Cooperative Learning Approach Applying Jigsaw Strategy to Enhance Students’ Comprehension Skill

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Abstract. Reading is an important skill in learning new languages as it is a receptive skill in the language competence despite of listening. Reading process requires learners to decode the symbols, interpreting the meaning and applying the ideas derives from the symbols (Herber 1978). However, to understand the reading material seems to be the main obstacle among language learners including Thai students. To help students increase their comprehension, the cooperative learning approach is an effective approach to deal with reading comprehension crisis as it contains the element of collaborative working required for 21st century learners. Jigsaw reading is presented here as the strategy to increase students’ comprehension in while reading stage. It is an activity designed for reading class based on cooperative learning elements.

Keywords: Cooperative Learning, Jigsaw Reading, Reading Comprehension

1. Introduction
Reading plays an important role in language learning as it is the process that learners perceive knowledge beside listening skill. Reading process requires learners to decode the symbols, interpreting the meaning and applying the ideas derives from the symbols (Herber 1978). Thus, learners need to comprehend the text to build the meaning. However, understanding the reading material is one of the challenges among English language learner particularly Thai students. In Thailand, learning a foreign language, especially English has been taught for decades. Thai children have been involved in the teaching and learning English language since they are in primary schools or even recently in kindergarten schools. According to the Thai Basic Education Core Curriculum, English is the only compulsory foreign language that has been taught for decades. Thai children have been involved in the teaching and learning English language since they are in primary schools or even recently in kindergarten schools. According to the Thai Basic Education Core Curriculum, English is the only compulsory foreign language that has been taught to Thai students from primary to secondary school. Consequently, they have already learned English for at least twelve years before entering a university. Thus, it would be seen that they have been familiar with English alphabets, English song, English tales, and English story for years. Surprisingly, many Thai students are poor incomprehending reading materials. Adunyariatiggun (1998) found that weak performances in reading in English indicate difficulties in fulfilling the demands of their studies. According to the latest result of the Program for International Student Assessment (PISA, 2012 cited in Hayikaleng,N., Nair. M.S., Krishnasamy. H.N., 2016) Thailand was ranked at 50th in English reading comprehension out of 65 countries. Recently, the result from PISA 2015 showed that Thailand was ranked at 58th in English reading comprehension out of 72 countries. (PISA 2015) Related to this, Thai students are weak in English reading comprehension (Chomchaiya, 2014; Kasemsap & Lee, 2015; Sawangsamutchai & Rattanavich, 2016).
Moreover, teaching strategy is one of the main factors contributed to a lack of reading comprehension skill. Kongkert (2013) cited in Hayikaleng, N., Nair, M.S., Krishnasamy, H.N., (2016) emphasized that the common technique used by teachers in teaching reading in Thailand is mainly focused on Teacher Center; for example, the teacher reads aloud and asks students to follow sentence by sentence, or section by section then answering comprehensive questions. This way of teaching does not promote thinking skill (Sawangsamutchai & Rattanavich, 2016). As such, it is important to solve the problem and help learners improve their reading comprehension. The most important thing that must be taken into consideration is the teaching method—as opined by Wichadee (2003) who stated that teacher-centered approach taking place in traditional classroom does not produce active recipients and results in fossilized language learning. Engaging students in reading class can be realized by employing cooperative learning structure. Cooperative learning thus the recent shift has occurred in reading instruction that is more student-centered and communication-oriented (Brown, 2007 cited in Pan&Wu (2013). Cooperative learning involves students working together in pair or group and they share information. They are in a team where most players must work together to achieve the group’s goal successfully (Brown, 1994).

2. Cooperative Learning Approach
Cooperative learning is rich in history of theory, researches, and actual classroom use, which lead it to become one of the most reverent instructional practices. Social interdependence, cognitive-developmental, and behavioral theory have guided research on cooperative learning

2.1 Social Interdependence Theory
Interaction with other people is essential for human survival. In an education setting, social interdependence refers to students’ efforts to achieve, develop positive relationships, adjust psychologically, and show social competence. Therefore, one of the cooperative elements that have to be structured in the classroom is positive interdependence or cooperation. When this is done, cooperation results in promoting interaction as group members encourage and ease each other’s efforts to learn (Johnson, Johnson, & Johnson, 1994).

2.2 Cognitive Developmental Theory
Most of the cognitive developmental viewpoint has been proposed by the work of Jean Piaget and Lev Vygotsky. Piagetian believed that when each person works along, sociocognitive conflict happens and creates cognitive disequilibrium that stimulates perspective-taking ability and reasoning. Therefore, Vygotsky’s theories present knowledge as a societal product (Johnson, Johnson, & Johnson, 1994). “The work of Vygotsky is based on the premise that knowledge is social and is constructed from cooperative effort to learn, understand, and solve problems”(Driscoll, Merrienboer, Merrill, & Spector, p.406). Group members exchange information and insights, discover the weak points in each other’s reasoning strategies, correct one another, and adjust their understanding on the basis of one another’s understandings. Thus Cognitive restructuring theorists believe that in order for information to be retained in a memory and incorporated in existing cognitive structures, the learners must cognitively rehearse and restructure the material by, for example, explaining the material to a collaborator.

2.3 Behavioral learning Theory
The main focus of Behavioral-social perspective is on environmental factors such as reinforcement, feedback, and practice. It conceptualizes learning as something that occurs from the outside in. For example, learners have clearly learned by observing others, and a learner’s belief about his or her ability to perform a task (i.e., self-efficacy) plays an important role in their learning (Shuell, T., 2013). Thus, in the cooperative learning setting, its perspective pays the attention on the impact of the group reinforces learning. Moreover, it has emphasized the need for extrinsic group rewards to motivate people to learn in cooperative learning groups (Johnson, Johnson, & Johnson, 1994).

2.4 Essential Components of Cooperative Learning
Structuring a cooperative learning activity as cooperation is more than a seating arrangement. There are five main essential components of cooperative learning that need to be considered before designing the collaborative activity
According to (Johnson et.al.,1994). Those five elements are:
• Clearly perceived positive interdependence
• Considerable promotive (face-to-face) interaction
• Clearly perceived individual accountability and personal responsibility to achieve the group’s goals.
• Frequent use of relevant interpersonal and small group skills.
• Frequent and regular group processing of current functioning to improve future effectiveness.

Many researches on cooperative learning approach have been conducted for decades. Barbara, Caposey, Heider & Tracey (2003) conducted an action research to enhance elementary and middle school students’ reading comprehension skill in Northern Illinois using cooperative learning approach. Based on the student's test score and teacher’s observational note showed that students required the enhancement in reading comprehension related retention and vocabulary, as a result the main activity applied in this study was a Group Matching Vocabulary Game. The intervention was implemented for a period of 10 weeks. Students and Parent survey, Pretest and Posttest, and observation were used as the research instruments for data collection. The result from a post intervention data indicated the improvement in mastery of vocabulary skills and reading comprehension through the use of cooperative learning activity in teaching reading.

Additionally, the study conducted by Wichadee (2003), which investigated the effect of CL learning on the development in English Reading skills of 40 first-year students in Thailand and their attitude toward CL; using the pre-test and post-test as instruments to assess student achievement before and after using CL along with the questionnaire and interview to survey students “view on CL indicated that the implementation of a Students Team - Achievement Division (STAD) technique during an eight week period, where students were involved in a group activity and took an individual quiz at the end of the class period can actually increase her student’s score in post-test when compared to a pre-test score at the 0.5 level significantly and they also showed a positive attitude toward CL. This showed the similar result in Jou’s study (2008) where CL was implemented in a novel teaching as the study indicated that students responded positively to CL in the novel class.

Moreover Pan & Wu (2013) also examined the effect of using CL towards the English reading comprehension of EFL Taiwanese freshmen students by comparing the CL instruction and traditional instruction. This experiment was conducted in the English reading course over a full semester. There were forty-four students in the experimental group and thirty-four students in the comparison group. The pre-test, post-test, and English motivation scale was administered to both groups before and after receiving the instructions. The experimental group received a reciprocal CL instruction while the comparison group received a traditional lecture instruction. The finding stated that students who received reciprocal CL instruction had a better score in the post-test and they had a positive view towards this approach. Therefore, it is clearly proved that the cooperative learning approach has contributed precious value in reading comprehension class.

3. Cooperative Learning In Reading Class
Making this approach to become more precious is designing the class activity. The lesson must be designed based on the essential elements of cooperative learning which provide positive interdependence, face-to-face interaction, individual accountability social skill and group processing. Jigsaw activity is one of the effective reading strategies that can help a reader to become a better coder.

Jigsaw reading in while reading stage. Jigsaw reading is one of the most distinguished techniques that encourage students to learn cooperatively as it provides students an opportunity to actively help each other build comprehension. It requires students to become an expert on one section of the assigned material and teaching or telling it to the teammates (Aronson, 2014). “Jigsaw reading is like playing with a jigsaw puzzle. After each member has retold his/her own part of the story, the whole group works together to re-arrange the story parts to recover the original story” (Lai, 2008, para. 1). In this stage, teachers can encourage the learners to master on their own section of the story parts. Afterwards, students are told to share and discuss the story with their teammates in order to help each other comprehend the whole picture of the story. Finally, individual assessment can be administered.
Crais & Lorch (1994, as cited in John, Lui, & Tannock, 2003) proposed that “Oral narratives (e.g., storytelling, story retelling, and story generation) are an essential part of the academic and social interactions of school-aged children” (p. 92). In this activity each member can be given a different portion of the story events. Students are given a fixed amount of time to read and comprehend their own parts. In this phase, they must be allowed to ask for help from their teammates if they do not understand some points of the story. Next, students tell their own parts to the group members. Here, each student is acting as a storyteller. They can share their own parts, ask their partners a number of questions and have a discussion about the story sequences in order to understand the whole story and put them in the correct order. Brown and Cambourne (1987, as cited in Mowbray, 2010) viewed that “Read and Retell is an excellent strategy to use in order to allow children to transform a text into their own words, taking only what is really understood” (para. 13). Moreover, Gambrell, Koskinen, & Kapinus (1991, as cited in Gibson, Gold & Charissa, 2003) stated that when they retell stories in a comprehensive manner, they reflect on the text and make distinctions between the actual words on the page and the meaning behind them. Therefore, retelling go beyond the literal and help children focus on a deeper understanding of the text. Hence (Hsui, n.d.) concluded that “retelling process allows readers to summarize their reading, rephrase text, and identify it closely” in the post reading.

4. Conclusion
Reading class should be set in the cooperative learning environment in order to help learners become more effective readers. The jigsaw reading activity that required students to retell the story and discuss with their teammates has contributed positive effect on students’ comprehension. As Brown &Cambourne (1987, as cited in Gibson et al. 2003) stated that “the process of story retelling involves the learners to think more conceptually –to look at the bigger picture-rather than a specific one. Thus, it helps readers internalize information and concept such as vocabulary and structure” (para. 8). It was also stated by Gambrell et al.(1991, as cited in Gibson et al., 2003) that “the more experience learners have with retelling, the more they are able to understand, synthesize, and infer because retelling is grounded in understanding of the crucial role that oral language plays in both the information and sharing of meaning” (para.8). Hence, through group discussion and storytelling, students will be able to help each other build better understanding.

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