

Improving Students' Speaking Proficiency through Teaching Critical Thinking Skills: A Case Study of English Major Students at Rajamangala University of Technology Isan, Nakhon Ratchasima

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Received: March 30, 2020; Revised: April 25, 2020; Accepted: April 27, 2020

Abstract

This research was intended to examine students' speaking proficiency through teaching critical thinking skills and to explore students' satisfaction toward this teaching technique to English as a Foreign Language students at Rajamangala University of Technology Isan, Nakhon Ratchasima. The sample comprised 38 third-year English major students who studied in a seminar in English language subject, in 2017 academic year. The research instruments were lesson plans, speaking tests, and questionnaires. The data were analyzed by mean, standard deviation, and t-test dependent. The findings indicated that students' speaking proficiency was significantly higher than before teaching at 0.05 level. Also, the students' satisfaction toward teaching critical thinking skills was at a high level.

Keywords: Speaking Proficiency; Critical Thinking Skills; EFL Students

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Introduction

The 21st century students should develop their skills in order to survive in the competitive environments both in their educational goals and their future professions. According to the National Education Act of 1999, being reasonable, critical, and capable of solving problems should be added to Thai students' skills; all the skills mentioned in the policy are in the 21st century paradigm. The 21st century skills are divided into three main categories: learning skills, literacy skills, and life skills. Learning skills are broken into critical thinking, creativity, collaboration, and communication (4Cs) and educators from all around the world have to integrate all 4Cs skills in the curriculum to strengthen their students' abilities. Ur, P. (Ur, P., 1996) stated that teachers know how to support their students for their educational improvement. Teachers should be aware of suitable teaching methodologies and materials to use as teaching tools according to the students' learning styles.

Critical thinking is an individual's ability to analyze and evaluate information by using appropriate decisions to suit various situations and contexts. Paul, R. and Elder, L. (Paul, R. and Elder, L., 2006) indicated that critical thinking is the art to analyze and evaluate thinking with a view to improving it. Additionally, the critical thinking definitions were broken into three disciplines which were divided into: psychological discipline, philosophical discipline, and educational discipline (Ivan, M. and Marcus, R., 2004). They defined critical thinking as involving dispositions toward the nature of thought which included fair-and-open-mindedness, the willingness to accept reason, inquisitiveness, the eagerness to reflect on various perspectives and the ambition to be well knowledgeable.

In addition, Facione, P. A. (Facione, P. A., 1990) proposed two components of critical thinking skills: cognitive skills (interpretation, analysis, inference, evaluation, explanation, and self-regulation) and a motivational component (the disposition toward critical thinking). The classification of critical thinking cognitive skills can be divided into five skills (Facione, P. A. and Giancarlo, C. A., 1997): Analysis means the ability to comprehend and express the meaning of various situations, data, events, or judgements, Evaluation refers to assessing the reliability of the statements, Inference means to identify the components needed to implicate reasoned conclusions, Deductive refers to inferences from general to specific, and inductive means inferences from the specific to general. According to Facione, P. A. and Giancarlo, C. A. (Facione, P. A. and Giancarlo, C. A., 1997), there are seven components of motivational critical thinking: truth seeking, open-mindedness, analyticity, systematicity, self-confidence, inquisitiveness which refers to the intellectual curiosity, and maturity.

Although, the importance of critical thinking is mentioned in Thailand's Educational policy, there are research results which show both Thai teachers and students still lack critical

thinking skills (Ploysangwal, W., 2018). An analysis of Thai cultural dimensions (Hofstede, G., 1980) showed factors such as high femininity, high collectivism, high power distance, and mid-level uncertainty avoidance), cause Thai teachers and students to be accustomed to a one-way interactive approach. The roles of Thai teachers are mostly teacher-centered and that can negatively affect the development of students' critical thinking processes. Moreover, Thai students highly respect their teachers, so they believe that teachers are always giving them only the right answers (Loima, J. and Vibulphol, J., 2016). These Thai' cultures can hardly promote Thai students' critical thinking skills.

Given all these, there are several factors affecting students' ability to communicate in the classroom. Critical thinking skill is one of the factors that affect students' communication skills because such skills can help students accomplish understanding, evaluating different perspectives, and solving problems. Moreover, critical thinking skills are helpful in students becoming creative, autonomous and self-confident. These elements of critical thinking skills can lead them to increase their knowledge and to prepare themselves for what they want to communicate with the others. According to Shangarffam, N. and Mamipour, M. (Shangarffam, N. and Mamipour, M., 2011), teaching critical thinking skills gives students more opportunities to show their decisions without their lack of knowledge with the interlocutors. Language teachers try to employ critical thinking strategies in the classroom because these skills can drive students with problem-solving skills and thought-provocative questions (Devine, T. G., 1962).

Therefore, teaching critical thinking to language learners can be a benefit for them. Ennis, R. H. (Ennis, R. H., 1989) pointed out four instructional approaches in the area of critical thinking skills which were general approach, infusion approach, immersion approach, and mixed approach. In the general approach, a teacher teaches students with familiar topics or problems in their daily lives, let them know how to transfer their critical knowledge in the various contexts. In the infusion approach, Lai, E. R. (Lai, E. R., 2011) stated that it is an embedded instruction in the context of the specific subject matter. Immersion approach is a student's engagement with the deepest specific subject matter. Lastly, mixed approach is the combination of general and subject-specific approaches where teachers can blend both exclusive instructions and explicit instructions in the general critical thinking principles with the application of critical thinking skills in the context of the specific subject matter.

Speaking skill is an important part of EFL courses because it is becoming a growing need in the digital age for the EFL learners who try to improve themselves in order to communicate with the foreigners from all over the world. Folse, K. (Folse, K., 2006) mentioned that speaking ability is the most important means of communication among human beings. However, speaking is the most difficult skill among the four language skills: listening, writing, and reading for the learners of English as a second language or English as a foreign language (Fulcher, G., 2003). Proficient speaking depends on a speaker's ability

to communicate by sharing information fluently and accurately, including appropriate selection and use of vocabulary and structures. Hence, teachers and learners should consider other various components of speaking to communicate perfectly.

Hughes, W. and Lavery, J. (Hughes, W. and Lavery, J., 2004) claimed that the relationship between language and thoughts is directly related as thoughts are expressed in and through language. Also, critical thinking skill involves an understanding of the ways in which words express our thoughts. Davidson, B. W. and Danham, R. A. (Davidson, B. W. and Danham, R. A., 1997) confirmed that critical thinking skills should be taught in the language classroom because critical thinking tasks can prepare learners to interact with speakers. Mathews, S. R. and Lowe, K. (Mathews, S. R. and Lowe, K., 2011) discussed on their research paper about effective characteristics of teaching critical thinking skills that were: introducing critical thinking skills related to content area, providing sufficient opportunities to practice the skills, involvement of student in classroom decision-making, and creating a safe learning atmosphere.

Students' critical thinking skills are very important because these skills are the best way to figure out the final decision of solving problems when they face difficult situations. Along with the critical thinking skills, students can find solutions with reasons based on facts more than emotions. Also, students' language and presentation skills can be improved by using their critical thinking skills when they express ideas because they think clearly and systematically. A creative solution to a problem can be promoted by critical thinking, and it plays an essential role in evaluating, selecting, and modifying new ideas if necessary. The critical thinking skills include students' self-reflection as these can be the tools for their self-evaluation.

As a consequence, teaching critical thinking skills to the language learners has been introduced by many researchers. Kabilan, K. M. (Kabilan, K. M., 2000) indicated that language teachers should bring students to subconscious answers. Critical thinking activities are required for language learners to become more active and questioning (Bruss, N. and Macedo, D. P., 1985; Freire, P., 1970). The suggested critical thinking activities can be applied in language classrooms such as group work, project work, presentation tasks, also the activities should provide learners with different chances sharing their ideas, reflecting on their learning and engaging in stretched communication with peers, teachers, and others (Kusaka, L. L. and Robertson, M., 2006). There are many suggested pedagogies in order to engage language learners to develop critical thinking skills so teachers should set the purposes of forming relationships; comparing and contrasting; classifying; evaluating; ranking; identifying right from wrong, fact from opinion, cause and effect; summarizing; interpreting; identifying main, supporting, and detailed ideas as well as making decisions and solving problems (Mahyuddin, R. et al., 2004).

Thus, this paper presented an examination of students' speaking proficiency through teaching critical thinking skill to the third year English for International Communication students at Rajamangala University of Technology Isan, Nakhon Ratchasima. The main purposes of this paper were to see the improvement of students' speaking proficiency through teaching critical thinking skills and to explore the students' satisfaction toward teaching critical thinking skills.

Literature Review

1. Critical Thinking Skills

The definitions of critical thinking skills were proposed by various educators such as (Scriven, M. and Paul, R., 1987; Willingham, D. T., 2007; Elder, L. and Paul, R., 1994). According to Scriven, M. and Paul, R. (Scriven, M. and Paul, R., 1987), critical thinking is the process of controlling personality cleverly so that it includes active and skillful conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to beliefs and actions. Moreover, Willingham, D. T. (Willingham, D. T., 2007) stated that critical thinking is associated with content knowledge and high discipline and, therefore, nontransferable. Elder, L. and Paul, R. (Elder, L. and Paul, R., 1994) pointed out that critical thinking is not only information, belief creating and processing skills, but also the importance of developing a habit of using those skills to guide behavior.

Additionally, Bailin, S. (Bailin, S., 2002) stated critical thinking as thinking in a particular quality-essentially good thinking that encounters specified criteria or standards of appropriateness and accuracy. Ennis, R. H. (Ennis, R. H., 1989) defined that critical thinking as the capability to think clearly and reasonably. It includes the ability to employ reflective and independent thinking, and the ability to decide what to do or what to believe. Bloom, B. S. (Bloom, B. S., 1956) indicated that "critical thinking is the mastery of a set of skills such as knowledge, comprehension, application, analysis, synthesis, evaluation and applying the best when faced with a novel situation; furthermore, the three higher levels, such as analysis, synthesis, and evaluation, are frequently reported to reflect CT". It can be concluded that critical thinking is the cognitive skill that can influence the way of thinking with three main higher level of thinking skills: analysis, synthesis, and evaluation.

2. Application of Critical Thinking in Language Classroom

Critical thinking can be applied in language classroom. Halpern, D. F. (Halpern, D. F., 2003) mentioned that learning to think is the primary purpose of education, and it is important to teach students how to think rather than what to think. The fundamental goal of learning should bring critical thinking skills to prepare students for higher education and

the workforce. These skills can help students to overcome problems that they might face in daily life or in the workplace (Fisher, A., 2003; Brown, H. D., 2004; Lai, E. R., 2011). Teachers of English are familiar with the strategies as Think Pair Share (TPS), quick write, know-want to know-learned (KWL), pen in the middle, jigsaw, predictions by terms, debate and so on.

Instructional strategies which can be used as an effective way of improving students' critical thinking in language class are: explicit instructions, teacher questioning, and active and cooperative learning strategies. Beyer, B. K. (Beyer, B. K., 2008) suggested specific procedures for explicit teaching that consists of detailed clarifications and demonstrating thinking skill procedures and rules; explicit instructions on how and when to apply critical thinking skills; systematic skill practice for self-directed use; and helpful reaction and continuous training. Teacher questioning, lower-level questions and higher-level questions, are other crucial ways to encourage students to think critically. Additionally, the adoption of active and cooperative learning focusing on student participation, cooperation, and interaction can provide students opportunities to exchange ideas, take responsibilities, and become critical thinkers (Slavin, R. E., 2011). The proposed instructional strategies to enhance critical thinking consist of role play or stimulation, group research projects, group discussion, debate, and peer-questioning.

Explicit teaching, a way of enhancing critical thinking skills, is the integration of smaller learning units into meaningful wholes, and it is tailored specifically to students' learning and needs. Students are cognitively involved throughout the learning process. They have chances throughout the lesson to self-monitor and self-direct their own learning and participation. Explicit teaching in language classroom requires teachers understand the relationship between critical thinking and language learning. The ability to explain, model and infuse the concept of critical thinking into the classroom activities is the most important. It is crucial that teachers explicitly transfer to students that these characters are highly valued and expected in English language classroom (Egege, S. and Kuthieleh, S., 2004).

Teacher questioning is another of enhancing students' critical thinking skills. Students are engaged in critical thinking by asking follow-up probing questions. Paul, R. and Elder, L. (Paul, R. and Elder, L., 2006) explained that English language classroom can be taught by using questions for clarification, questions about different perspectives, and questions to challenge students' assumption, reasons, evidence, implications, and purposes. To engage students in critical thinking, teachers must have unaffected interaction with students and offer them sufficient time for reflection.

Active and cooperative learning strategies can be suggested into 3 methods: group discussion, debate, and reciprocal peer questioning. Group discussion involves

teaching students to exchange their ideas with active learning and participation (Orlich, D. C. et al., 2004). It is an effective teaching method of encouraging students to think and clarify their perspective and insightful ideas. Debate is one of the teaching methods which can build students' critical thinking skills. Goodwin, J. (Goodwin, J., 2003) argued that debates in a communication class increases the development of different perspectives on course topics in both students' participation and language use. It can be confirmed that debates can facilitate critical thinking development. Simpson, A. (Simpson, A., 1996) introduced reciprocal peer questioning method where questioning and sharing responses in small groups could help students improve critical thinking skills. Students can work in pairs or in groups, take turns to ask their well-prepared questions and answer each other's questions. If students can develop their critical thinking skills and habit of regularly and frequently asking and answering questions, then they become critical thinker.

In developing students' communicative skills, simulation, role play and problem solving play a vital role because these activities allow learners to think outside the written text provided to them. These activities make students able to apply their knowledge in real life situations. While accomplishing these activities, teachers must help in learning process so that students can be motivated to take part in this process of language learning. Larsen-Freeman, D. (Larsen-Freeman, D., 1986) believes that role plays are crucial in communicative approach as they offer a chance to practice social roles in different contexts. Both structured and unstructured role plays can have an effect on students' minds, and develop language fluently by creating an interactive environment in the classroom. It, being a flexible activity, has an extensive potential for teaching and learning.

Objective of the study

1. To examine students' speaking proficiency through teaching critical thinking skills.
2. To explore students' satisfaction toward teaching critical thinking skills

Hypotheses

Regarding the above-mentioned objectives, the following hypotheses were raised:

1. Students' speaking proficiency after teaching critical thinking skills were higher than before teaching critical thinking skills.
2. Students' satisfaction toward teaching critical thinking skills were at a high a level.

Research Methodology

1. Participants

The participants of this study were thirty-eight English for International Communication students (EIC), studying at Rajamangala University of Technology Isan, Nakhon Ratchasima who studied in a seminar in English language subject in 2017 academic

year. Thirty-eight participants were pre-tested and post-tested for their speaking ability in terms of speaking competence. The three raters were English teachers who gave twenty marks following the evaluation criteria form. The criteria for the speaking competence were divided into 4 main components which were Performance, Grammatical Accuracy, Fluency, and Critical thinking criteria. The 8 sessions of treatment in critical thinking were carried out for 3 hours per a session.

2. Instruments

The research instruments were lesson plans, speaking test, and questionnaires. The materials employed to teach critical thinking and to train the students were based on the general method of critical pedagogy. The participants were asked to think, probe the questions, analyze and make decisions based on their own findings. The critical thinking activities used in the classroom were paired-analysis of data, group discussions, class discussions, debates where these activities intended to create a clear concept of critical thinking skills.

Speaking test focused on the dimensions of critical thinking skills which are cognitive skills (analysis, interpretation, inference, explanation, evaluation and self-regulation) and disposition skills (open-mindedness, inquisitive, truth-seeking, being analytical, systematic and self-confident in reasoning) as mentioned by Facione, P. A. and Giancarlo, C. A. (Facione, P. A. and Giancarlo, C. A., 1997). The speaking test was a content-based topic of the students' field of research interest. The speaking criteria mentioned above were Performance, Grammatical Accuracy, Fluency, and Critical thinking criteria. The critical thinking criteria mean clarity, precision, specificity, relevance, depth, fairness, logicalness and completeness.

Questionnaires were designed with 10 items depicting the level of satisfaction toward teaching critical thinking skills using the 5 Likert scales. The interpretations for the satisfaction were as follows;

1.00 - 1.49	means	high dissatisfaction
1.50 - 2.49	means	dissatisfaction
2.50 - 3.49	means	neither satisfaction nor dissatisfaction
3.50 - 4.49	means	satisfaction
4.50 - 5.00	means	high satisfaction

3. Procedure

This study was an experimental research where one-group pretest-posttest design was used. The experimental research design included a pretest measure followed by a treatment and a posttest for a single group (Cresswell, J. W., 2008). After the posttest, the participants were asked to answer the questionnaires on students' satisfaction toward teaching critical thinking skills.

Research design

O1	X	O2
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O1 = Pretest

O2 = Posttest

X = Treatment (8 sessions of treatment in critical thinking activities)

Results

The results of this study answered the following research questions: Can teaching critical thinking skills improve students' speaking proficiency? and how was the students' satisfaction toward teaching critical thinking skills?.

The data were collected through a quasi-experimental design and were analyzed using a quantitative approach. Thirty-eight participants took the speaking test before the experiment. The same test was repeated after the eight sessions of the treatment in teaching critical thinking skills. The results of pretest and posttest were presented in the following table.

Table 1 The pretest and posttest score of students' speaking proficiency

Speaking Test	N	Total Score	Minimum	Maximum	\bar{X}
Pretest	38	20	10	14	11.61
Posttest	38	20	10	18	15.16

From Table 1, the minimum score of students' speaking proficiency pretest was 10 the same as the posttest score. The maximum of students' speaking proficiency pretest was 14, but the posttest was 18. The results indicated that students' speaking proficiency posttest had higher scores than pretest.

Table 2 The prepost and posttest test score of students' speaking proficiency: Paired-samples Test

Speaking Test	N	\bar{X}	S.D.	df	t	P-value
Pretest	38	11.61	1.28			
Posttest	38	15.16	1.53	37	23.05*	0.000

*P < 0.05

As shown in Table 2, the paired t-test result indicated the students' speaking proficiency pretest and posttest. There was a significant difference between the speaking pretest and posttest at the level of 0.05. The mean score of speaking pretest was 11.61 and that of the posttest was 15.16. The standard deviations of the pretest and posttest were 1.28 and 1.53 respectively. This showed that teaching critical thinking skills can improve students' speaking proficiency.

Table 3 The level of students' satisfaction toward teaching critical thinking skills

No.	Students' level of satisfaction toward teaching critical thinking skills	\bar{X}	S.D.	Interpretation	Rank
1.	I could review my background knowledge before learning the new skills	3.96	0.39	High satisfaction	7
2.	I can exchange my ideas with both teachers and friends	3.94	0.43	High satisfaction	8
3.	When I face problems, I have opportunities to solve my problems	4.06	0.35	High satisfaction	4
4.	I can cooperate and discuss with others about the conclusion of the main point and learning transformation	4.10	0.46	High satisfaction	3
5.	I can clearly understand through the critical thinking skills activities	3.91	0.46	High satisfaction	9
6.	The critical thinking skills activities are enough for me to practice speaking English	4.15	0.44	High satisfaction	1
7.	The difficulties of the critical thinking skills activities are suitable for me to practice speaking English	4.03	0.59	High satisfaction	5
8.	I can practice speaking English through the critical thinking skills activities with friends and myself	3.94	0.50	High satisfaction	8
9.	I improved my speaking ability after using the critical thinking skills activities	4.00	0.50	High satisfaction	6
10.	I will ask the teacher to teach the critical thinking skills activities again	4.12	0.42	High satisfaction	2
Total		4.02	0.46	High satisfaction	

From Table 3, it was found that the students' satisfaction toward teaching critical thinking skills were at a high level ($\bar{X} = 4.02$, S.D. = 0.46). Each item pointed toward the students being satisfied with the highest mean average at 4.15 through enough critical thinking skills activities to practice speaking ($\bar{X} = 4.15$, S.D. = 0.44). They were also satisfied with the desire to ask the teachers to teach critical thinking skills activities again. The cooperation and discussion during the activities was at a high level with a mean average of 4.12 and 4.10 ($\bar{X} = 4.12$ and 4.10, S.D. = 0.42 and 0.46, respectively).

The students expressed that the opportunities to solve problems and difficulties with mean average of 4.06 was at a high level of satisfaction. In conclusion, the total mean scores of the questionnaires had at high level of satisfaction toward teaching critical thinking skills.

Conclusions and Discussion

The first finding of this research revealed that teaching critical thinking skills had a significantly positive impact on the speaking proficiency of English major students. According to Malmir, A. and Shoorcheh, S. (Malmir, A. and Shoorcheh, S., 2012) who conducted a research and found that with critical thinking, students can improve better language skills. Naeini, J. (Naeini, J., 2005) found in her research that language learners taught by critical thinking strategies performed better than other groups. Similarly Nikoopour, J., Amini Farsani M., and Nasiri, M. (Nikoopour, J. et al., 2011), revealed that the results for teaching critical thinking to EFL students were positive and it can challenge language learners to be more successful.

Moreover, Malmir, A. and Shoorcheh, S. (Malmir, A. and Shoorcheh, S., 2012) studied the impact of teaching critical thinking on learners' speaking skills, and they found that language learners training with critical thinking had vital impact on promoting students' speaking ability, also becoming active participants in the interaction process. It is important for language learners to increase the critical thinking skills in order to use these skills to improve their language skills because they will find themselves interacting, collaborating, and practicing the language.

Critical thinking skills and language development are related, and teaching critical thinking should be integrated in the language curriculum (Rafi, M. S., 2009). Chamot, A. (Chamot, A., 1995) suggested that educators should emphasize the essential of developing higher-order thinking skills in the foreign language classrooms. Like Kabilan, K. M. (Kabilan, K. M., 2000), he argued that proficient language learners need to improve their thinking skills to be more critical and creative thinkers. The responsibilities of language teachers could promote critical thinking skills and help them learn the language by

integrating teaching critical thinking strategies in language classrooms, so promoting critical thinking skills were considered one of language teachers' tasks to enhance language learners to become more effective.

The second finding of this research showed that students' satisfaction toward teaching critical thinking skills was at a high level of satisfaction. Students' opportunities both with teachers and friends to ask questions or share ideas when faced with problems can change their language classroom cultures. As Pattapong, K. (Pattapong, K., 2015) stated in his research that Thai students rarely asked or answered questions in the classrooms because they fear losing face and save face or being shy of making mistakes. Thus, friendly and comfortable classroom environment encourage students to communicate and share more ideas increasingly.

Also, students were highly satisfied with critical thinking activities during teaching and practicing in the classroom. The results of the levels of satisfaction showed students' engagement by using their personal reflection, language skills, communication skills and collaborative learning skills in the critical thinking activities. According to Wattanavorakijkul, N. (Wattanavorakijkul, N., 2019), when teachers understood the concept of the 21st century skills, this can be reflected through their teaching activities, so students can enhance critical thinking skills as one of the 21st century skills in both their classrooms and their real life situations.

Further research can be suggested; that the same kind of study should be conducted with the other groups of students in different kind of field of studies. Also, a large scale of participants should be done to support the generalizations. This can be done with longer period of time in order to add more activities to practice students' critical thinking skills. Research on critical thinking skills can be done together with other language skills. Finally, researchers can conduct experimental research by promoting various kinds of critical thinking activities to enhance the four skills of language learning.

Acknowledgement

I gratefully acknowledge the kindness of English language teachers and students who allowed me to conduct this research and also supported me. Thanks to all my colleagues for all the support. Also, I would like to thank the anonymous reviewers for their kind words and useful suggestions. Last but not least, thanks to all the inspirations that drive me to be an academician.

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