Implementing Reading Strategies based on Collaborative Learning Approach in an English Class

Ornprapat Suwantharathip
Bangkok University

ABSTRACT

The present study investigated the effects of reading strategies based on collaborative learning approach on students' reading comprehension and reading strategy use. The quasi-experimental research study was performed with two groups of students. While the control group was taught in the traditional way, the experimental group received reading strategies instruction based on collaborative learning approach. Tools for collecting data included pre- and post-reading tests, the questionnaire surveying students' reading strategy use, and three open-ended questions. Data obtained were analyzed by using the independent t-test and paired sample t-tests. Results revealed that after the intervention, the experimental group outperformed the control group in terms of reading score in significant ways. Significant differences also existed in pre-and post reading score and reading strategy use of students in the experimental group. The findings contribute to a better understanding of the approach and support the belief that reading strategy training in a collaborative learning environment should be conducted to enhance learners' reading performance.

INTRODUCTION

According to Gascoigne (2005), reading skills have attracted a higher level of interest where research and their uses in foreign language teaching are concerned. Efficient reading skills are a springboard for academic progress and success. Since reading techniques help with understanding what learners read, they should be able to use the techniques effectively. A high level of reading proficiency often translates into better language acquisition. Reading techniques can also benefit students with low levels of reading skills in terms of reading comprehension advancement.

A tool that can assist learners to be successful readers is reading strategies. Through them students can transfer the strategies they use when reading in their native language to reading in a language they are learning. If students face the difficult tasks and are able to use the strategies to overcome the problem, they are effective readers. Moreover, effective readers often monitor their understanding, and when they lose the meaning of what they are reading, they usually select and use a reading strategy (such as rereading or asking questions) to help them reconnect with the meaning of the text.

To comprehend the text better, students will involve principally two main strategies: cognitive and metacognitive strategies. Cognition plays an important role in strategic learning when the prior knowledge or schema and domain knowledge are focused. Williams and Burden (1997) state that cognitive strategies are seen as mental processes directly concerned with the processing of information in order to learn, that is, for obtaining, storage, retrieval, or use of information. Block (1986), Carrell (1989), and Davis and Bistodeau (1993) (as cited in Salataci

& Akyel, 2000) mention that cognitive strategies aid readers in constructing meaning from the text. In this approach, reading is meant to be a process of decoding—identifying letters, words, phrases, and then sentences in order to get the meaning. According to this theory, so as to comprehend a text, readers make use of both the text and their background knowledge. Therefore, interaction of the background knowledge and the text is necessary for efficient reading. Readers are often required to make predictions and hypotheses about the text content by relating new information to their prior knowledge and by using language clues.

A related term is metacognition, which refers to knowledge people have about their own thinking, which is considered as an important key to learning and learning performance (Bruning, Schraw, & Ronning, 1995). Flavell (1976) explains that metacognition includes "the active monitoring and consequent regulation and orchestration" (p. 232) of information processing activities. According to Anderson (2002), readers, who are metacognitively aware, know what to do when they do not understand; that is, they have strategies to find out or to figure out what they need to do. Brown (1994, as cited in Ozek & Civelek, 2006) states that reading strategies are checking the outcome of any attempt to solve a problem, planning one's text move, monitoring the effectiveness of any attempted action, testing, revising, and evaluating one's strategies for learning. Skehan (1993, as cited in Ozek & Civelek, 2006) defines that metacognitive strategies contain functions to monitor or dominate cognitive strategies. Learning process, planning for learning, and monitoring of comprehension or production after the language activity are all included in these kinds of strategies. Strategies specific to reading can be classified in the following three clusters of metacognition: planning, monitoring, and evaluating strategies (Israel, 2007; Pressley & Afflerbach, 1995).

Although reading strategies are important and need to be conveyed to EFL students, from the researcher's experience, most students have reading difficulties because they have insufficient knowledge of vocabulary. Knowledge of vocabulary is very important for helping students to understand the various textbook reading tasks containing diverse concepts and technical vocabulary (Hayes, 1991; Kinzer & Leu, 1995). When students are assigned to read, they usually use dictionaries to look for the meanings of unknown words because they lack the ability to guess meaning from context.

Summarizing main ideas is also a major reading problem of first-year students. According to the course description of *English 111*, students are required to summarize a reading passage. The researcher found that many students fail in doing so. They often copy sentences from a reading passage instead of using their own sentences. In addition, some students are not able to comprehend main ideas of reading passages; hence, they produce incorrect summaries. Similarly, Chuenta (2002) states that common reading problems include students' inability to grasp the main idea, read quickly due to limited vocabulary, and summarize the text. In other words, students lack appropriate reading strategies.

One significant way to enhance students' reading comprehension skills is exposure to reading strategies. Instructors are well advised to make use of interesting techniques in order to avoid boredom caused by too much exposure and to add spice to the lessons. Learning in small groups is highly likely to boost students' motivation. Working as a group, students tend to feel that they are responsible for and deal critically with the reading material. According to Banerjee (2000), the collaborative learning process requires learners to independently reflect on the materials, put the reflections to the test, elaborate on them, make conclusions, thoroughly understand them, and integrate the knowledge into their knowledge base. Only then will they be able to impart what they have learned to their peers. Smith and MacGregor (2009) see each

group member as a contributory factor. The group members' various answers to questions serve to form the total sum that embraces their varied viewpoints (Panitz, 1997).

Believing that basing reading strategies on collaborative learning method is highly appropriate for Thai EFL classes, this researcher felt the need to conduct the study reported here. First, with the introduction of reading strategies based on collaborative learning, reading is no longer an individual task. Integral to the new approach are working in groups and interactive responses. Students can teach and simultaneously learn from their peers in a relatively stress-free atmosphere. Second, the age-old teaching method through translation does not make for inspired language learning. Learners are spoon-fed language input. It is critical that they improved their reading skills through more efficient teaching methods (Akkakoson & Setobol, 2009). With proper and effective teaching methodologies, learners are able to become expert readers who design, supervise, and assess their own reading (Cubukcu, 2008). The question is whether the students will continue making use of the reading techniques they learned. Therefore, my last reason rests on alerting the students to the significance of the reading techniques. The findings will demonstrate how students have benefitted from the techniques performance-wise, and also substantiate the results of the studies previously carried out. In examining the effectiveness of the reading strategies based on collaborative approach in comprehending expository texts, this study has three research questions:

1. Can reading strategies based on collaborative learning approach help improve students' reading comprehension?
2. Will students' strategy use be improved after they are taught reading strategies based on collaborative learning approach?
3. How do students respond to the use of strategies based on collaborative learning approach?

THEORETICAL PERSPECTIVES

This study employed collaborative learning approach to facilitate learning when reading strategies were implemented in class. Reid, Forrestal, and Cook (1989) presented five phases of collaborative learning: (1) engagement, (2) exploration, (3) transformation, (4) presentation, and (5) reflection. In the engagement phase, instructor and students engage in organizing activities that are collaborative in nature. In forming groups, students feel free to choose their own group members. In the exploration phase, students have the opportunity to work together as a team. The instructor only serves as a facilitator. In this phase, students are introduced to new topics, concepts, and ideas and have the opportunity to make predictions and hypotheses, discuss with their group members, and make decisions. In the transformation phase, students in each group explore and compare information. Moreover, students clarify, elaborate, and learn how to synthesize ideas as all group members are required to discuss, contribute, and share ideas. In this phase, students are expected to take part in the learning activity such as classifying information, giving examples to support opinions, and discussing outcomes. The fourth phase relates to the presentation of knowledge. Here, each group is given the opportunity to present their findings to the class. Students are also required to give feedback to the findings and check for accuracy. The last phase in the learning activities is the reflection phase. In this phase, students reflect on both progress and process in reading comprehension. They also offer constructive ideas to the class and make error corrections where necessary.

In this study, ten reading strategies were selected from Anderson's (1999) reading strategy checklist and the work of Phakiti (2006). However, the researcher did not include all of them in strategy training. First, there was limited time on reading strategy training due to time constraints. Moreover, each new strategy could only be strengthened through a lot of practice in order to make students use those reading strategies both effectively and efficiently. Finally, the training outcomes of those reading strategies would most likely be seen on the types of questions of the pre-test and post-test.

Many pieces of research were thus conducted to promote the use of cognitive reading strategies to improve reading comprehension; most of them demonstrated positive outcomes (Houtveen & Van de Grift, 2007; Boulware, Carreker, Thornhill, & Joshi, 2007; Cubukcu, 2008). On the aspect of cognitive and metacognitive reading strategies toward reading ability, the results of several pieces of research indicated that reading strategies instruction can improve students' reading ability (Phakiti, 2006; Talebi, 2009; Akkakoson & Setobol, 2009; Wichadee, 2011). There is evidence showing that group learning can be a powerful tool for reading comprehension improvement. Chen, Chen, and Sun (2010) proposed a Tag-based Collaborative reading learning System (TACO), which provided a collaborative environment for reading English. They used TACO to improve reading comprehension. The results showed that there was a significant improvement in reading scores among participants in their tag-based system. Armbrister (2010) measured a collaborative reading strategy's effects on language learning students in third, fourth, and fifth grades at an intermediate elementary school. The findings of the study demonstrated the positive effects on the reading comprehension of English language learners which, in turn, is consistent with the work of Mesh (2010). This work revealed that collaborative activities could foster improvement in reading comprehension skills of adult learners.

RESEARCH METHODS

Research Design

This study, conducted with first-year students enrolled in EN112: Fundamental English II in the first semester of the 2011 academic year at a private university, utilized a quasi-experimental research design. Since the Records Office had already assigned students to their sections, it was not possible to randomly select samples out of the population. Thus, two sections were chosen by cluster sampling from a total of 31 sections. One section was chosen to be the control group while another the experimental group. Each group consisted of 40 students.

Instruments

Three instruments were used in this study. The first one was a multiple-choice test on expository texts comprised of 50 questions. The seven readings selected had varied topics. The readings in the test were developed by the researcher based on EN 112 course objectives and students' proficiency level in terms of length, vocabulary, and grammatical points. The questions targeting different aspects of reading comprehension covered two main reading strategies: cognitive strategies and metacognitive strategies. Regarding the cognitive strategies, there were 10 items in comprehending, eight items in memory, and eight items in retrieval. The

metacognitive strategies, in turn, had nine items in planning, eight items in monitoring, and seven items in evaluating. The reading test took the form of the pre- and post-tests and measured students' achievement. Time allowed for the test was 100 minutes. Thereafter, three teachers of English from the Language Institute examined the test to assure language accuracy and content validity. The test was then piloted with 40 students enrolled in EN111 in the summer semester. The reliability of the overall test calculated by Kuder-Richardson-20 formula (KR-20) was 0.87, signifying high reliability. The same test was used as a parallel test for pre-and post-testing phases. That is, the researcher administered the test twice and employed an alternate form of the test from the first administration to the second. The readings were not discussed in class.

The second instrument, a cognitive and metacognitive strategy questionnaire, based on Anderson's (1999) reading strategies checklist and Phakiti's (2006) work, contained 30 items on a Likert-type response scale. The cognitive strategies contained three parts: eight items in comprehending (1, 3, 4, 5, 7, 8, 12, 13), three items in memory (10, 11, 14), and seven items in retrieval (2, 6, 9, 15, 16, 21, 26). Concerning the metacognitive strategies, there were three parts: six items in planning (17, 18, 19, 22, 25, 27), three items in monitoring (20, 24, 30) and three items in evaluating (23, 28, 29). The questionnaire investigated respondents' frequency of actual use of strategies on a 5-point rating scale, namely (5) always, (4) usually, (3) sometimes, (2) rarely, (1) never. Then the questionnaire was submitted to the three experts for evaluating the content validity. They had to mark each item as appropriate (+1), not sure (0), or not appropriate (-1). The scores were then calculated by means of IOC (index of item objective congruence). If the IOC value is higher than 0.5, it is accepted (Rovinelli & Hambleton, 1977). However, if an item is lower than 0.5 in value, it will have to be revised. The results showed that all items were valid as they possessed proper indexes (0.66-1.00). The validated questionnaire was then pilot-tested with 40 students to check item readability and understanding. Questionnaire data from the pilot group were analyzed for determining an internal consistency reliability coefficient. According to cognitive reading strategies, the alpha coefficient value of 0.904 indicated that the reliability of the questionnaire was rather high. Metacognitive reading strategies, with the alpha coefficient value of 0.888 and the overall aspects, with the alpha coefficient value of 0.939, also indicated a similar level of rather high questionnaire reliability. This questionnaire was distributed to all students in the experimental group before and after the intervention.

The last instrument was an open-ended questionnaire exploring the students' perception on reading strategies based on collaborative learning approach. The questionnaire was distributed to the experimental group after finishing the last class. All group members had to answer the questions regarding the strategies-based instruction and collaborative learning. There were three questions in the questionnaire: (1) What benefits did you gain from collaborative learning? (2) What benefits did you gain from learning reading strategies (Cognitive and Metacognitive reading strategies)?", and (3) Do you like working individually or working in groups? Give a reason to support your answer. The purpose of using an open-ended questionnaire was to afford students the opportunity to give their responses to the teaching approach.

Materials for Teaching Cognitive and Metacognitive Strategies

In order to find the most suitable reading material, six reading texts from different sources were selected for experts' validation. Each text was about 1,000 words in length. Three experts validated reading difficulty judged by experts, vocabulary difficulty, and levels of interestingness of these reading passages. The rating was on a scale of 1-5, and the mean scores

from the three experts were calculated. The passage scoring between 3.00-3.50 was used for the study (Pratontep, 2007). The teaching materials were revised according to the experts' comments and suggestions, and the overall IOA value of the content and construct validity of the teaching materials was 4.92. Then, the material and procedure were trialed with one section of EN 111 in the summer semester of the academic year 2010 to investigate any problems that might occur and check whether it was appropriate for the students or not.

Teaching Strategies Based on Collaborative Learning Approach

This empirical study was carried out in two classes where the researcher was the teacher. The data collection spanned 13 weeks. For the pre-instructional period, the pretest was administered to the control and experimental groups at the beginning of the study to verify the equality of the two groups in their reading comprehension performance. The intervention period took place during weeks 2-14. Both groups were taught with the same content such as vocabulary, grammatical points, and reading comprehension. The control group studied the eight expository texts without any treatment while the experimental group was trained to use useful reading strategies through collaborative learning approach. Students in the experimental group were asked to self-select a team of 4-5 members and were taught explicitly what each individual strategy was (declarative knowledge), the context or situation in which the strategy should be used or applied (situational knowledge), and how to employ the strategy (procedural knowledge). Then the collaborative teams were practiced with the exercises provided. While working together, teams were strongly encouraged to use the strategies learned in class. Each group of students had to finish the exercise. For the post-instructional period, the two groups were post-tested.

Data Analysis

The data obtained from the reading tests and the questionnaire were analyzed quantitatively. To ensure that both the control and experimental group were as equivalent as possible before the study was carried out, an independent t-test (Levene's Test) was used to determine whether the two groups were homogeneous. Then students' reading comprehension mean scores of the two groups were compared using independent t-tests. The mean scores of students in the experimental group before and after the intervention were compared by using paired samples t-tests to reveal changes in performance of reading comprehension and reading strategy use. Data from open-ended questions were analyzed by content analysis.

RESULTS

Part I: Students' Reading Comprehension

The pre-test scores of the two groups were compared using the independent t-test. From the data below (Table 1), the Levene's Test for equality of variances shows $F = .052$ and $p = .820$, proving that the variance of the groups was equivalent. Moreover, the result also shows $t = -.019$, $df = 78$, and $p = .985$, showing that the two groups did not differ significantly, but were homogenous.

Table 1. Results of the Levene's Test for Equality of Variances

Group	F	Sig	t	df	Sig (2-tailed)
Equal Variance assumed	.052	.820	-.019	78	.985
Equal Variance not assumed					

Therefore, it can be assumed that the samples of both groups were equal in their reading proficiency levels at the time of the experiment. To answer the first research question, the means of the pre-test and post-test scores were compared. The paired-samples *t*-test was employed to provide statistical verification.

Table 2. Posttest Scores between the Experimental and Control Groups

Group	$\bar{X}$	S.D.	df	t	Sig (2-tailed)
Control (n = 40)	24.42	7.40	78	-3.631	.001
Experimental (n = 40)	31.05	8.85			
Mean Difference	6.62				

To test the hypothesis and to see the efficacy of the intervention, students' reading scores obtained from the post-test of the two groups were analyzed to see if there was a statistically significant difference. Table 2 showed that the mean for the post-test scores for the control group was 24.42, and the mean for the experimental group was 31.05, with the great difference of 6.62; the mean difference was significant. Therefore, it can be concluded that the null hypothesis which was "there is no significant difference in reading comprehension scores of the students in the experimental group and those in the control group" was rejected. The experimental group who received reading strategy training based on collaborative learning approach outperformed the control group in a statistically significant way.

In order to find out whether a statistically significant difference existed in English reading ability, the pre and post-test mean scores were compared by using a paired samples t-test, and the result was shown in Table 3.

Table 3. A Comparison of Pre- and Post-test Reading Mean Scores

	$\bar{X}$	S.D.	t	df	Sig
Pre-test	21.15	5.64	-10.284	39	.000
Post-test	31.05	8.85			

The paired-samples t-test analysis in Table 3 shows that the mean score on the post-test (M = 31.05) is much greater than the mean score on the pre-test (M = 21.15). From a t-test analysis, the post-test mean score of the students after the intervention was significantly different from that before the intervention t (39) = -10.284, $p < .05$. Therefore, H_02 (no significant difference between pre-test and post-test in the reading comprehension scores of the students in the experimental group) was also rejected. It can be concluded that students significantly improved their reading comprehension through reading strategies based on collaborative learning approach after 12 weeks.

Part II: Reading Strategy Use of Students in the Experimental Group

Table 4. A Comparison of Pre- and Post-Strategy Use

	$\bar{X}$	**S.D.**	**t**	**df**	**Sig**
Pre-survey	3.02	.54	-4.006	39	.000
Post-survey	3.29	.67			

The result of the t-test in Table 4 showed that the students earned a higher post-strategy use mean score (M = 3.29) than a pre-strategy use mean score (M = 3.02). The mean difference was -.27 and the t value was -4.006 with 39 degrees of freedom (n = 40). It is apparent that there was a significant difference between the mean scores from the pre- and post-reading strategy use at a significant level ($p < .05$). The hypothesis that stated that there is no significant difference between the pre- and post- reading strategy use of the students in the experimental group was thus rejected. It can be deduced that reading strategy use increased after the intervention.

Part III: Students' Perception on Strategies-based Instruction and Collaborative Learning

The benefit students gained most from collaborative learning approach was having a chance to plan and work systematically. In this response, most of them indicated that it could help them finish their work faster and more effectively. It helped them organize their ideas and improve their working process. The second benefit was having a more relaxing learning environment, which helped reduce anxiety and stress in class. The third benefit was learning how to work in groups, which helped them understand the texts better.

When asked about the advantages of learning reading strategies, most students responded that they could comprehend the reading texts better. The second benefit they gained was knowing what to do first when reading. They also stated that they were able to guess the meanings of unknown words. They felt good that the teacher instructed them how to use strategies during reading.

When asked whether students like working individually or working in groups, none of them chose to work individually. All students preferred working in groups by stating different reasons. For instance, 10 students supported this choice by claiming that they could complete reading tasks faster. Six of them specified that they had a chance to share or listen to other people's ideas. If they had different ideas, they could explain their reasons. Three of them even pointed out that working in groups enabled weak students to learn from other group members.

DISCUSSION AND CONCLUSION

The first research question dealt with reading improvement. When reading pre-test and post-test mean scores were compared, the result indicated a significant improvement in the students' reading ability after they had been exposed to strategies-based instruction and collaborative learning. Two factors may help explain this. First, the students had gained more confidence because they had studied and worked together with their classmates. Learning together or collaborative learning could make them feel less stressed out. When the students studied as a group, they felt that what they were working on was some kind of task that they had to complete successfully. Reid, Forrestal, and Cook (1989) expressed the same view when they

said that the students had an opportunity to talk and put forward and express their opinions through this learning method. All group members should contribute to the learning method by grouping data, substantiating ideas with examples, and discussing the results. Moreover, their answers to the open-ended questions also showed that the students gained many benefits from collaborative learning. They realized that setting a plan was necessary and important. It could help them complete their task quicker. Collaborative learning allowed them to see the usefulness of sharing ideas, which could help complete the task more accurately and effectively. Second, the significant improvement of the students' mean scores was probably due to the fact that they had repeatedly practiced the reading techniques such as guessing the contents by using titles and illustrations. This shows that effective teaching of reading techniques and systematic reading can help make low-proficiency students become skilled learners. Many other studies (Armbrister, 2010; Chen, Chen, & Sun, 2010; Mesh, 2010; Bolukbas, Kaskin, & Polat, 2011) also supported that students' reading scores could be improved by collaborative learning.

Research question 2 investigated the students' reading strategy use in the experimental group after learning with reading strategies based on collaborative learning approach. It was found that students improved their reading strategy use after the intervention. The finding was consistent with many previous research studies showing reading strategies instruction can improve reading strategies of students (Phakiti, 2006; Talebi, 2009; Akkakoson & Setobol, 2009; Wichadee, 2011). This was probably due to the fact that students started to see the significance of reading strategies they gained in this course. They might not have been taught reading strategies before or they might not have been appropriately or sufficiently trained on the use of reading strategies. Once students had been practicing to use strategies, they learned that they had tools to fight reading problems. Both cognitive and metacognitive reading strategies helped them comprehend the texts better. According to Anderson (2002), readers who are metacognitively aware know what to do when they do not understand; that is, they have strategies to find out or to figure out what they need to do. Meanwhile, cognitive strategies aid readers in constructing meaning from the text. In this approach, reading is meant to be a process of decoding—identifying letter, words, phrases, and then sentences in order to get the meaning (Salataci & Akyel, 2000). The results from open-ended questions also pointed out that students learned to select suitable strategies and were able to use them to overcome the problems when facing difficult tasks. They became effective readers after being trained in the intervention period.

Applying reading strategies based on collaborative learning approach should be considered carefully since the teaching process may have some effects on both instructors and students. Regarding instructors, this approach is rather time consuming, so they may have to spend quite a lot of time preparing materials. Moreover, they have to find teaching materials that best correspond with the reading strategies. As for the impact on students' learning, this approach requires students to work in a mixed ability group. Group members have to be willing to adapt collaborative learning practices and should be given every opportunity to self-elect their participation in such interventions.

Ornprapat Suwantarathip *is currently an English instructor at Language Institute, Bangkok University, Thailand. She graduated with a Master degree in Linguistics. She has 8 years experience teaching ESL students at Bangkok University. Her research interests focus on the use of reading strategies.*

Email: ornprapat.s@bu.ac.th

REFERENCES

Afflerbach, P. (1990). The influence of prior knowledge on expert readers main idea construction strategies. *Reading Research Quarterly*, *25*(1), 31-46.

Akkakoson, S., & Setoblo, B. (2009). Thai EFL students' use of strategies in reading English texts. *The Journal of KMUTNB, 19*(3), 329-342.

Anderson, N. (1999). *Verify strategies: Exploring second language reading*. Boston, MA: Heinle & Heinle.

Anderson, N. J. (2002). The role of metacognition in L2 teaching and learning. *ERIC Digest*. Retrieved August 7, 2004 from http://www/-ericdigests.org/

Armbrister, A. (2010). *Non-native speakers reach higher ground: A study of reciprocal teaching's effects on English language learners* (Doctoral dissertation). ProQuest LLC, Capella University.

Banerjee, R. (2000). *The benefits of collaborative learning*. Retrieved October 8, 2011 from http://www.brighthub.com/education/k-12/articles/70619.aspx

Bolukbas, F., Keskin, F., & Polat, M. (2011). The effectiveness of cooperative learning on the reading comprehension skills in Turkish as a foreign language. *The Turkish Online Journal of Educational Technology*, *10*(4), 330-335.

Boulware, G. R., Carreker, S., Thornhill, A., & Joshi, R. M. (2007). Instruction of metacognitive strategies enhances reading comprehension and vocabulary achievement of third-grade students. *The Reading Teacher*, *61*(1), 70-77

Bruning, R. H., Schraw, G. J., & Ronning, R. R. (1995). *Cognitive psychology and instruction.* Upper Saddle River, NJ: Prentice Hall.

Chen, J., Chen, M., & Sun, Y. (2010). A novel approach for enhancing student reading comprehension and assisting teacher assessment of literacy. *Computers & Education*, *55*(3), 1367-1382.

Chuenta, C. (2002). *Reading materials for graduate students in administration* (Master's thesis) Khon Kaen University.

Cubukcu, F. (2008). Enhancing vocabulary development and reading comprehension through metacognitive strategies. *Educational Research, 18*(1), 1-11.

Flavell, J. H. (1976). Metacognitive aspects of problem solving. In L. B. Resnick (Ed.), *The nature of intelligence* (pp. 231-235). Hillsdale, NJ: Erlbaum.

Gascoigne, C. (2005). Toward an understanding of the relationship between L2 reading comprehension and grammatical competence. *The Reading Matrix*, *5*(2), 1-14.

Hayes, B. L. (1991). *Effective strategies for teaching reading.* Boston, MA: Allyn and Bacon.

Houtveen, A. A. M., Van de Grift, W. J. C. M. (2007). Effects of metacognitive strategy instruction and instruction time on reading comprehension. *School Effectiveness and School Improvement*, *18*(2), 173-190.

Israel, S. E. (2007). *Using metacognitive assessments to create individualized reading instruction*. Newark, DE: International Reading Association.

Kinzer, C. K., & Leu, D. J. (1995). *Effective reading instruction.* New York, NY: Merrill.

Mesh, L. (2010). Collaborative language learning for professional adults. *Electronic Journal of e-learning*, *8*(2), 161-172.

Ozek, Y., & Civelek, M. (2006). A study on the use of cognitive reading strategies by ELT students. *Asian EFL Journal*, *14*(1), 3-10

Panitz, T. (1997). Collaborative versus cooperative learning: Comparing the two definitions helps understand the nature of interactive learning. *Cooperative Learning and College Teaching*, *8*(2), 5-7.

Phakiti, A. (2006). Modeling cognitive and metacognitive strategies an their relationships to EFL reading test performance. *Melbourne Paper in Language Testing*, *1*, 53-95.

Pratontep, C. (2007). *The effects of extensive reading and levels of reading proficiency on Thai university students' English reading comprehension using self-regulated learning framework* (Doctoral dissertation). Chulalongkorn University.

Pressley, M., & Afflerbach, P. (1995). *Verbal reports of reading: The nature of constructively responsive reading.* Hillsdale, NJ: Erlbaum.

Reid, J., Forrestal, P., & Cook, J. (1989). *Small group learning in the classroom*. Portsmouth, NH: Heineman.

Rovinelli, R. J., & Hambleton, R. K. (1977). On the use of content specialists in the assessment of criterion-referenced test item validity. *Dutch Journal of Educational Research*, *2*, 49-60.

Salataci, R., & Akyel, A. (2000). Possible effects of strategy instruction on L1 and L2 reading. *Asian EFL Journal*, *14*(1).

Smith, B. L., & MacGregor, J. T. (2009). *What is collaborative learning?* Retrieved September 20, 2011 from http://learningcommons.evergreen.edu/pdf/collab.pdf

Talebi, S. H. (2009). An attempt towards learner autonomy in L2 (English) an L3 (Arabic) reading through cognitive and metacognitive reading strategy instruction (CMRSI) in L2. *Indian Journal of Applied Linguistics*, *35*(2), 101-112.

Yarnruksa, W. (1997). *The study of the relationship between reading skill and achievement in learning English* (Master's thesis). Ramkhamhaeng University.

Wichadee, S. (2011). The effects of metacognitive strategy instruction on EFL Thai students' reading comprehension ability. *Journal of College Teaching & Learning*, *8*(5), 31-40.

Williams, M., & Burden, R. L. (1997). *Psychology for language teachers: A social constructivist approach.* Cambridge, UK: Cambridge University Press.