การพัฒนารูปแบบการสอนการอ่านเพื่อความเข้าใจ โดยใช้ยุทธวิธีการสอนแบบแลกเปลี่ยนบทบาทและแผนภูมิความหมายเพื่อส่งเสริมความสามารถในการอ่านเพื่อความเข้าใจของนักศึกษาระดับปริญญาตรี

The Development of the Reading Comprehension Instructional Model through Reciprocal Teaching and Semantic Mapping Strategies to Enhance Reading Abilities of Undergraduate Students

ฉลอง รัตนพงษ์*
Chalong Rattanapong
วิสาข์ จัติวัตร์**
Wisa Chattiwat

บทคัดย่อ

　　　　การวิจัยนี้มีวัตถุประสงค์เพื่อ 1) พัฒนาและหาประสิทธิภาพของรูปแบบการเรียนการสอนการอ่านเพื่อความเข้าใจ โดยใช้ยุทธวิธีการสอนแบบแลกเปลี่ยนบทบาทและแผนภูมิความหมายเพื่อส่งเสริมความสามารถในการอ่านเพื่อความเข้าใจของนักศึกษาระดับปริญญาตรี 2) ประเมินประสิทธิผลของการใช้รูปแบบการสอนการอ่านเพื่อความเข้าใจ โดยใช้ยุทธวิธีการสอนแบบแลกเปลี่ยนบทบาทและแผนภูมิความหมายโดย 2.1) เปรียบเทียบความสามารถในการอ่านเพื่อความเข้าใจก่อนและหลังเรียนและ 2.2) ความพึงพอใจต่อรูปแบบการสอน กลุ่มตัวอย่างคือนักศึกษาชั้นปีที่ 1 สาขาวิชาอังกฤษธุรกิจ มหาวิทยาลัยราชภัฏสุราษฎร์ธานี จำนวน 30 คน ภาคการศึกษาที่ 1 ปีการศึกษา 2557 เครื่องมือที่ใช้มีแผนการเรียนรู้ แบบสัมภาษณ์ แบบทดสอบ แบบสอบถามความพึงพอใจ การวิเคราะห์ข้อมูลใช้การทดสอบที ร้อยละ ค่าเฉลี่ย และส่วนเบี่ยงเบนมาตรฐาน การวิจัยนี้เป็นแบบผสมผสานวิธีโดยขณะรวบรวมแบบสอบถามเพื่อทำการวิจัยเชิงปริมาณจะมีการเก็บข้อมูลเชิงคุณภาพด้วยการสัมภาษณ์วิเคราะห์ร่วมด้วย ผลการวิจัย พบว่า 1) รูปแบบ PMPC Model ที่พัฒนาขึ้น ผู้เชี่ยวชาญ 5 ท่าน ประเมินว่าดีมาก 2) ประสิทธิผลของรูปแบบพบว่า 2.1) คะแนนเฉลี่ยความเข้าใจการอ่านหลังทดลองใช้รูปแบบของผู้เรียนสูงกว่าก่อนเรียนอย่างมีนัยสำคัญทางสถิติที่ระดับ .05 และ 2.2) ผู้เรียนพอใจมากหลังเรียนและมีผลทำให้ผู้อ่านเป็นผู้อ่านอิสระได้

---

* นักศึกษาปริญญาปรัชญาดุษฎีบัณฑิต สาขาวิชาหลักสูตรและการสอน คณะศึกษาศาสตร์ มหาวิทยาลัยศิลปากร

** อาจารย์ที่ปรึกษา รองศาสตราจารย์ ดร. อาจารย์ประจำหลักสูตร ภาควิชาหลักสูตรและวิธีสอน คณะศึกษาศาสตร์ มหาวิทยาลัยศิลปากร

………

Abstract

This study is aimed to: 1) investigate development of the Reading Comprehension Instructional Model through Reciprocal Teaching and Semantic Mapping Strategies to Enhance Reading Abilities of undergraduate students; 2) evaluate the effectiveness of the Reading Comprehension instructional model by 2.1) the reflection of students while learning reading comprehension with the Reciprocal Teaching strategy and the Semantic Mapping strategies; 2.2) the students' satisfaction with the Reciprocal reading strategies and the Semantic Mapping strategies via survey. The subjects were a group of 30 first- year students majoring in Business English of Suratthani Rajabhat University, during the first academic year 2014. The instruments used for this study were lesson plans, interviews, a pre-post reading comprehension test and a set of questionnaires for investigating student satisfaction with the reading lessons. The data were analyzed by t-test; percentage, mean and standard deviation. Mixed methods research was employed. The results of the study revealed that: 1) the developed PMPC Model was rated at a very good level by five experts. The lessons were efficient at an accepted level. 2) The effectiveness of the PMPC Model indicated that 2.1) the average score of students' reading comprehension after using the model was higher than the average score before using the model and the average score was significantly different at .05 level; 2.2) the students' satisfaction with the PMPC MODEL was highly positive and they can be the independent readers.

Keywords : Reading Comprehension/ Reciprocal Teaching/ Semantic Mapping Strategy/ Reading Ability

Introduction

In Thailand, English is taught as a foreign language, and the purpose of learning English is for communication. To communicate efficiently, learners need the four skills of listening, speaking, reading, and writing, but of all of these four skills, reading is regarded as the most vital and necessary for students in both classroom content and extracurricular environment (Carrell, 1989; Grabe & Stoller, 2002). In a higher education classroom, Thai college and graduate students need efficient reading skills to comprehend a mass of reading material from various sources related to their studies.

By considering Rajabhat Surattani students' reading ability, the researcher would like to explore a variety of reading strategies to improve their reading comprehension.

From the researcher's teaching experience, she could assume that the students did not have purpose for their reading so they just read enough to pass the course. Even though some students have a good attitude towards reading English and their English achievements are higher than their classmates, they are still discouraged by the difficulty of text. Most of them cannot succeed in comprehending the text they read, so some of them think the reading is boring and some of them lack confidence and are afraid of reading a long expository text. Several study results of researchers and scholars found that the learners had an inefficiency to comprehend content using effective strategies (Lederer, 2000; Greenway, 2002; Oliver, 2009). The crucial problem is the teaching approach because almost all learners are familiar with traditional teaching in which teachers teach details and grammar more than reading comprehension skills (Gradman, 1991). Therefore, teachers have to find more strategies to support their students. They can support readers to read unfamiliar or difficult content and support readers' vocabularies by emphasizing reading strategies (Rivard and Yore, 1992). The Reading comprehension was very crucial;

therefore, the researcher chose the two appropriate reading strategies; the Reciprocal Teaching and the Semantic Mapping Strategy for her students.

The Reciprocal Teaching is based on collaboration learning that can support the reading comprehension learning. Another is based on Vygotsky's social theory "the zone of proximal development (ZPD)" Vygotsky believed that learners can learn and he focused on two developmental levels of learners' learning which were 'actual' and 'potential' (Richard-Amato, 2003). Therefore, the zone of proximal development is occupied between 'actual' and 'potential' abilities. The learners reached their potential through solving problems with other people who have higher ability than them such as the teacher and friends who collaborate with more capable peers (Richard-Amato, 2003). Related with students at Suratthani Rajabhat University, one thing that could motivate them to accomplish reading the long texts is group-learning strategy because those students are naturally strongly influenced by the peer pressure within their group. They always do everything in a group and they also need the teachers to guide them closely in how to learn reading from their texts. With this concept of knowledge constructivism, learners acquire knowledge better though collaboration with more learned peers or adults in new areas of learning (Vygotsky, 1987).

....

The Semantic Mapping Strategy is a very important tool to assist students think in a systematic way because it is "a graphic arrangement showing how the major and minor ideas are related in written work. With this reason, the researcher choses this strategy to support the students understanding of reading information from written texts. Moreover, the Semantic Mapping Strategy can help students identify their thinking model following reading text structures.

Theoretical Framework of the Model

The Reading Comprehension Instructional Model through Reciprocal Teaching and Semantic Mapping Strategies was composed of these principle theories: Instructional Model System, Teaching English as the second language, Cognitive and Metacognitive theory, Critical Reading, Reciprocal Teaching, Semantic Mapping Strategy, Collaborative Learning Theory and Scaffolding.
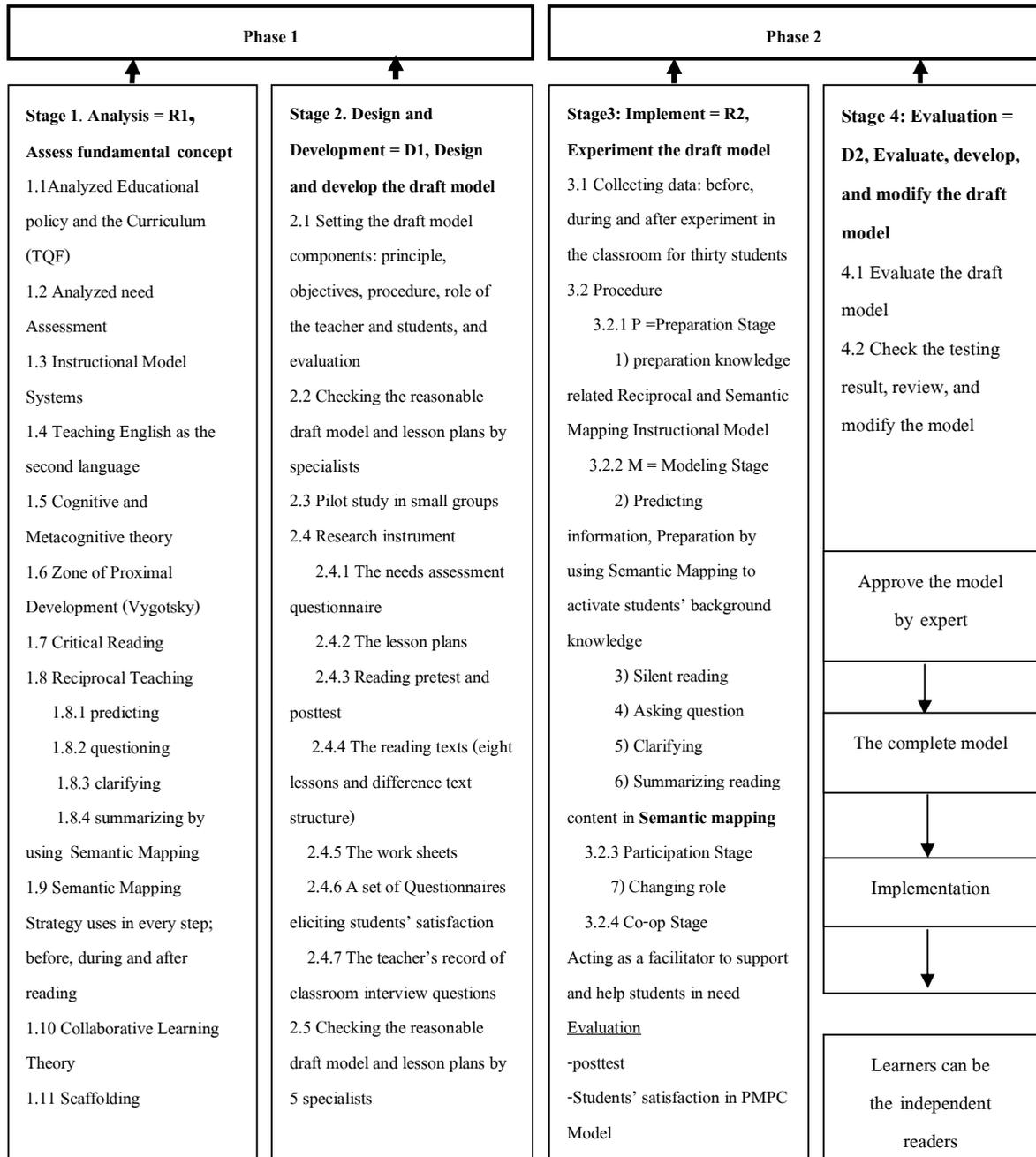
Phase 1

Phase 2

Stage 1. Analysis = R1, Assess fundamental concept

1.1 Analyzed Educational policy and the Curriculum (TQF)

1.2 Analyzed need Assessment

1.3 Instructional Model Systems

1.4 Teaching English as the second language

1.5 Cognitive and Metacognitive theory

1.6 Zone of Proximal Development (Vygotsky)

1.7 Critical Reading

1.8 Reciprocal Teaching

   1.8.1 predicting

   1.8.2 questioning

   1.8.3 clarifying

   1.8.4 summarizing by using Semantic Mapping

1.9 Semantic Mapping Strategy uses in every step; before, during and after reading

1.10 Collaborative Learning Theory

1.11 Scaffolding

Stage 2. Design and Development = D1, Design and develop the draft model

2.1 Setting the draft model components: principle, objectives, procedure, role of the teacher and students, and evaluation

2.2 Checking the reasonable draft model and lesson plans by specialists

2.3 Pilot study in small groups

2.4 Research instrument

   2.4.1 The needs assessment questionnaire

   2.4.2 The lesson plans

   2.4.3 Reading pretest and posttest

   2.4.4 The reading texts (eight lessons and difference text structure)

   2.4.5 The work sheets

   2.4.6 A set of Questionnaires eliciting students' satisfaction

   2.4.7 The teacher's record of classroom interview questions

2.5 Checking the reasonable draft model and lesson plans by 5 specialists

Stage3: Implement = R2, Experiment the draft model

3.1 Collecting data: before, during and after experiment in the classroom for thirty students

3.2 Procedure

   3.2.1 P = Preparation Stage

    1) preparation knowledge related Reciprocal and Semantic Mapping Instructional Model

   3.2.2 M = Modeling Stage

    2) Predicting information, Preparation by using Semantic Mapping to activate students' background knowledge

    3) Silent reading

    4) Asking question

    5) Clarifying

    6) Summarizing reading content in **Semantic mapping**

   3.2.3 Participation Stage

    7) Changing role

   3.2.4 Co-op Stage

Acting as a facilitator to support and help students in need

Evaluation

-posttest

-Students' satisfaction in PMPC Model

Stage 4: Evaluation = D2, Evaluate, develop, and modify the draft model

4.1 Evaluate the draft model

4.2 Check the testing result, review, and modify the model

Approve the model by expert

↓

The complete model

↓

Implementation

↓

Learners can be the independent readers

Figure 1: Conceptual frameworks of research and development

The relationship between Reciprocal Teaching and Semantic Mapping Strategies

Reciprocal Teaching

There are four key strategies that teacher and students use to share their ideas and their roles. These four key strategies are predicting, questioning, clarifying and summarizing (Palincsar & Brown, 1986). Prediction involves clues by using learners' background knowledge and prior experiences. The objective is to link what readers have already known about the topic and the new knowledge. Title and graphic are the first clues to what the text is about. Questioning can construct questions about the main idea or important information to check reader comprehension of the content (Anderson, 2000). Clarification occurs when readers have confusion or comprehension breakdowns, and they try to check meaning. There are two ways to clarify: reference and vocabulary (Lederer, J. 2000). In summarizing the reader can express the main idea of each paragraph, and this strategy can encourage the reader to use the title, sub-title and the detail from each paragraph to summarize the content to get the main idea of the entire article and get the whole picture (Greenway, 2002).

The Semantic Mapping Strategy

Semantic mapping is "a graphic arrangement showing how the major and minor ideas are related in written work. The map consists of nodes which can be drawn as circles, rectangles or squares containing keywords or phrases and connecting links in the form of lines or arrows drawn between the nodes" (Sinatra, Gemake & Morgan 1986: 4). Heimlich & Pittelman (1986) suggested the way to apply the Semantic Mapping techniques in reading activities before and after reading following these reading objectives:

1. to access the readers' background knowledge

2. to know key words in the text.

3. to transfer the background knowledge and the new knowledge in the text

4. to comprehend the text.

The Semantic Mapping strategy is a very crucial technique to help readers connect the key concepts, to differentiate the major from the minor ideas by identifying supporting ideas using text structures. This technique is utilized in reading activities before, during and after reading, based on the Formal Schema theory. It could help the reader better understand the text (Wisa Jattiwat, 2000 : 145). Therefore, many studies of researchers and scholars assert that using the Semantic Mapping strategy to summarize the text in every step of reading comprehension can support the reader both in predicting a topic before reading and making predictions on each paragraph until readers finish the reading content. The last crucial point is

………………………………………………………………………………………………………

readers can summarize the whole picture of the text by using this strategy.

Therefore, along with Reciprocal Teaching in this study the researcher uses the Semantic Mapping strategy in every step of reading; before, during and after. The researcher uses the Semantic Mapping for summarizing every paragraph. This strategy can help readers to comprehend the passage step by step. And Semantic Mapping is used in summarizing the whole picture of the passage.

Purposes of the Study

The purposes of this experimental study were to: 1) investigate development of the Reading Comprehension Instructional Model through Reciprocal Teaching and Semantic Mapping Strategies to Enhance Reading Abilities of students of Suratthani Rajabhat University after implementing PMPC Model. 2) evaluate the effectiveness of the Reading Comprehension instructional model by 2.1) the reflection of students while learning reading comprehension with the Reciprocal Teaching strategy plus the Semantic Mapping strategy; 2.2) the students' satisfaction with the Reciprocal reading strategy plus the Semantic Mapping strategy via survey.

Research Methodology

This research was carried out to study the effects of Reciprocal Teaching and Semantic Mapping Strategy on the English reading comprehension of the first year students of Suratthani Rajabhat University, Surat Thani province. It also examined whether Reciprocal Teaching and Semantic Mapping strategy enhanced students' English reading ability. The research methodology used in this study consisted of a mixed method approach that combined both quantitative and qualitative data collection and analysis.

The Research Design and Research Procedure

The research design was experimental with one-group pretest-posttest. A model of Reciprocal Teaching and Semantic Mapping Strategy for reading instruction was constructed to investigate its effects on the participants' reading comprehension. The students were instructed to read through Reciprocal Teaching and Semantic Mapping Strategy; the researcher selected those strategies to be a model because they are suitable for the students. Its strategies can be a means of aiding them to construct a meaning from the text as well as of monitoring of

their reading to ensure that they in fact understand what they read from learning the reading technique from the teacher and their friends within their group.

The students were instructed by Reciprocal Teaching and Semantic Mapping Strategies. The teacher instructed the experimental group for 8 weeks. During this period, the qualitative data was collected by interviewing them (Focus Group) about their reading strategies and their opinion related to the PMPC model. After that a posttest was administered to investigate whether the participants had improved their reading comprehension and their reading ability. The last step was the experimental group answered a questionnaire that was used to measure the students' satisfaction with the Reciprocal Teaching and Semantic Mapping Strategies. All data obtained from the above- mentioned research instruments were analyzed both quantitatively and qualitatively in relation to the research objectives.

Sample group

The research sample of this study consisted of 30 first year students (24 females and 6 males) of Suratthani Rajabhat University, in Business English major who were chosen at random from 160 participants (four classrooms). They undertook Basic English reading during the first academic year 2014. They were all native Thai speakers.

Research Instruments

Research instruments were rated by three experts in the field of teaching reading strategies and curriculum and instruction. Then the instruments were corrected and selected by the index of item-objective congruency (IOC) ≥ 0.67.

1. The reading comprehension test, for quantitative data, with 50 items of multiple choice questions was used for students' pre-test and posttest to compare their reading ability scores.

2. The lesson plans, for the Reciprocal Teaching and Semantic Mapping strategies were used for classroom' activities.

3. The reading texts (eight lessons and different text structure) and the work sheets

4. A set of questionnaires eliciting students' satisfaction

5. The teacher's record of classroom interview questions and observation notes.

Data collection

Data related to student outcomes and achievement were collected from three sources: the effectiveness of the teaching Model, the students' questionnaire responses and the reading achievement test. The Teaching Model was created based on many principle theories. The

effectiveness of the model was evaluated by 5 experts and from student pretest and posttests of the pilot student group. The students' questionnaire achievement is for reflecting the students' attitude to Reciprocal Teaching and Semantic Mapping Strategy after finishing the experiment. The reading test was adapted from the reading achievement test from many fields of content following the TQF (Thai Qualifications Framework for Higher Education, TQF: HEd) in year 2009. Instrument materials: a total of eight passages came from a variety of resources which were available for instructional purposes.

Data analysis

The mean, standard derivation, percentage and t-test were used to analyze the data. The descriptive part was identified from the qualitative information (by interviewing) from the study.

Research findings

1. The synthesized reading comprehension instructional model, called the PMPC model, through Reciprocal Teaching and Semantic Mapping Strategies to Enhance Reading Abilities of the students of universities. It was comprised of five components: principles, objectives, procedure, roles of teacher and the students and evaluation. The procedure was comprised of four steps: Preparation (P), Modeling (M), Participation (P) and Cooperation (C). The model was rated by five experts who evaluated the instructional model at a very high level about the whole picture and were either high or very high about each function following in table 1. The results are shown in Table 1 below. Also, the lesson plans were efficient at an accepted level.

Table 1: Effectiveness of the teaching model

Issues	Overall mean and standard deviation		Degree	Rank
1. **Model Principle**	**4.40**	**.50**	**Very high**	**1**
1.1 Principle and theories	4.20	.45	Very high	(3)
1.2 Functions of Model appropriate with theories	4.60	.55	Very high	(2)
2. **Model Objective**	**3.55**	**.54**	**Very high**	**4**
2.1 content	4.20	.45	Very high	(3)
2.2 activity step	4.40	.70	Very high	(2)
2.3 principle and theory	4.80	.45	Very high	(1)
2.4 evaluation	4.60	.55	Very high	(2)

Issues	Overall mean and standard deviation		Degree	Rank
3. Procedure	**3.53**	**.48**	Very high	**5**
3.1Completely appropriate for teaching	3.20	.45	high	(7)
3.2 Suitable in teaching steps	3.80	.45	Very high	(4)
3.3 Evaluation steps suitable	3.60	.55	Very high	(5)
4. Teaching and Learning Procedure	**3.80**	**.50**	**Very high**	**2**
4.1 Appropriate teacher's role with learners	4.20	.45	Very high	(3)
4.2 Materials are suitable	3.40	.55	high	(6)
5. Suitable Evaluation	**3.60**	**.55**	**Very high**	**3**
5.1 Evaluation in harmony with the theory of the model	3.60	.55	Very high	(5)
TOTAL	**3.78**	**.51**	**Very high**	

Table 1 shows the effectiveness of the teaching model. It can be seen that the Model principle is very high and its rank is the first (excellence). This result indicates that the PMPC model was analyzed and synthesized from the principles, experts' suggestion, theories and researches so it is the highest and very suitable. The second highest is the role of Teaching and Learning Procedure. It is also very high. The lowest is the Procedure. This might be because it is the new model for students. Therefore, they have to take a time to practice following their teacher.

2. The results from the pretest and posttest were analyzed to answer the research aim 2. The findings were based on the mean scores of these tests for experimental groups. Analysis of the data shows significant change in students' achievement from pretest to posttest. They developed their reading skill and knowledge from the lesson as showed in Table 2.

Table 2: Students reading comprehension achievement

Sample Group	Numbers	Full scores	Mean	Std. Deviation	t-test
Pretest	30	50	20.60	4.73	15.33*
Posttest	30	50	33.37	4.74	

Significant = .05*

……

2.1 The hypothesis aimed to investigate the effectiveness of Reciprocal Teaching and Semantic Mapping Strategies teaching Model on the English reading comprehension of students of Suratthani Rajabhat University, Surat Thani province, Thailand. Data analysis revealed a significance at .05*of improved reading ability among students which means that the Reciprocal Teaching and Semantic Mapping Strategies approach developed their reading skills. The means score of the posttest is higher than the pretest, and the difference between pretest and posttest was statistically significant.

2.2. The hypothesis investigated the reflection on students' satisfaction after learning reading comprehension with the Reciprocal Teaching Strategy and Semantic Mapping Strategy.

Table 3: Students' satisfaction with the Reciprocal Teaching and the Semantic Mapping Strategies via survey.

Steps	Issues	Overall mean and standard deviation		Degree	Rank
1	P= Preparation Stage	4.40	.56	high	1
2	M= Modeling Stage	4.15	.76	high	4
3	P= Participation Stage	4.22	.76	high	2
4	C= Cooperation Stage	4.16	.69	high	3
5	Content	3.96	.72	high	5
6	Learning Activity	3.88	.84	high	7
Total		**4.04**	**0.72**	**high**	

From Table 3, after teaching, all students were very highly satisfied with the teaching activities of the instructional model. It was obviously shown that students preferred to study with this instructional model.

During instruction, the students in the experimental group, which were taught through reciprocal teaching, recorded in interviews the way they applied the reading strategies they used. The results from this data supported the quantitative data collected from the pretest and posttest scores of English reading comprehension.

For example: Students' responses with Reciprocal Teaching (four key strategies):

Prediction:

T: When you look at the title, what is your prediction about this paragraph?

Ss: The **PUPPETS**

T :   Why do you think that?

Ss : Look at the pictures?

Questioning:

T: From the text, where were the first puppets used?

Ss: India.

T: How long have they been using these puppets?
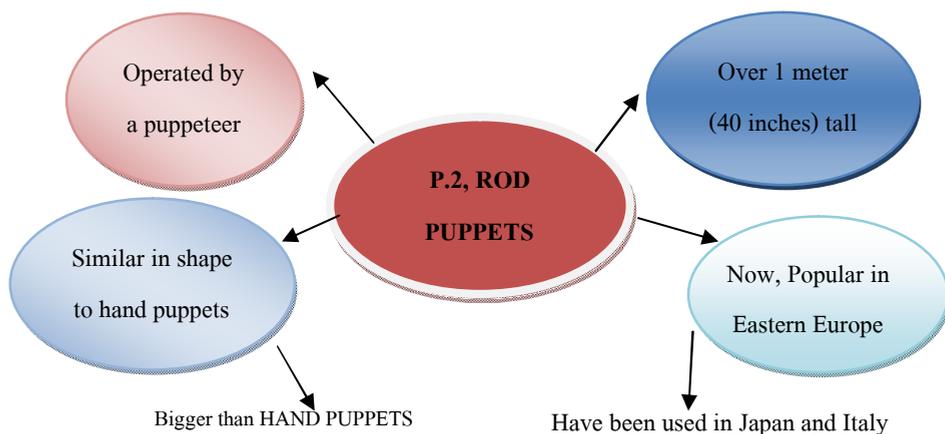
Ss: More than 4,000 years.

Clarifying:

Ss : My question is what the word "costume" means.

T: It means the clothes and things used for decorating the puppets.

Summarizing:

In this step it was very difficult for them; they could answer in Thai more than in English. About structural mapping, the leaders of their groups were the advanced students.

The leader and members summarize a paragraph by using semantic mapping.

Operated by a puppeteer

Over 1 meter (40 inches) tall

P.2, ROD PUPPETS

Similar in shape to hand puppets

Now, Popular in Eastern Europe

Bigger than HAND PUPPETS

Have been used in Japan and Italy

……

Discussion of the findings

This research procedure comprised of two phases.

1. In phase 1, the researcher studied the context, background, concepts of a reading comprehension model through Reciprocal Teaching and the Semantic Mapping Strategy, and the proposed model was verified by five experts. The model is called PMPC Model, comprised four steps: Preparation (P), Modeling (M), Participation (P) and Cooperation (C). The model was rated by five experts, and can be interpreted as a very high level. The implementation of the model in the classroom, all the qualitative data corresponded to quantitative data. Therefore, the lesson plan efficiency was at the accepted level. In phase 2, the model was implemented in the classroom with the Research and Development. The results of the study revealed that the different average score of students reading comprehension pre-test and posttest was significantly higher at the .05 level and students could interpret and synthesize better. This might result from the theories and concept studies that scholars synthesized such as models of teaching, schema theory, the concept of Reciprocal Teaching and Semantic Mapping strategy. According to the Reciprocal Teaching students have to predict from their background knowledge. Prediction involves clues by using learners' background knowledge and prior experiences. The objective is to link what readers have already known about the topic and the new knowledge. Title and graphic are the first clues to what the text is about. Questioning can construct questions about the main idea or important information to check reader comprehension of the content (Andre & Anderson, 1979). Clarifying is one of the reciprocal reading strategies that students were taught in class when students have confusion or comprehension breakdowns, and try to check the meaning. This way can help them to clarify: reference and vocabulary that is agreed by Lederer (2004). In this step, the teachers and peers could help them. Therefore, this concept is supported by collaboration learning and Vygotsky's social theory "the zone of proximal development". Vygotsky believed that learners can learn and he focused on two developmental levels of learners learning which were 'actual' and 'potential'. In summarizing step, Greenway (2002) claimed that the Semantic Mapping strategy was used for catching the main idea of each paragraph, and this strategy can encourage the reader to use the title, sub-title and the detail from each paragraph to summarize the content.

2. After learning reading comprehension with the PMPC model, students had a high satisfaction and enjoyment in reading English. They said that learning through the PMPC model was very crucial, interesting, and effective

………

instruction. They could improve their reading comprehension and had improved English skills. Particularly, they could think step by step after using Semantic Mapping strategy. This finding was in accordance with Sinatra, Gemake and Morgan (1986). Hence, it is shown that this instructional model is very useful in encouraging independent readers.

Research recommendations for further study

In this study, the PMPC model was designed for undergraduate students. However, it can be used with other levels of learners who desire to improve their reading skill. The online reading by using Reciprocal Teaching and Semantic Mapping strategies should be developed for enhancing reading as well.

Figure 2: PMPC Model

………………………………………………………………………………………………………

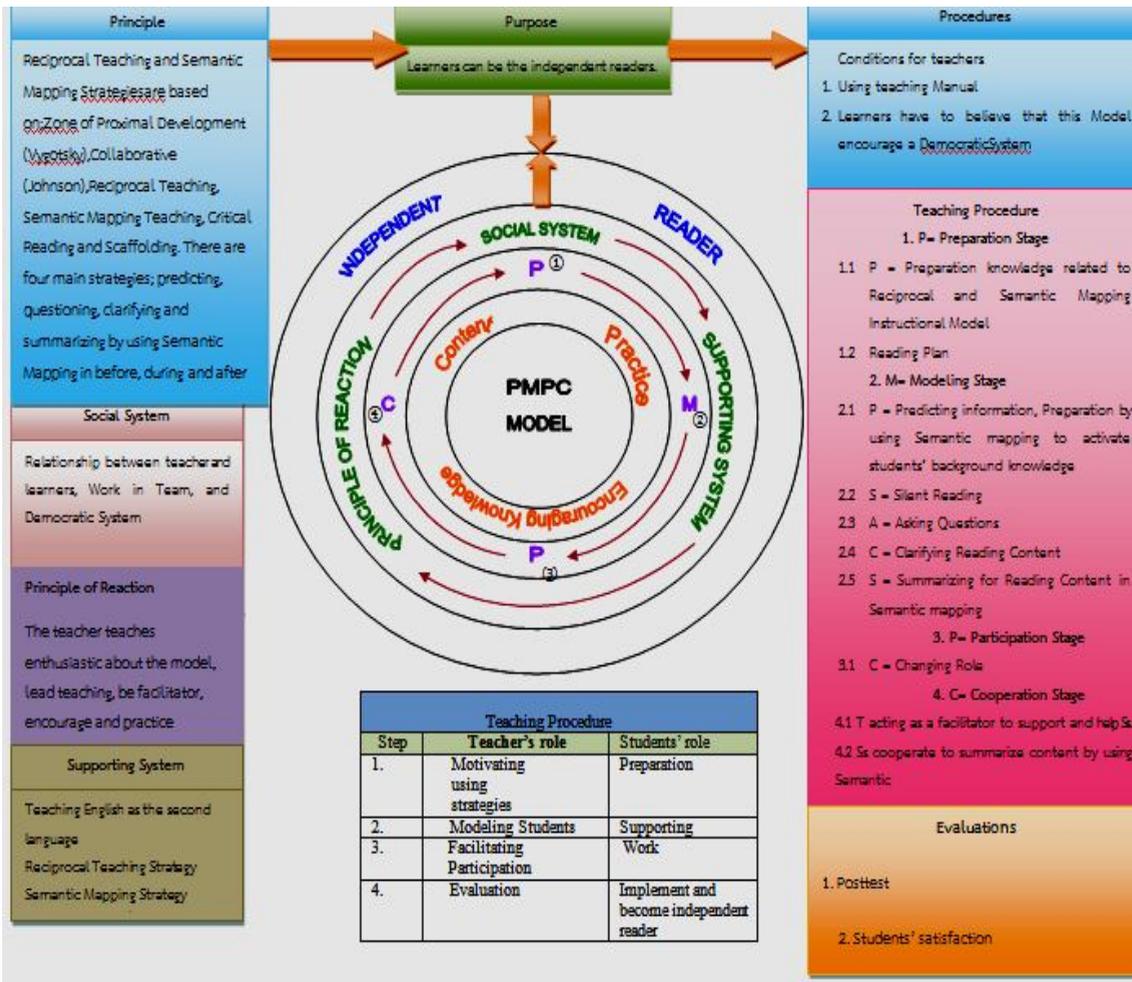**References**

Thai

วิสาข์ จัติวัตร์. (2543). **การสอนอ่านภาษาอังกฤษ**. นครปฐม : สถาบันวิจัยและพัฒนา มหาวิทยาลัย
    ศิลปากร.

English

Aebersold, J.A., & Field, M.L. (1997). **From reader to reading teacher**. Cambridge: Cambridge
    University Press.

Alderson, J.C. (2000). **Assessing reading,** Cambridge: Cambridge University Press.

Alderson, N.J. (2003). **Scrolling, clicking and reading English**: Online reading Strategies in a
    second/ foreign language. The Reading Matrix, 3 (3), retrieved May 16, 2006, from
    http://www.lib.uni.com/dissertations/fullcit/3073547.

Brown, A. L; Palincsar, A.S. & Armbruster B.B. (2004). **Instructing Comprehension- Fostering
    Activities in Interactive Learning   Situations**. In R.B. Ruddell & N.J. Unrau,
    Theoretical Models and Processes of Reading (pp. 780-806). Newark: International Reading
    Association, Inc.

Carrel, P.L. (1989). "Metacognitive awareness and second language reading". **Modern Language
    Journal**, 73: 120 - 133.

Goodman, K. (1967). "Reading: A psycholinguistic guessing game". **Journal of the reading
    Specialist,** 6 (1): 126 - 135.

Grabe, W. & Stoller, F. (2002). **Teaching and Researching Reading**. New York: Longman.
    Gradman, H. & Hannania, (1991). "E-Learning background factors and ESL proficiency".
    Modern Language Journal, 75(1): 39-51.

Greenway, C. (2002). "The process pitfalls and benefits of implementing a reciprocal teaching
    Educational intervention to improve reading comprehension of a group of year 6 Pupils"**.
    Psychology in Practice,** 18(2): 113 - 138.

Heimlich, J. E., & Pittelman, S. D. (1986). **Semantic mapping. Newark**, DE: International Reading
    Association.

………………………………………………………………………………………………………

Johnson, G., & Catherine, M. (1998*)*. **Strategy training for poor reading Comprehensions: Strengthening the visual code with visualizing/ verbalizing versus strengthening the verbal code with reciprocal teaching**. Published Ph.D. dissertation, University of Colorado, Boulder, Colorado, United States.

Lederer, J. (2000). "Reciprocal teaching of social studies in inclusive elementary classrooms". **Journal of Learning Disabilities**, 33(1): 91 - 107.

Nunan, D. (1990*)*. **Second Language Teaching and Learning**. Boston: Heinle & Heinle Publisher.

Richard-Amato, P. A., (2003). **Making it happens: From interactive to participatory language teaching: theory and practice**. White Plains, NY: Pearson Education.

Rivard L, Yore L, D., (1992). **Review of reading comprehension instruction:** 1985 - 1991. Paper presented at the Annual Meeting of the National Association for Research in Science Teaching, retrieved from Oliver, K. (2009), Boston.

Oliver, K. (2009). **An Investigation of Concept Mapping to Improve the Reading Comprehension of Science Texts. Springer Science Business Media, LLC.**

Sinatra, R&Stahl - Gemake, J. & Morgan, N.W. (1986). Using Semantic mapping after reading to organize and write original discourse. **Journal of Reading, 30:4 - 13.**

Vygotsky, L. S. (1978). **Mind in society: The development of the higher psychological processes**. Cambridge, MA: Harvard University Press.