

# ***Effects of Question-based Activities on Critical Thinking of 2<sup>nd</sup> Year English Major Students, Chiang Mai Rajabhat University***

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## **Abstract**

The objectives of this research were to enhance EFL learners' critical thinking ability through question-based activities, and to examine the opinions and awareness of students towards question-based activities. The sample was selected using the purposive sampling method consisting of 43 second-year English major students. The research instruments were 1) a 25-item test used to assess the students' critical thinking skills taken from 'Critical Thinking Skills Success in 20 Minutes a Day' by Lauren Starkey 2) a five-scale opinion questionnaire used to explore the students' opinion on English language instruction through question-based activities in the Inferential Reading course and 3) the students' reflective writing on the instruction in the Inferential Reading course. The results revealed that the students' critical thinking skills were higher after they had participated in the question-based activities at 0.05 level of significance, and the students' opinions towards question-based activities were at a high level. The students were aware of the importance and benefits of questioning both in the academic sense and in everyday life situations.

**Keywords:** Question-based Activities, Critical Thinking, EFL learners

## **Introduction**

Critical thinking is one of many crucial competencies, which learners should be equipped with, after graduating from an educational institution; therefore, most educators and teachers need to nurture the critical thinking among their students in order to prepare them to thrive in the real world outside the classroom. The term 'Critical Thinking' has been defined by many philosophers, educators, and researchers. It can be defined as a process associated with cognitive skills in order to make sensible judgements on claims or situations and to draw conclusions based on logical and reasonable evidence without biases and prejudices. (Reed & Peirce, 2004; Bassham, Irwin, Nardone & Wallace, 2011)

According to Bloom's Taxonomy (1956), there are six levels of learning in the cognitive domain: 1) knowledge 2) comprehension 3) application 4) analysis 5) synthesis and 6) evaluation. These six categories are ordered hierarchically. Krathwohl (2002) revised Bloom's cognitive domain, and made adjustments to the terms of these categories. The

revision of Krathwohl's cognitive process dimension includes 1) remembering 2) understanding 3) applying 4) analyzing 5) evaluating and 6) creating. Both cognitive domain of Bloom's taxonomy and Krathwohl's cognitive process dimension of the revised taxonomy focus on cognitive skills that learners should master from the simple ones to more complex ones. We can divide these 6 levels into 2 types of thinking skills: lower order thinking skills and higher order thinking skills. Lower order thinking skills require learners to remember and understand what they have studied and learned. Moreover, learners can apply their knowledge in given or real situations. Learners in the 21<sup>st</sup> century, however, need to improve and train their higher order thinking skills. They should be able to analyze the materials or contents in order to break down the information into elements, to discover how/why each element relates to others, evaluate things based on logical evidence and finally, to creatively design new ideas or concepts. Those higher order thinking skills are critical thinking skills which all learners should develop throughout their lives for living consciously in current times.

For decades many Thai teachers in various institutions have attempted to implement a number of interesting teaching methods; however, they have not been able to reach this goal. Most Thai students cannot improve their higher order thinking skills which include those analytical, evaluation and creative skills. The failure to teach critical thinking skills in classrooms was evident from the result of Program for International Students Assessment or PISA) in 2015, where Thailand was placed on the 55<sup>th</sup> spot out of 70 countries (The Organization for Economic Co-operation and Development, 2018). The scores of PISA 2015 in science, reading and mathematics of Thai students were lower than the scores in 2009 and 2012 in all aspects. The PISA scores indicated that the majority of Thai students were unable to read comprehensively and critically, and that they failed to think logically and systematically. As instructors, we have a great responsibility to facilitate and develop our students' skills in communication, creativity and critical thinking, as well as problem-solving, collaboration, self-direction, along with leadership, and adaptability, which are the core competencies of education in 21<sup>st</sup> century skills. (Walser, 2008 cited in Barell, 2010)

How to teach critical thinking skills in the classroom is one issue that has been debated for a long time. There have been various arguments in terms of effective methods to teach learners how to analyze, judge and evaluate massive amount of information in daily life, and to prevent them from being trapped in biases and in accepting incorrect information, which are key characteristics of critical thinkers. Before critical thinkers accept and believe what they have read and heard, they look for evidence and rational explanations. Therefore, asking and probing questions in inquiry-based activities may help learners to become critical thinkers. Moreover, questioning is one effective technique to stimulate students' curiosity and interest in lessons or topics. It can also encourage them to be actively engaged in their learning because students have to seek answers or solutions while responding to questions. Hence, questioning is a suitable technique that can change passive learners to become more active and confident ones. (Learning Development, 2010; Etemadzadeh, Seifi, & Far, 2013; Bunwirat, Chuaychoowong, & Boonsathorn, 2018) Questioning is a classic instruction technique that many teachers employ in the classroom. However, asking questions using higher order thinking skills (*How? What if? So what? What next?*) has not been fully implemented. Most teachers ask lower order thinking skills questions (*Who? What? Where? When? Why?*) to only determine learners' comprehension and understanding. Robitaille and Maldonado (2015) explained that according to many studies conducted by education researchers, the problem of accelerating critical thinking in the classrooms was not avoiding asking questions, but teachers failed to ask specific questions to encourage higher order thinking skills such as critical thinking and problem-solving skills. In order to enhance learners' critical thinking skills, asking both lower order thinking skills questions and higher

order thinking skills questions were implemented in the Inferential Reading class for the second-year English major students in the first semester of 2017 academic year.

## Objectives

The objectives of this study were to assess the effectiveness of implementing question – based activities in EFL classroom for non-native English speaking students with various levels of English proficiency so as to enhance critical thinking, and to examine the opinions and awareness of students towards question – based activities. For these objectives, the research questions were put forward as follows:

- 1) Can the students participating in question-based activities improve their critical thinking?
- 2) Have the students participating in question-based activities gained a positive attitude towards English learning?
- 3) What are the views of the students on English language instruction through the question-based activities?

## Research Hypothesis

Question-based activities in EFL classroom could improve critical thinking of the students.

## Research Methodology

### *Participants*

This study was done using a one-group Pretest-Posttest design. The research participants consisted of 43 undergraduate English major students who had enrolled in the Inferential Reading course with the researcher in the first semester of 2017 academic year at Chiang Mai Rajabhat University. The Inferential Reading course was a three-credit course (3 hours per week) over 16 weeks including midterm and final examination weeks. Pre-test and post-test were carried out in the first and fifteenth week of the course. Although the 43 participants were English major students, their English proficiency was at beginner to intermediate levels and most of them were accustomed to passive learning that depended on what teachers had instructed and taught.

### *Research Instruments*

There were 3 instruments used to collect data for this investigation:

1) a 25-item test on critical thinking skills taken from the “30 Multiple Choice Critical Thinking Skills Test” extracted from Lauren Starkey (2010) book “Critical Thinking Skills Success in 20 Minutes a Day”. This critical thinking skills test was employed as a pretest and a posttest for this study. The pre-test was administered in the first week of the semester and the post-test was administered in the last week.

The “30 Multiple Choice Critical Thinking Skills Test” was inspected by three experts in the field of TEFL and Literature for content validity assessment regarding Index of Objective Congruence (IOC). Every item was between 0.67-1.00 which was greater than 0.50; therefore, all items were considered valid.

After that, the test was tried out on 49 students majoring in English Education, who were not in the sample group and also exhibited various levels of English proficiency. The “Item Difficulty Index” was used to assess the difficulty of each item. The index should be between 0.20-0.80. After calculating the Item Difficulty Index for the test, it was found that there were only 25 items having an index between 0.22-0.80. Therefore, the critical thinking skills test for this research contained 25 items with 5 multiple choices.

2) a five-scale opinion questionnaire measured with 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). This questionnaire was used to explore the students’ opinion on English language instruction through questioning technique in the Inferential Reading course.

3) the students’ reflective writing on the instruction in the Inferential Reading course.

### ***Data Collection Procedure***

Prior to collecting the data, the researcher studied related documents and designed a course syllabus for the Inferential Reading class focusing on question-based activities. Before implementing the questioning technique in the classroom, learners were assessed for their critical thinking by responding to the test of 25 questions with 5 multiple choices taken from “30 Multiple Choice Critical Thinking Skills Test” extracted from “Critical Thinking Skills Success in 20 Minutes a Day” by Lauren Starkey (2010).

During the first four weeks of the semester, the teacher prepared students by allowing them to get familiar with lower order thinking skills questions (*Who? What? Where? When? Why?*), where students used specific contents of passages/texts to find answers to the teacher’s questions. Moreover, during the warm-up activity of every week, the teacher allowed students to create their own questions towards the passages/texts before reading, so the participants were trained to ask questions and search for answers. Besides the textbook or teaching materials that the teacher had prepared, they could search for answers using various sources of information. After the research participants were familiar with the lower order thinking skills questions, the teacher encouraged them to think laterally by asking higher order thinking skills questions (*How? What if? So what? What next?*). Students then participated in question-based activities including both lower and higher order thinking skills questions over the following ten weeks. These ten-week question-based activities mainly focused on students’ participation in higher order thinking skills through reading news articles, comic strips, short stories, advertisements and so on. The teacher started the lesson by allowing students to pose questions about the printed texts in order to predict what they were going to read. Then, the teacher employed the lower order thinking skills questions to assure that the students comprehended the texts. After that the researcher encouraged the students to ask and answer higher order thinking skills questions by discussing and sharing their answers in peer and group discussions. After brainstorming amongst group members, they presented their answers, ideas, or opinions to the whole class.

In the fifteenth week of the Inferential Reading course, the research participants subsequently took a post-test to once again assess their critical thinking. The research participants also did the five-scale opinion questionnaire on English language instruction through questioning technique in the Inferential Reading course. Also, they were assigned to write a reflective writing in regard to the activities they had participated in the class.

Additionally, the research participants read two external books of their choosing throughout the semester. These external readings were Graded Readers of Oxford University Press (level 4 to level 6). The research participants could choose the levels of their external

readings depending on their English proficiency levels. Before they had started their external readings, learners and teacher helped to create questions to the stories they would read. For example,

Before Reading Questions: *What hints does the title give the reader about the story?*

While Reading Questions: *Who is the main character? What kind of person is he/she?*

*Are there any clues/ words/ actions relating to his/her personality? Can the setting help you understand the story in this chapter more clearly? How? How does the main character solve the problem? Or how does the main character react to the situation in this chapter? What if you were the main character, what would you do? Why?*

After Reading Questions: *What have you learnt after reading this story? How can you*

*apply this lesson to your life? How do you feel after you read the story? etc.*

These questions were given to the students in advance before they started reading.

After they finished each external reading, they had to write a reflective writing regarding their reading experience.

After collecting the data, the researcher analyzed the results collected from the pre- and posttests and the questionnaires. The quantitative data were analyzed statistically for mean and standard deviation. The qualitative data from the reflective writing were analyzed descriptively.

## Results

### *The Results of Critical Thinking Assessment*

With regard to the collected data from the pre- and post-test, and as it is evident in table 1, the mean score of the research participants before being exposed to the questioning technique was 10.63 (out of 25). After ten weeks, the mean score of learners' critical thinking was 13.58 (out of 25), which indicated that there was a significant difference in learners' critical thinking. Accordingly, it can be assumed that learners' critical thinking after attending the course had changed significantly.

In respect to the S.D., the pre-test standard deviation was 2.76 and the post-test standard deviation was 2.63. It can be explained that learners had significantly different levels of critical thinking and English reading skills, which affected the S.D. figure. However, after participating in the question-based activities, the S.D. was lower.

**Table 1 Learners' Critical Thinking before and after being exposed to the questioning technique**

	N	$\bar{X}$	S.D	P-Value
Pre -test	43	10.63	2.76	< 0.001
Post- test	43	13.58	2.63	

\*Level of Significance 0.05

***The result of learners' opinion on English language instruction through the questioning technique in the Inferential Reading course***

According to the results of the questionnaire, and as it is evident on Table 2, the mean score of the learners' opinion towards English language instruction through the questioning technique, after 14 weeks, was 4.50 (out of 5), which indicated that there was a general positive agreement in the effectiveness of the questioning technique instruction. As a result, it can be concluded that learners felt positive about the questioning technique as their opinion towards this method was significantly high.

**Table 2 Learners' opinion on English language instruction through questioning technique in the Inferential Reading course**

Items	N	$\bar{X}$	S.D.	Level of Agreement
15	43	4.50	0.34	Agree

In terms of the learning process (see table 3), the questioning technique and question-based activities encouraged learners to study this course more effectively, and learners thought that questioning enhanced their learning. Also, they were aware of the benefits of this technique and felt that this technique should be implemented in language classes and should be adopted in other courses. Most importantly, the questioning technique and question-based activities could help them comprehend the text more easily.

**Table 3 Learners' opinion on their learning process after participating in English language instruction through the questioning technique**

Items (N = 43)	$\bar{X}$	S.D.	Level of Agreement
1. Questioning assisted you to study this course efficiently.	4.41	0.60	Agree
2. Questioning could be employed in studying other courses.	4.49	0.51	Agree
3. Questioning enhanced your learning.	4.35	0.63	Agree
4. Question-based activities should be held in class.	4.30	0.57	Agree
5. Questioning helped students to understand written texts better.	4.68	0.47	Strongly agree

Additionally, learners found that the questioning technique and question-based activities enhanced their thinking from lower order thinking to higher order thinking (see Table 4). They became aware how questioning had improved their critical and logical thinking, enabling them to better process available information (e.g. fact, opinion) and furthermore, to analyze the relationship between ideas, topics, or themes of written texts. More remarkably, learners recognized that they were becoming better decision makers as they thought the questioning technique and question-based activities helped them make reasonable decisions by taking additional time to think carefully and logically before drawing any conclusions. Furthermore, they believed that the questioning technique and



question-based activities could help them think critically and logically before making any judgements.

**Table 4 Learners' opinion on their higher order thinking skills after participating English language instruction through the questioning technique**

Items (N = 43)	$\bar{X}$	SD	Level of Agreement
1. Questioning enhanced your thinking skills.	4.54	0.61	Strongly agree
2. Questioning enhanced your logical thinking.	4.57	0.55	Strongly agree
3. Questioning enabled you to process the information better e.g. fact, opinion, biases.	4.51	0.61	Strongly agree
4. Questioning enabled you to analyze the relationship between ideas, topics, or themes of the written texts.	4.57	0.55	Strongly agree
5. Questioning helped you to make reasonable decisions.	4.54	0.61	Strongly agree
6. Questioning helped you to take more time to think carefully and reasonably before drawing any conclusions.	4.70	0.46	Strongly agree
7. Questioning encouraged you to think critically and logically before making any judgement.	4.49	0.61	Agree
8. Questioning helped you detect the relationship among things or incidents.	4.43	0.60	Agree
9. Questioning enabled you to retrieve the information better.	4.27	0.56	Agree
10. Questioning enabled you to better analyze the information you gained every day.	4.59	0.50	Agree

Additionally, all items of the questionnaire on English language instruction through the questioning technique and question-based activities in the Inferential Reading course indicated the same pattern of a high level of agreement.

### ***Reflective Writing on English language instruction through the questioning technique and question-based activities***

After a 14-week instruction based on questioning technique and question-based activities, the research participants reflected their ideas and opinions towards this course, which could be divided into 4 categories. The following excerpts show how learners explained in their own words:

***Item 1: Have you gained any new knowledge and what have you learned through questioning activities?***

*I have better skill on reading for main ideas.*

*I have practiced how to think critically.*

*I love critical reading more and more, not reading for main ideas only.*

*I have learned a lot of new vocabulary.*

*I have improved my reading skills: reading for main ideas, speed reading, and summarizing. I like reading more.*

*I can interpret what I have read, make the reasonable inference, and guess the meaning from the context better.*

*I can integrate the skills I gained in this course into my writing course well.*

*I question on the information I get before making the decision. Are those facts or assumptions? Can I rely on those sources of information?*

*I can improve my speed reading and guessing skills. Also, I can differentiate facts from opinions.*

*I am more reasonable.*

*I have learned that there is more than one solution to my problem and when we have to make a decision, we should choose the best solution among them. Questioning can help us think laterally.*

**Item 2: Students' learning problems and obstacles to learn this course and how to deal with those problems/obstacles:**

**Problems/obstacles**

*My range of vocabulary is limited, so I don't understand the texts.*

*My grammar knowledge is not enough.*

*I am a slow learner.*

*I have a short attention span to the lesson.*

*The content is too complicated.*

**How to cope with the problems/obstacles:**

*I learn by myself before/after class.*

*I have to practice guessing the meaning from the context.*

*I should prepare myself before class.*

*I should do meditation before class.*

**Item 3: What is your suggestion to make this course more interesting and better (e.g. content, activities, instruction style, materials etc.)?**

For this item, learners did not wish to change anything. They reflected that everything in this course was proper and suitable for undergraduate students

**Item 4: How can learners apply the knowledge and skills they gained from this course to their daily lives?**

*I can apply reading skills to my real-life reading e.g. reading news or academic texts.*



*I will not believe anything easily anymore for sure. I have to ask about its reliability and its benefits first.*

*I can employ critical reading skills to my further courses.*

*I have more critical eyes when I receive real life messages or information e.g. ads, news, articles.*

*I can interpret the tone and purpose of written texts in my real life.*

*I can retrieve information more effectively and efficiently with my critical thinking.*

*I can make more reasonable decision and I will think critically towards which source of information I can believe.*

*I have practiced critical thinking through questioning activities, so I will not be deceived easily by marketing tricks and propaganda ads.*

The statements above, especially the excerpts from item 4, indicated that questioning technique and question-based activities not only enhanced learners' reading and learning skills, but also improved their critical thinking skills. They realized what they did and did not know, and they also sought the solutions to their problems. Furthermore, one of the students mentioned that questioning activities made him/her become a critical thinker, who would not be deceived by biases and by accepting incorrect information. In addition, there were many learners stating that after participating in this course, they thought they had gained and practiced critical thinking skills which helped them judge what kinds of information they could trust, which sources were reliable, and which statements were facts or just opinions of writers.

## Discussion

The results indicated that learners had improved their critical thinking after attending English instruction through questioning technique and question-based activities. This could be the result of consistently practicing their critical thinking through the 14-week-questioning activities.

During the first four weeks of the semester, the teacher designed the questions where learners could find the answers in selected passages or stories. These questions were lower order thinking questions (Who? What? Where? When? Why?). Learners adapted to these questions during this 4-week-period. The aim of this activity was to allow learners to become familiar with these types of questions and how to create questions by observing the teacher's questioning methods. Learners responded to these lower order thinking questions by determining the main ideas and by summarizing them in from of written texts. After they had comprehended the reading passages, they could step further to the next thinking level. They were then able to analyze the texts, to read between the lines, and to develop good judgement in making decisions regarding what they had read.

Following the first four weeks of lower order thinking questioning activities, learners started creating their own questions in respect to the content that they were reading. 5Ws (Who? What? Where? When? Why?) helped learners understand the passages and texts, for example, news articles, short stories, comic strips, advertisements and so forth. After searching for the answers in the passages or texts, if they could not find the answers, they could explore the internet, and subsequently had to present their sources to their group

members or the entire class. Then, every member judged the reliability of the source as well as the accuracy of the information. Subsequently, they shared their ideas in regard to the answers or information they had observed. Additionally, sometimes after reading short stories, poems, or songs, learners predicted the situations that might be happening next. The teacher accelerated learners' critical thinking by asking higher thinking skill questions, for instance, "*According to the reading passage, what happened?, why did it happen?, what will happen next?, if you were him/her, what would you do?, and why would you do that?*" These questions can enhance reader's comprehension and improve their thinking abilities. According to Anurit (2016), when EFL learners conveyed their opinions through reflective writing and discussion by adopting question words like "*How? Why? What if?*", they would be able to practice their problem-solving skills and creative thinking. Furthermore, asking various kinds of suitable questions encourage learners to search for answers, seek further information, and to systematically analyze the information. Moreover, learners can implement their knowledge in their lives effectively (Iakovos, 2011; Feng, 2013). After sharing and discussing the ideas in groups, the representatives of each group presented the group's understanding and interesting opinions or suggestions to the entire class. Every class member could raise his/her own dispute or agreement on others' ideas; however, they were required to support their arguments logically and reasonably.

Besides the classroom activities, learners were assigned to individually read 2 external books outside the classroom. The teacher and learners created relevant questions by asking about the story. Those questions were divided into 3 phases: questions before reading, questions while reading, and questions after reading. (1) Questions before reading focused on developing inference skills. Learners guessed the genre and the ending of the story by judging its cover, the title and the brief information in the synopsis. (2) Questions while reading helped learners to get a clearer understanding of the story, where questions encouraged learners to read between the lines and to think critically by analyzing the words and actions of the main characters or by motivating participants to think laterally. For example, *if the main character didn't do like that, what would have happened? If you were the main character, what would you do and why?* (3) Questions after reading focused on critical thinking. Learners were required to think critically by asking higher order thinking questions, for example, *if you could change the end of the story, what would it be?/ which character do you like the most/the least? why? /what have you learnt after reading this story?/, and how can you apply this lesson to your life?*

In addition, using questions can help learners to better read the stories, and it can improve their writing skills as well, as questioning can guide learners to reach the aims of their reading and writing. Etemadzadeh, Seifi & Far (2013) mentioned that questioning technique encouraged Malaysian secondary students to think critically and engaged them to writing activities eagerly and enthusiastically. After participating in the English writing instruction through the questioning technique, Malaysian students had more confidence and were engaged in meaningful and effective communication. It can be said that employing questioning technique in English teaching is beneficial to learners, both for writing and thinking skills.

Having said this, it is important to note that the difference between the pre-test and post-test scores was not high. This may be due to the lack of English proficiency of learners because the students' English competencies varied from beginner to intermediate level. According to the learners' reflective writing, some learners felt that they could not convey their ideas and opinions well enough, when they had to participate in group discussions, as they were not confident in their English speaking skills. Although most activities in class were pair/group discussions and the atmosphere of the class was not tense, they felt inhibited

to interrupt the instruction process and annoy their classmates. DeWaelche (2015) also faced this problem. According to DeWaelche's study, the participation of Korean EFL learners in small group discussions was limited because of limitations in English language abilities that caused the communication to be rather difficult. Therefore, they could not share their understanding and ideas with their classmates in English. On the other hand, they could express interesting ideas towards the matters which reflected their critical thinking if they discussed the issues in their own Korean language. It can be concluded that language abilities are reflective of and impact the critical thinking of learners.

The findings also revealed that the learners' opinion toward the questioning technique and question-based activities was positive after 14-week question-based activities as they were aware of the benefits of questioning toward their studies and further in the real world. In other words, learners realized how to employ the questioning technique in order to help them analyze, judge and evaluate massive amount of information on a day to day basis, and to help them from being trapped in biases and in accepting bogus information.

## Conclusions and Suggestions

In summary, this research shows that the question-based activities can enhance students' critical thinking skills as shown in the posttest scores' significant difference. The question-based activities have also made students aware of the way they learn. According to the results of the questionnaire and the reflective writing, it is shown that the collaboration between teacher and students, or among students themselves, to pose questions may nurture students' ability and confidence to question the information they gain reasonably and creatively. Hence, this question-based instruction might prepare and equip students with thinking skills, those of the 21<sup>st</sup> century skills required by the current various workplaces.

The questioning is an effective technique to enhance thinking skills. However, the levels of English language can affect students' understanding of class materials and students' participation when they participate in question-based activities and group discussions. The limitation of this study is that the English proficiency of the participants varied from beginning to intermediate levels; therefore, it is recommended that for future studies for discussion session and reflective writing, the participants should be allowed to use their native language in order to let them express their ideas and opinions more clearly and critically in order to ensure all students get involved in every activity. Moreover, the questions and choices in critical thinking tests should be written in the Thai language to avoid misunderstanding and misinterpretation while reading the test. Furthermore, if possible, there should be follow-up courses to continuously develop students' critical thinking skills in various content knowledge arenas.

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## References

- Anurit, T. (2016). Implementation of Literature Circles to Enhance Thai EFL Learners' Critical Thinking Skills. *PasaaParitat*. 31, 81-106.

- Barrel, J. (2010). *Problem-based learning: the foundation for 21st century skills*. (1st ed.). Indiana: Solution Tree.
- Bassham G., Irwin W., Nardone H. & Wallace J.M. (2011). *Critical Thinking: a Student's Introduction*. (4<sup>th</sup> edition). New York: McGraw-Hill.
- Bloom, B. S. (ed.). (1956). *Taxonomy of Educational Objectives. Vol. 1: Cognitive Domain*. New York: McKay.
- Bunwirat, N., Chuaychoowong, M., & Boonsathorn, S. (2018). Effects on Inquiry-Based Mobile Learning (IBML) on University Students' Questioning and Public Speaking Skills. *FEU Academic Review*. 12(1), 283-303.
- DeWalsche, S.A. (2015). Critical thinking, questioning and student engagement in Korean university English courses. *Linguistics and Education*. 32(b), 131-147. Retrieved from <http://doi:10.1016/j.linged.2015.10.003>.
- Etemadzadeh, A., Seifi, S., & Far, H.R. (2013). The role of questioning technique in developing thinking skills: The ongoing effect on writing skill. *Procedia-Social and Behavioral Sciences*. 70, 1024-1031.
- Feng, Z. (2013). Using Teacher Questioning to Enhance EFL Students' Critical Thinking Ability. *Journal of Curriculum and Teaching*. 2(2), 147-153. Retrieved from <http://doi:10.5430/jct.v2n2p147>.
- Iakovos, T. (2011). Critical and Creative Thinking in the English Language Classroom. *International Journal of Humanities and Social Sciences*. 1(8), 82-86. Retrieved from <http://pdfs.semanticscholar.org/feb7b/047e44fae84131d84b1639b07dc8e6412521.pdf>.
- Krathwohl, D.R. (2002). A Revision of Bloom's Taxonomy: an Overview. Retrieved from [http://www.unco.edu/cetl/sir/stating\\_outcome/documents/Krathwohl.pdf](http://www.unco.edu/cetl/sir/stating_outcome/documents/Krathwohl.pdf).
- Learning Development. (2010). Critical Thinking. Retrieved from <https://www.plymouth.ac.uk/learn>.
- Reed, B. & Peirce, B. (2004). Strategies for teaching critical Thinking Reading and Textbook Reading. *Handbook of Critical Thinking Resources*. Maryland: Prince George's Community College. Retrieved from <http://academic.pg.cc.md.us/~wpeirce/MCCCTR/handbook.pdf>.
- Robitaille, Y.P. & Maldonado, N. (2015). Teacher's Experience Relative to Successful Questioning and Discussion Techniques. *American International Journal of Contemporary Research*. 5(1), 7-15.
- Starkey, L. (2010). *Critical Thinking Skills Success in 20 Minutes A Day*. (2<sup>nd</sup> ed.). New York, Learning Express.
- The Organization for Economic Co-operation and Development. (2018). PISA 2015 Results in Focus. Retrieved from <https://www.oecd.org/pisa/pisa-2015-results-in-focus.pdf>.