' use of different strategies support that there is no pattern and fixed order of reading strategies employment among the students (Akkakoson and

Setobol, 2009;, Cekiso, 2007; Jafari, 2012; Ozek and Civelek, 2006;).

Interestingly, the students' think aloud protocols revealed that in the intervention and post-test, they reminded themselves to pay more attention and use reading strategies. This results support Anderson (1999) and Arabsolghar and Elkins (2001) that students need to read consciously and keep in their minds about how, when, where and why to use reading strategies. The findings of students' perceptions supported the results of students' awareness of using reading strategies. They showed their perceptions that they pay attentions and try to remind themselves to use reading strategy during reading as "I learned to pay attention to the way reading strategies are use" ($\bar{x}$ =4.19). The study of Mokhtari and Reichard (2004) also found that effective readers were more aware of using reading strategies than less effective readers.

Conclusions:

The present study promoted the use of reading strategy to improve Thai EFL undergraduates' reading comprehension. The students' reading comprehension were improved after the reading strategy instruction. The students continue using both cognitive and metacognitive strategies in their reading. The students' actual use of reading strategies from their think aloud protocols confirmed that reading comprehension is improved by conscious reading and using reading strategies. The implications from the present study can be applied in pedagogy and research in reading strategy instruction for Thai EFL learners.

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