Promoting Reading Comprehension through Transactional Strategies Instruction for Thai Undergraduate Students

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ABSTRACT

The purposes of this mixed method study were 1) to investigate effects of Transactional Strategies Instruction on reading comprehension of undergraduate students, and 2) to explore the students' opinions on the Transactional Strategies Instruction (TSI).

The students consisted of 30 second-year students who enrolled in the course Reading II (ENG2106) in the second semester of the academic year 2014 at Roi-Et Rajabhat University. The research instruments were 1) lesson plans of TSI, 2) a reading comprehension test, 3) materials developed for the study, 4) think aloud protocols of six case students, and 5) an open-ended questionnaire. The data were analysed, presented by means ($\overline{X}$) and standard deviations (S.D.), and statistically tested using t-test. A content analysis was used to analyse the think aloud protocols.

The findings are 1) students' reading comprehension increased significantly at 0.05 level, 2) with the supportive help from the teacher and peers during learning processes, the students feel relieved, 3) the students were encouraged and confident to use the strategies, 4) they were satisfied with their reading scores, and 5) They also reported that they would apply the strategies learned in other courses.

Keywords: Reading Comprehension; Reading strategies; Transactional Strategies Instruction

INTRODUCTION

Reading comprehension is an essential skill which second language learners need to acquire (Gunning, 2000). The reason for this is that if readers are able to understand what they read, they would attain mastery of the language that they are learning. Many studies, however, have reported that Thai students are still poor in English reading skills. For instance, most Thai students encounter the problems of remembering vocabulary and understanding sentences so that the students feel panic and do not have any pleasure in reading. They cannot comprehend much of the text due to lack of practice therefore, they read as little as possible, and remain slow

readers by looking up words in dictionaries which interrupt the reading process (Liamsakul, 1998). Many students lack the knowledge in order to rectify their comprehension breakdown. They have negative attitudes towards studying English. They could not figure out the meaning from the printed text; they translated sentences word-by-word so that they could not increase their reading comprehension (Jamornman, 1991). Factors impede Thai students' reading abilities include grammatical structures, difficulties with unknown words, unsuitable reading materials as well as lack of background knowledge (Adunyarittigun, 2002; Changpueng, 2005; Chuthachindaket, 2005; Intarasombat, 2002; Jesdapornpun, 2001; Mingsakoon, 2003; Tanghirunwat, 2003). Moreover, they do not know how to get the full meaning of the text because they might lack of repertoire of reading strategies to apply in a reading condition. Ratanakul's study (1998) revealed that Thai students had difficulties in reading English texts because of insufficient reading strategies. It is necessary that students have sufficient strategies to facilitate them while interacting with the text (Durkin, 1993; Lehr and Osborne, 2006).

To enhance comprehension, many interesting techniques and challenging strategies are integrated into classroom instruction (Yang, 2006). According to Oxford (1990) reading strategies are essential for readers including

non-native readers in order to overcome language deficiency, and comprehend texts more effectively. It is essential to teach students several strategies and lead them to use appropriate strategies to overcome the texts (Grabe and Stoller, 2002). Researchers have claimed that if students know how and when to use strategies, then they can more comprehend reading a wide range of genres (Ambe, 2007; Brown, 2008; Lapp, Fisher and Grant, 2008).

Transactional Strategies Instruction (TSI) is a form of multiple strategy instruction models including activating prior knowledge, predicting, questioning, clarifying, text structure analysis, and summarizing. It has shown hope in a significant contribution to the development of students in reading comprehension. The National Reading Panel (2000) claimed that students who have been trained using TSI improve in interpretive dialogues, transact with text to gain meaning, and utilize comprehension strategies proficiently. Apparently, these strategies allow readers to identify and select the reading techniques that are appropriate for a variety of reading content for comprehension, including switching from one strategy to another when the first one is not working. TSI is a process that corresponds with the learner-centred learning model using a gradual release of responsibility of instructional

model in order to foster independent and self-regulating readers (Goodman, 1994).

In order to explore the value of TSI, McElvain (2010) suggested the TSI was an effective instruction to increase students' reading comprehension. For example, Wichadee (2012) studied using TSI in English reading and summary writing of students. The results showed that after students learned through TSI, their English reading and summary writing abilities were higher than those before learning. Students also expressed a high level of opinion towards learning. Junlapho (2008) implemented TSI with online learning. It was found that students' scores were significantly higher after being trained using TSI. It was also found that after the students were taught through TSI with online learning, their autonomous learning ability increased. Furthermore, other research studies suggested that the TSI process helps students improve reading and summary writing skills in English language as well (NAEP, 2001; Brown, 2001; Nachiangmai, 2004; Kitchakarn, 2010). Pressley and Wharto-McDonald (1995) all supported that the use of TSI provide students with an array of strategies, increased readers' comprehension, motivation and enjoyment including developed autonomy in readers.

Having realized the benefits of the said TSI, many pieces of research pinpoint to the fact that TSI can enhance the students' reading comprehension. These strategies enable them to identify the relationship within the text in order

to decipher the message (Goodman, 1994). However, a review of literature in current study shows that there is lack of research on the TSI at the higher level education in Thailand. Thus, it is interesting to know the results of an application of TSI among Thai university students and their opinions.

MATERIALS AND METHODS

Population and Sample

The population of the research was 120 second-year English majors who enrolled in Reading II (ENG2106), at Roi-Et Rajabhat University, Roi-Et province. Thirty students which were 36 percent of the population participated on voluntary basis in the study, and have never studied in any other countries.

Research Instruments

Five research instruments included lesson plans of TSI, a reading comprehension test for pre-test and post-test, materials developed for the present study, think aloud protocols, and an open-ended questionnaire.

1. Lesson Plans of TSI

There were eight lesson plans for TSI implementation developed. Each lesson plan included title of the lesson, content objective, reading strategy activities and evaluation. Moreover, each lesson was developed by the researcher based on the TSI. Activities in all 8 lessons were explicitly taught in six strategies that comprised activating background knowledge, predicting, questioning, clarifying, text structure analysis, and summarizing (see Fig 1).

> **Transactional Strategies Instruction**
> -Explicit teaching in reading strategies
> -Four step procedure: pre-reading, while-reading, post-reading, and evaluation.
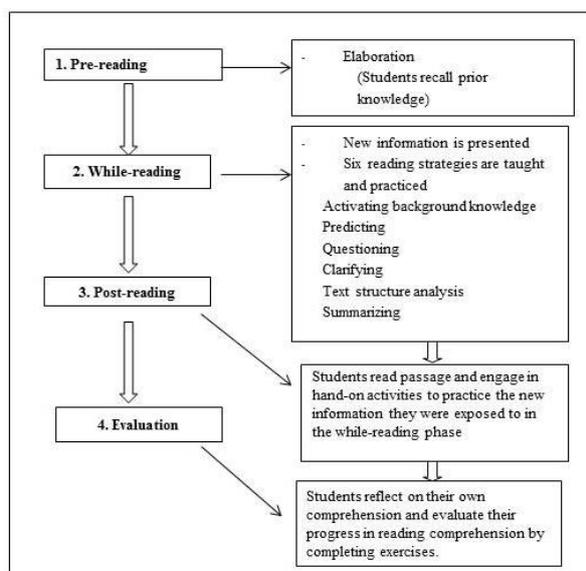
Fig. 1 Lesson plans of TSI

Furthermore, the lesson plan consisted of four step procedure: pre-reading, while-reading, post-reading, and evaluation. First of all, pre-reading was the initial phase. To complete the task the teacher introduced the lesson, activated prior knowledge and determined what the students already know, and what skills and learning strategies students already had. Secondly, the teacher introduced and presented new content in while-reading phase. Individual reading strategies were identified and explained in detail to the students as well as when and why it was being taught. Thirdly, post-reading phase involved the students practicing reading and utilizing the newly acquired skills and strategies. Finally, in evaluation phase, required the students to evaluate their understanding and proficiency with the content and learning strategies they had been practicing.

2. A Reading Comprehension Test

A reading comprehension test was used as the assessment tool in the pre-test and post-test which was developed by the researcher, and the tests were used to measure the level of reading comprehension of the students. The collected data in this study were analyzed with re-test. There were forty multiple-choice questions, and the time given for the test was one and a half hour. Before testing the students, the reading comprehension test was examined by three experts who were two lecturers from English Programme and a lecturer Educational Measurement, Faculty of Education, Roi-Et Rajabhat University. The resulted from the test item objective evaluation form were calculated based on Index of Item Objective Congruence (IOC) criteria. Items scoring higher than 0.5 were reserved and those scoring lower than 0.5 were modified. After the revision of the instructional instruments and research instruments, a pilot study was carried out before the main study was undertaken to check whether the test reflected the construct validity. The 30 students who were not the students of the study who enrolled in the course ENG2106 (Reading II) were selected to do the trail test. The test was analyzed to find out the indices of difficulty and discrimination of each item, and the reliability value of the whole tests. All 40 test items were trialed and tested for difficulty indices (p) ranged between 0.20 and 0.80, and discrimination indices (r) were equal or higher than 0.20. The reliability of the test calculated statically using Kuder-Richardson-20 formula (KR-20) was 0.89.

3. The Materials

Eight reading passages were developed for the study. A needs analysis was conducted to find out the needs of students' interests. Based on the results of the survey, eight reading passages from a variety of sources were selected to be used in TSI. The selected strategies comprised activating background knowledge, predicting, questioning,

clarifying, text structure analysis, and summarizing.

Following steps were used to develop the materials:

Step 1: Before the training TSI, all passages and exercises were checked by English lecturer at Roi-Et Rajabhat University to examined whether they have the content validity or not.

Step 2: The exercises were piloted with 10 students from the group of research population, but not those who were the students of the study and the passages were adapted and improved in terms of wording to make the exercises and passages easier to read for students at the Intermediate level.

Step 3: The teaching materials consisted of 8 topics, and the length of each passage was approximately 300-400 words and adapted to students' preferable reading topic. The reading passages should be drawn from several authentic reading materials such as textbooks, magazines, and newspaper.

Step 4: After finishing each set of exercises in groups and individually, the students were given feedback on their reading ability. The students were also given explanation on any unclear points or further discussion on the use of strategies was carried out.

4. Think Aloud Protocols

This technique is commonly used in qualitative studies in order to clarify and support further information obtained from interviewing the students. Observations on their thought processes give us the opportunity to understand how language learners process text and how they use strategy to deal with the text (Smith, 2006; Walker, 2005; Wilhelm, 2001). Students verbalize their own thoughts as they read aloud, modeling the kinds of strategies a reader uses during the reading.

Think aloud protocols were collected from six case students during their reading in the pre- and post- tests. Each student was interviewed approximately for thirty minutes. The researcher observes the students before and after practicing the TSI to prompt them to describe their using reading strategies. The six case students were given an opportunity to choose to think-aloud in their native language, Thai, or in English. The students preferred to use their native language so the think aloud protocol was conducted in Thai because students were lack of proficiency in L2 (Davis and Bistodeau, 1993). The think aloud processes were audio-recorded with the consent of the students while the researcher also took notes about their verbalization.

5. A Questionnaire

In order to get opinions of the students, an open-ended questionnaire was implemented to explore their uses of TSI. It was written in English for the students, which was completed after the posttest. The questionnaire was also constructed with 14 items. After the construction of the questionnaire, the evaluation form of test item objective had been validated by experts for its contents and pilot tested to ensure its reliability. The pilot test was using Cronbach's Alpha Coefficient method. The reliability coefficient value of the questionnaire was 0.83. The open-ended questionnaire developed for this study was divided into two parts which were: part one was questionnaire of five Likert rating scale and part two was open-ended for comments.

Research Procedure

The steps to implement this study were as following:

In session 1, prior to the TSI training, all students took a pretest in order to assess their reading comprehension ability and reading strategies.

Besides, the researcher chose 6 case students participated in the think aloud protocols in order to examine what reading strategies they use before being trained using TSI. Next, the experimental procedures of TSI were trained along with reading strategy instruction included teacher modelling and explicit explanation of the strategies, and scaffolding of students learning the strategies. In session 2-7, the core of the training consisted of practicing six basic reading strategies were taught to students, namely

1) activating background knowledge – activating students share what they know, what they want to know, and what they have learned about the topic such as using brainstorming or KWL charts;

2) predicting - predicting about what is coming up in the text based on students' background knowledge;

3) questioning - asking questions about the passages at key points, and generating questions such as what was the main idea, what was happening, what would you do if….?;

4) clarifying - finding the possible ways of solving the problems students faced such as concentrating on key words and guessing the meaning from the context;

5) text structure analysis - recognizing the structure of the text by looking for clues to organize thinking, and

6) summarizing – summarizing the most important ideas of the passages such as key place, key information or key ideas by using semantic map to visualizing. In addition, the training contained interactive group activities that invited the students to observe their own reading process including observing and discussing the strategies they apply to understand what they have read. In order to encourage the students to apply the strategies presented during the training in their independent reading, after each lesson, the students were given reading exercises to work. In session 8-9, the students were asked to complete reading passages and exercises as individual work. That is, there was no teacher's help in order to activated each student could use a variety of strategies flexibly and select the right strategy for what he/ she has read until he/ she was likely to become self-regulated reader. In session 10, at the end of TSI training, all of the students took a reading comprehension test as the post test. The test was distributed in order to compare students' reading comprehension ability before and after using TSI. Besides, a questionnaire was provided to the students in order to explore students' opinion toward the TSI. Moreover, in order to attain qualitative data from the students' reaction toward TSI, 6 case students were called out for the think aloud protocols. The think aloud protocols mainly used to investigate what kinds of thinking processes or strategies students are making use of. The researcher collected the think aloud protocols on tape and then transcribed and analysed it. It can be seen that TSI has three common characteristics as follows:

1) Explanation and modeling:
The teacher introduced the students to the importance, the purpose, and the use of TSI to the whole class. In this research study, the

teacher selected 6 strategies. Then the teacher might, in discussion, elicit what strategies students have already been using, so that students can develop their awareness of strategy use.

2) Practice and coaching:

The teacher provided students with practice in implementing the strategies as well as in selecting which strategy to use at different time. Furthermore, students were interacting with the texts with the teacher's guidance. The teacher ought to demonstrate how students can solve specific problems with appropriate strategies in a learning task. This way, students will understand one of the major roles of strategy use: problem-solving.

3) Transfer of responsibility:

During this phase, the teacher provided no supports at all. Students had to monitor their reading, utilize each strategy to figure out the information, and then gain an understanding of the passage in a small reading group. Finally, with this understanding in mind, students can practice strategy use independently in order to promote reading comprehension. (Casteel, Isom and Jordan, 2000) (see fig 2).
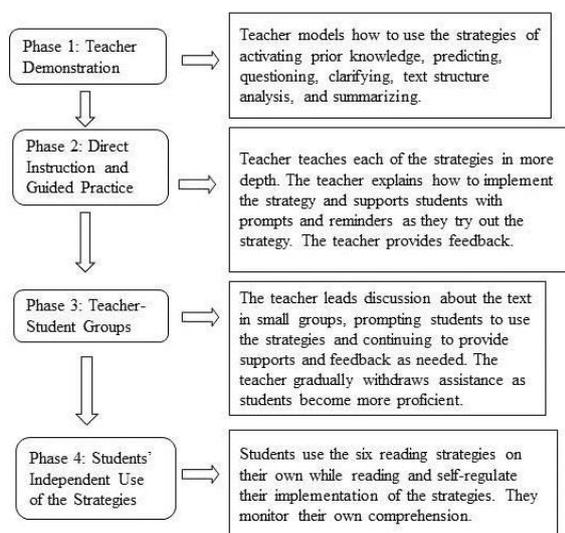

Fig. 2 TSI for teaching reading comprehension strategies

Data analysis

Data analysis for research question 1

Research question 1 was concerned with the effects of using Transactional Strategies Instruction toward the students' reading comprehension ability. The data obtained from the pre and post reading comprehension test was statistically analyzed by means of arithmetic mean, standard deviation, and t-test (Paired samples test) in order to compare the differences in the students' reading comprehension ability. In addition, the think aloud protocols were analyzed and transcribed using content analysis in order to compare the differences of the students' strategy use before and after implementing TSI practice.

Data analysis for research question 2

Research question 2 was concerned with the students' opinion toward the Transactional Strategy Instruction and its usefulness. The data obtained from the five-rating scale items from the questionnaire was statistically analyzed by means of arithmetic mean and standard deviation. The data obtained from the open-ended questions in the questionnaire was grouped, tallied and calculated to find the percentage.

RESULTS AND DISCUSSIONS

RESULTS

a. Pre-test and post-test English reading comprehension scores

TABLE 1: Scores of students' reading comprehension

Mode of Assessment	$\overline{X}$	S.D.	t	df	Sig.
Pretest	29.10	8.53	8.789*	29	0.00
Posttest	33.53	7.92			

*P < .05

Table 1 shows that the mean score ($\bar{x}$) of the pre-test in reading comprehension scores was 29.10 (S.D. 8.53). After implementing the Transactional Strategies Instruction, the mean score of the post-test was 33.53 (S.D. 7.92). The t-value was 8.789 with a degree of freedom of 29 (n = 30). Therefore, the difference of the mean scores of the pre-test and the post-test in reading comprehension is significantly different at 0.05 levels. It is apparent that the post-test average scores of the students are much higher than that of pre-test. In other words, students' reading comprehension ability significantly improved after receiving the training of using TSI in English reading.

b. Think aloud protocols

TABLE 2: Strategy Used by Six Case Students

No.	Strategy	No. of Students Used Strategies (Pretest)	No. of Students Used Strategies (Posttest)
1	Activating prior knowledge	1	4
2	Predicting	2	4
3	Questioning	2	5
4	Clarifying	2	6
5	Text structure analysis	0	3
6	Summarizing	3	6

As shown in table 2 below, all six case students used TSI strategies in their reading after the training, and the number of the case students who employed the TSI strategies increased for all strategies. It is interesting that the strategy of text structure analysis was used by only three case students. Nevertheless, no case student applied this strategy in the pretest. In conclusion, the case students used more reading strategies in comprehending the text.

Besides, example of Excerpts from the think aloud protocols of case students are presented in table 3. In the following table, parentheses are used for the presentation of the students' verbal responses, and the sentences from the text are emphasized in quotation marks.

TABLE 3: Excerpts from the think aloud protocols of case students

Strategy	Case Students Verbal Responses
1. Activating Prior knowledge	"Hertford House is an alternative school with an excellent reputation, located in Toronto, Canada." (I'm not sure about the meaning of this word. What is an alternative school? But I think alternative must be the meaning like option. And I have heard and known that an alternative school means a school where students can choose what they want to study.)
2. Predicting	"However, classes are optional. We do not force students to go to classes, or to do homework." (I think my guess was right because this sentence indicated that students weren't forced to attend the class.)
3. Questioning	"We are a community. Everyone cooperates in the daily life of the school. We make all our decisions together, and the opinions of adults and children are given equal importance." (Then I looked at this sentence to support the meaning. Therefore, this school provided not only adults but also children to share their ideas, isn't it?)
4. Clarifying	"At Hertford House, we believe in freedom for the individual. We encourage each child to discover who they are and what they want to be." (I see. Hertford House is a school where students have a freedom to do as desired. Anyway I can understand the general meaning of this sentence.)
5. Text structure analysis	"Fees are $11,500 per year. Some optional classes, such as foreign languages (where students are taught individually), are extra. Optional vacation activities are also not included. There is a monthly cost of $65 for textbooks and materials for each student." (From this sentence, I think the text structure is descriptive. I noticed the signal clue and like "such as" and describes "what" and "how" about fees of Hertford House.)

11. Students are encouraged to apply reading in learning another course.	3.57	0.76	3
12. Students were aware of using reading strategies in their real lives.	3.65	0.62	2
Overall	$\overline{X}$ = 3.74 S.D.= 0.43		

6. Summarizing	"Hertford House is a special place where children and young adults from all over the world get the best possible start in life." (Hertford House is regarded as a good school where children all around the world will get the best things of their lives. The passage says this.)	

c. Analysis of students' opinion on TSI training

After having participated in TSI training, students were asked to answer a questionnaire. The findings from the open-ended questions were divided into four parts: Instructor, Reading activities, Learning environment, and Usefulness. The data obtained were used to analyse the sample's opinions toward the TSI in terms of the mean score and the standard deviation as shown in Table 4.

TABLE 4: Students' Opinion on TSI training

Statement	$\overline{X}$	S.D.	Ranking
Instructor	$\overline{X}$ = 3.65 S.D.= 0.59		
1. The instructor well prepared the teaching.	3.23	0.99	3
2. The instructor explained and modelled six reading strategies clearly.	3.67	0.87	2
3. The instructor activated the students' opportunity to practice in reading.	4.06	0.45	1
Reading activities	$\overline{X}$ = 3.53 S.D.= 0.94		
4. The reading activities challenged students' thinking.	3.50	0.99	2
5. All reading texts were interesting.	4.02	0.83	1
6. The reading activities encouraged students' thinking.	3.09	0.44	3
Learning environment	$\overline{X}$ = 3.77 S.D.= 0.76		
7. Students were active in reading.	3.54	0.98	2
8. Students had an opportunity to discuss about issues they did not understand.	4.34	0.02	1
9. Students had an opportunity to share their idea freely.	3.43	0.23	3
Usefulness	$\overline{X}$ = 3.07 S.D.= 0.76		
10. Students gained more reading strategies.	3.88	0.98	1

For the instructor, students showed the highest opinion which indicated that the instructor had given the students' opportunity to practice in reading skills $\overline{X}$ 4.06 (S.D.0.45). For reading activities and learning environment, students said that they were good. The mean scores were $\overline{X}$ 4.02 (S.D. 0.83), and $\overline{X}$ 4.34 (S.D. 0.02) respectively. The students had the highest opinion level that all reading texts were interesting. The students also had an opportunity to discuss about issues they did not understand. For the usefulness of TSI, students stated that they gained more reading strategies $\overline{X}$ 3.88 (S.D. 0.98). In conclusion of the students' opinion toward the TSI on English reading for the over all of opinions were $\overline{X}$ 3.74 (S.D. 0.43). Besides, the analyses of the comments given by the case students revealed that the students had very good opinions towards both reading English and the TSI. The teacher's demonstration and practice were adequate and clear. Moreover, the students were more enjoyable reading English texts. The supportive help of teacher was also provided appropriately to the students. TSI techniques help the students to solve problems when they encountered the difficult passages. Students had the opportunity to practice appropriate reading strategies. Thus, it can be concluded that the TSI enhanced students' reading comprehension ability and their use of reading strategies.

DISCUSSIONS

With regards to any development occurring throughout the implementation of the TSI, there were some factors why the students'

reading comprehension ability was improved. Those contributive factors could be discussed as follows:

1. The teacher's demonstration of the use of strategies

This feature of the TSI encourages the students to be aware of the use of strategies through the teacher's demonstration. At the stage of the teacher's demonstration, the students introduced and demonstrated the use of strategies to deal with the passages. They also had a chance to practice deploying the suggested strategies to comprehend texts as a whole class and in group before completing the individual tasks. This activity also provides a chance for the students to make clear their understanding about how to use the strategies. It is noted that the teacher's demonstration of the use of strategies is considered as the ascertainment of the students' reading experiences. It also ensures that the students have a better understanding of what they are supposed to do instead of immediately performing on their own (Harmer, 2001). Moreover, modeling helps the students learn the variety of the strategies and skills. It also heightens the students' engagement and ownership in the learning process, clarifies students' understanding, and encourages students' confidence (Hogan and Pressley, 1997; Larkin, 2002). The teacher's demonstration of the use of strategies was considered very important and powerful (Braaksma et al., 2004). This is consistent with the suggestion of Palinscar and Brown (1986), noting that the teacher's modeling is one of the meaningful activities that helps the students succeed in learning.

2. Reading strategies

The results of the study shows that the students frequently used six reading strategies after being trained using TSI which consist of activating prior knowledge, predicting, questioning, clarifying, text structure analysis, and summarizing. This result answers the first research question about reading strategies which are frequently used by the students to enhance their reading comprehension. In addition, this study also supports previous study in that there were several strategies need to be developed by the students since these strategies help them to enhance their reading skills but rarely used in their daily reading activities. Regarding to the first research question about the most helpful reading strategies of TSI to be employed by the students especially when they answer questions in a reading comprehension test; it found that the students successfully answered questions in reading comprehension test, used six reading strategies. Six reading strategies of TSI considered helpful for students. First, activating background knowledge strategy helps students to improve both understanding and recall of text content. Second, predicting can be used as students read to test whether or not the text is making sense. Third, questioning can be viewed as the strategy that drives all of the other strategies. Therefore, helping students develop the ability to ask and answer questions of themselves and the text before, during, and after reading is an important part of process of becoming strategic readers. Forth, clarifying involves the ability of readers to make mental images of a text as a way to understand processes or events they encounter during reading. This ability can be an indication that readers understand a text. Fifth, text structure analysis helps students identify the organizational structure of a text facilitate the comprehension process. Finally, summarizing is an important strategy because it can enable readers to recall text quickly. It also can make readers more aware of text organization, of what is important in a text and of how ideas are

related. This is consistent with the previous study suggested that the students have to use reading strategies of TSI which will help them to solve the problems and help them to improve their reading ability significantly (Gillet and Temple, 1994; Honig et al., (2000); Levin and Pressley, 1981).

CONCLUSIONS

The conclusion of the study is based on the answers to each research question as follows:

1. Does Transactional Strategies Instruction affect Thai undergraduate students' reading comprehension?

2. What are Thai undergraduate students' opinions to Transactional Strategies Instruction?

The participants comprised of 30 third year students, majoring in English from the Faculty of Education, Roi-Et Rajabhat University, who enrolled in Reading II (ENG2106) course of the second semester of academic year 2014. Prior to the research period, the reading comprehension test was distributed to the students in order to assess their reading comprehension. Think aloud was used to identify the case students' uses of reading strategies. All the participants joined the training of the TSI. The training was three hours per week. The training included 10 sessions. At the end of the training, the participants were asked to take the posttest which was the same as the pretest. In addition, think aloud protocols were collected, and a questionnaire was administered.

In order to answer the two research questions, the means scores obtained from the pre and post reading comprehension tests was statistically analyzed by means of arithmetic means, standard deviations, and t-test to compare the differences in the students' reading comprehension abilities and their reported use of reading strategies before and after receiving the TSI. Besides, the additional findings from the think aloud protocol was transcribed and analyzed qualitatively to compare students' reading strategies before and after using TSI.

The questionnaire was also analyzed by means of arithmetic means and standard deviations in order to collect their opinions toward using TSI to enhance their reading comprehension abilities.In response to research question 1, Does Transactional Strategies Instruction affect Thai undergraduate students' reading comprehension?, the results in Table 1 indicated that there were significantly higher average scores on the post reading comprehension test than the pre reading comprehension test at p < .05. Students improved their reading comprehension ability after receiving TSI. That is, the TSI significantly assisted students to comprehend the reading comprehension test. Additionally, the result from the think aloud protocol in Table 2 showed that the students were not able to use appropriate reading strategies in earlier weeks before training the TSI. Nevertheless, they were gradually able to apply the strategies with more confidence and relief in the later weeks. This was because the students were provided opportunities to practice more strategies of the TSI. At first, the students could not complete the reading tasks due to the lack of reading experience. In contrast, they could finish the reading tasks timely when their confusion was clarified through the discussion and feedback from the teacher. Furthermore, it was because they had more chance to practice in the stages of the whole class and group performances before carrying out the tasks individually. Noticeably, the provided

scaffolding was gradually taken away when the students completed the tasks in group and then individually. This means that reading ability of the students increased after the implementation of the TSI. It can be concluded that practicing the TSI encouraged students use more reading strategies.

Results from the research question 2, What are Thai undergraduate students' opinions to Transactional Strategies Instruction?, in Table 4 showed that after using the TSI method, all students expressed their opinions that the students had positive opinions towards implementing the TSI in teaching reading comprehension. They learned cooperatively with peers in sense of helping together to find the answers through the discussion. Their needs in the scaffolding from teacher and peers were gradually decreased when completing individual tasks. It was also found that they were confident in using the strategies and satisfied with their performance in each reading session. In addition, it revealed that the instructional activities were organized appropriately for the level of students. The students were first introduced and demonstrated the use of the reading strategies before practicing in group and individually cooperation from teacher and peers throughout the reading process. It also motivated their satisfaction and confidence to read the passages and employ different sets of strategies to complete the tasks. Additionally, they considered that their reading ability had increased after the experiment.

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