Developing Critical Thinking Skills and Attitude:
An Analysis of a Reading Course in a University English Program

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Abstract

The purpose of this paper is to examine whether an English academic reading course in a Japanese university fosters critical thinking skills and attitude among its students. Critical thinking has long been a topic of debate in education, but especially recently, it has become a center of attention of educators in Japan. The English program of International Christian University, Tokyo, has been providing quality education with the aim of nurturing critical thinking skills through academic English. The research question asked in this paper is "How does the reading course of this program provide the students with opportunities to engage in critical thinking?" Based on definitions of critical thinking provided by several scholars, this paper analyzes classes and assignments to identify which critical thinking skills the students need to employ. The findings show that students do engage in activities that require critical thinking. This paper also implies that skills and attitude are inseparable for effective critical thinking.

Critical thinking has been widely discussed in education and educational reform. The recent educational reform in Japan aims to develop thinking skills, including critical thinking skills, among children and young adults. It seeks to nurture responsible members who can contribute to the globalized society. This concept of critical thinking is often confined to L1 education, especially at the primary and secondary levels, but it has gained a high position in English language education in many countries (Atkinson, 1997). Nowadays, enhancing critical thinking in learners is considered one of the foreign language teachers' tasks (Shirkhani & Fahim, 2011). International Christian University (ICU), Tokyo, Japan, has been trying to promote critical thinking since its foundation (Evans, Fearn, & Bayne, 2006). Therefore, the English for Liberal Arts (ELA) program, which offers English classes to first-year and second-year students at ICU, has aimed not only to help the students to improve their academic English skills but also enhance their critical thinking skills. However, critical thinking is not easy to define (Atkinson, 1997), and the ELA program has not had a common understanding of what it specifically refers to.

Many different definitions of critical thinking have been proposed by various researchers (Dewey, 1909, 1998; Fisher & Scriven, 1997; Glaser, 1941; Norris & Ennis, 1989; Paul, Fisher & Nosich, 1993). Among these researchers, the authors of this paper find

that Glaser's (1941, p. 5) three elements of critical thinking the most appropriate definition: "(1) an attitude of being disposed to consider in a thoughtful way the problems and subjects that come within the range of one's experience; (2) knowledge of the methods of logical enquiry and reasoning; and (3) some skills in applying those methods." In summarizing Glaser, Fisher (2011) points that "critical thinking is partly a matter of having certain thinking skills but that it is also a matter of being disposed to use them" (p.4). Thus, educators' aim should be not only teaching critical thinking skills to learners but also helping them to foster critical thinking attitude.

The purpose of this paper is to examine whether spring Reading and Content Analysis (RCA) classes in the ELA program at ICU fosters critical thinking skills and attitude among its students. RCA is one of the core courses of the ELA, and its focus is developing students' reading skills through intensive reading. First, this paper discusses critical thinking attitude expected of students in this course. Then, it examines three assignments in spring RCA classes by referring to the lists of critical thinking skills developed by three major scholars.

Enhancing Critical Thinking Attitude

One of the major goals of RCA is to gain an accurate comprehension of text through an interactive process of active learning. This learning process involves communication among students. Students formulate and ask questions, and give their answers and interpretations. Having critical thinking attitude is a vital element in the process (Halpern, 2000; Lipman, 2003). For example, students with critical thinking attitudes are curious and committed to find answers; thus, they are more likely to achieve the goal of RCA. This section discusses building a "community" (Forrester, 2008; Lipman, 2003; Thomas, 2011) within an RCA class to develop students' critical thinking attitude by examining the reading materials and class activities used in the spring term.

The contents of the two reading materials themselves help students to form a critical thinking attitude. The first text, "What Every Yale Freshman Should Know" (Morgan, 1960), describes that curiosity and communication are essential qualities of a scholar, and also that university is a place to devote oneself to the journey of truth-seeking and to question and answer freely. The second text, "The Techniques of Propaganda" (Larson, 1989), asserts that logical and recurrent inquiry is important in critical thinking. In this case, using the texts that directly deal with a community model, which is university (Morgan, 1960) and importance of inquiry (Larson, 1989), corresponds to Lipman's (2003) first stage[1] in building the "community of inquiry" in classroom where the text itself plays an important role in demonstrating "community of inquiry."

Based on the contents of this reading material, a number of holistic and analytic comprehension questions are given from the teachers as well as from the students. This stage is similar to Lipman's (2003) second stage in setting the agenda. During this stage a flexible attitude on the agenda should be employed by both instructors and students. Note that, in the activities of answering these questions, the focus is not on finding correct answers. As Lipman (2003) emphasizes "dialogical" activity to be utilized for reinforcing the community in the third stage, a large portion of class time is spent in group and class discussion focusing on practicing logical inquiry and reasoning. For example, in answering what the author of the text means by a particular sentence, students are prompted to explain the reason for their interpretation of the sentence, and other students ask further questions to make sense of the reason. As much as this collaborative activity is crucial, individual decision making is

required for critical thinking. Thus, the process of finding answers is more emphasized than the product of correct answers even when there are definite ones. Similarly, sharing assignment for peer-evaluation is often encouraged in and outside of class. This process is useful to prompt self-evaluation; accordingly, students are motivated to become autonomous learners.

After the assessment of students' text comprehension in an exam, it is indispensable to conduct a review session to give opportunities not only to consider questions that are not discussed in class but also to take another look at their decision making, which results in their "final judgements" as "outcomes of critical thinking" (Lipman, 2003). In this session, feedback is conducted through discussion as well, focusing on logical reasoning. Furthermore, students are invited to evaluate exam questions and answers, and even to "co-develop criteria for assessment" (Shirkhani & Fahim, 2011). This activity further promotes their attitude of inquiry.

RCA classes, as many other ELA classes, are conducted to enhance students' critical thinking attitude by building the "community of inquiry." It can be said that forming critical thinking attitude at an early stage of their university life has a positive influence on their academic success.. The reading materials are suitable for this purpose as their content illustrate the ideal community and logical inquiry. In addition, various activities are implemented to develop students' attitude, such as discussion, peer-evaluation, and exam review. Constant encouragement to the students through these activities, helps them strengthen their attitude.

Developing Critical Thinking Skills

Critical thinking involves not only attitude but also skills: "thinking skills underlying critical thinking" (Fisher, 2011, p. 7). Almost all scholars who have worked on critical thinking tradition have provided a list of skills which seem to be fundamental to critical thinking. However, Mayfield (2007) states that "there is not one common definition of critical thinking" (p.5). Therefore, this paper uses three lists that are frequently cited in critical thinking literature: Glaser (1941), Long (2003),[2] and Fisher (2011).

Glaser (1941) proposed the following:
1. Recognize problems
2. Find workable means for meeting those problems
3. Gather and marshal pertinent information
4. Recognize unstated assumptions and values
5. Comprehend and use language with accuracy, clarity and discrimination
6. Interpret data
7. Appraise evidence and evaluate statements
8. Recognize the existence of logical relationships between propositions
9. Draw warranted conclusions and generalizations
10. Put to test the generalizations and conclusions at which one arrives
11. Reconstruct one's patterns of beliefs on the basis of wider experience
12. Render accurate judgements about specific things and qualities in everyday life.

Long (2003) states that critical thinking is made up of a set of skills rather than any single skill including the following:
1. Separate facts from opinions, inferences, and evaluations

2.   Recognize own and other's assumptions
3.   Question the validity of evidence
4.   Prepare persuasive arguments using evidence
5.   Ask questions
6.   Verify information
7.   Listen and observe
8.   Resist jumping to conclusions
9.   Seek to understand multiple perspectives
10. Seek 'truth' before being 'right'

Fisher (2011) proposed the elements of critical thinking skills as follows:
1.   Identify the elements in a reasoned case, especially reasons and conclusions
2.   Identify and evaluate assumptions
3.   Clarify and interpret expressions and ideas
4.   Judge the acceptability, especially the credibility, of claims
5.   Evaluate arguments of different kinds
6.   Analyze, evaluate and produce explanations
7.   Analyze, evaluate and make decisions
8.   Draw inferences
9.   Produce arguments

The next section investigates three assignments used in Spring RCA classes of the ELA program to determine whether these assignments are successfully promoting critical thinking skills. It analyzes each step of the activities from the viewpoint of the above critical thinking skills.

Analysis of Assignments

This section analyzes how three assignments in the spring term RCA, Definition Writing, Concept Map, and Background Research, help the students to develop their critical thinking skills.

Definition Writing
Definition Writing is one of the assignments when they read the first text, "What Every Yale Freshman Should Know" by Edmund S. Morgan (1960). They are to write stipulated definitions of five keywords of the text.

Purpose. The student handout of this assignment clearly mentions its purpose, "By writing stipulated definitions based on Morgan's text, you are to demonstrate your clear understanding of the text." Before they start working on it, students have to read a supplementary writing textbook of the ELA, *The Student Guide to Writing* (ELA, 2018), to learn what a definition is, why it is important, and how to write it. They familiarize themselves with a dictionary definition, a stipulated definition, and an extended definition.[3] They learn that stipulated definition shows the author's definition in the text.
The students' definitions are assessed based on the following criteria: (a) including all the four elements for a definition (an expression to introduce definitions, a target word, a category word, and explanation); (b) finding the appropriate category word; (c) providing

enough explanation from the text; and (d) not adding his/her own explanation, interpretation, or additional information.

Stages and critical thinking skills. There are three main stages that students should follow to do this assignment.

Stage 1. Find keywords of the text
    Fisher #6: Analyse, evaluate and produce explanations

Before they start writing definitions, they need to decide on the keywords of the Morgan text by analyzing the text carefully in doing so they are engaged in a component skill of *Fisher #6*. To identify these keywords, they need to find the words that appear repeatedly throughout the text. They are also told to find the words that are related to the title. In this case, they need to find the answers to the question, what should every Yale freshman know? Another important point is the main idea of each paragraph. Finding main ideas is a crucial analysis to understand academic texts. As a result of such analysis, the students usually identify these five keywords: *scholar*, *university*, *world*, *curiosity*, and *communication*.

Stage 2: Understand the author's definition of each keyword
    Long #2: Recognize own and other's assumptions
    Fisher #3: Clarify and interpret expressions and ideas

After they identify the keywords of the text, they need to find the author's intended meaning of those keywords. At this stage, the students engage in the skill of *Fisher #3*. Fisher (2011) states that authors of academic writing should consider who their audience is and provide sufficient clarification to the audience. He explains that providing a stipulated definition is a possible source of the author's clarification of their expressions and ideas. The audience or the readers should be able to note the author's stipulated definitions to understand their ideas. Moreover, they need to *recognize own and other's assumption* to find the author's definitions, as in *Long #2*. Stipulated definitions show the author's assumptions about the keywords, which can be different from readers' own assumptions. For example, readers' assumption of a university may usually be a place for higher education where students study for a degree, but the author, Morgan, says a university is "a sanctuary" for scholars (Morgan, 1960, p. 13). Fisher (2011) defines an assumption as a belief that is not stated but is taken for granted by a speaker or a writer. Assumptions lead to the author's stance on the topic, so recognizing the author's assumption is crucial for writing definitions.

Stage 3: Paraphrase and/or summarize the author's definitions into their own words
    Glaser #4: Recognize unstated assumptions and values
    Glaser #5: Comprehend and use language with accuracy, clarity, and discrimination
    Long #2: Recognize own and other's assumptions
    Fisher #2: Identify and evaluate assumptions
    Fisher #3: Clarify and interpret expressions and ideas
    Fisher #6: Analyse, evaluate and produce explanations

In the final stage, students write the author's stipulated definitions of keywords. They need to paraphrase and/or summarize the sentences they marked in the text using their own words. Fisher (2011) states that providing a paraphrase is a way to clarify terms and ideas

(*Fisher #3*). Also, another CT skill, *Fisher #6* is involved here because students need to produce their explanations for the author's definitions.

Above all, students have to write sentences accurately and clearly, demonstrating the skill of *Glaser #5*. This assignment requires the students to include four elements necessary for definition sentences: an expression to introduce definitions (eg. *According to the author…*), a target word (eg. *a university*), a category word (eg. *a place*), and explanation (*where the world's hostility can be defied*).

In order to write stipulated definitions accurately and clearly, students should discriminate the author's stance from their own stance. In other words, they need to *identify, recognize, and evaluate* their own assumptions and the author's assumptions as in *Fisher #2, Long #2*, and *Glaser #4*. In the assessment, RCA teachers not only check if the sentences are accurate and clear and if they include enough explanations from the text, but also evaluate if they do not contain the students' own explanation, interpretation, or additional information. As an actual example, one student defined "world" as a place where there are scholars. However, what Morgan intended to show is a contrast between a university that welcomes scholars' curiosity and the world that dislikes the curiosity, and the importance of curiosity for students who came from "world." Although Morgan says students should continue to be scholars and have curiosity even after they graduate from a university, this is not the main idea of the text, and it does not help to clarify the author's explanation of the keyword, "the world." This student paid attention to details and misinterpreted the main point of the author.

Additionally, when they revise their definitions for themselves and when they conduct peer review, they also engage in skills such as *Long #5: Ask questions* and *Long #7: Listen and observe*. When they need to explain their definition to their peers or teachers, they employ the skill of *Long #4: Prepare persuasive arguments using evidence*.

In this section, the assignment of Definition Writing was analyzed to examine what critical thinking skills are involved in it. The analysis showed that the students engage in several important critical thinking skills to complete this assignment.

Concept Map

Students learn how to create a concept map through reading Morgan's text. Generally, a concept map is a graphical tool for organizing and representing knowledge (Novak & Cañas, 2008) for versatile purposes.

Purpose. Students are to create concept maps to visually show their understanding of Morgan's text. They are expected to enhance skills for organizing ideas logically and understanding the connections of important concepts in the text.

Stages and critical thinking skills. There are three stages in the concept map assignment.

Stage 1. Brainstorm on a small piece of paper
   Glaser #3: Gather and marshal pertinent information
   Glaser #5: Comprehend and use language with accuracy, clarity and discrimination
   Fisher #3: Clarify and interpret expressions and ideas

In order to discover five keywords, students freely come up with whatever nouns or noun phrases they deem important in Morgan's text and list them up on a small piece of paper. This stage is designed for students to think of as many ideas as possible regardless of the level of specificity or abstraction, and the relationships between concepts are not to be

considered. Their concept map is assessed for representation of a complete understanding of the content. It is necessary to fully understand the text by reading 'between the lines'; therefore, the skill *Glaser #5* or Fisher #3 is of critical importance.

Stage 2. Draw a concept map of what students understand about Morgan's text
     Glaser #1: Recognize problems
     Glaser #3: Gather and marshal pertinent information
     Glaser #8: Recognize the existence of logical relationships between propositions
     Long #4: Prepare persuasive arguments using evidence

     The assignment guideline clarifies that students learn to create a concept map that "begin(s) with main idea(s) and branch out to show how the main ideas are connected with each other and with other specific ideas" and to practice presenting it to classmates.

     On a large piece of paper, students draw groups of circled concepts based on their comprehension of the text. First, students determine where to place the five keywords in their map after *recognizing problems* (*Glaser #1*). Focusing on key concepts means selecting some essential ideas and discarding what is not important. Students will evaluate the importance of different pieces of information and position them accordingly (*Glaser #3*). They position concepts close to or under a relevant keyword, circle it and analyze the connection.

     Next, students draw links and write phrases to label the connection. The connection can be direction, sequence, time elapses or cause and effect. In this way, students are supposed to understand and present logical connections (*Glaser #8*). Novak and Cañas (2008) suggest that the linking words often help learners demonstrate innovative leaps in knowledge construction. Discovering logical connections between the concepts make them ready to produce appropriate explanation in a presentation because they need to make sure the relationship will be logically connected (*Long #4*).

     Concept map is also assessed for representations of keywords and relations to the topic, which corresponds to this stage in that it evaluates the skill of organizing information (*Glaser #3*). Furthermore, the assessment also focuses on arrangements of keywords and ideas showing insightful understanding of relationships and a variety of connections. Through this stage, the skill (*Glaser #8*) may partially determines its quality of concept map.

Stage 3. Review: self-review and peer-review the concept map
     Glaser #7: Appraise evidence and evaluate statements
     Long #5: Ask questions
     Long #6: Verify information
     Long #7: Listen and observe
     Fisher #6: Analyze, evaluate and produce explanations
     Fisher #7: Analyze, evaluate and make decisions

     Self-review and peer-review provide students with opportunities to evaluate and improve the maps in an informal atmosphere to prove that their works suffice the essential requisites for the map. Firstly, students review them by themselves. Finishing a draft of their concept map, they ask themselves the questions below which also serve as the informal criterion to evaluate the map.

- Can you fill the gaps in?
- Are there keywords and ideas you don't quite understand?

- Are there connections you need to find out?

By looking for any missing keywords, ideas or connections, students are expected to reconsider the concepts and connections on the map and discover any missing items. They can clarify unknown parts to make it complete. This is one of the self-review approaches by which they can improve the drawing and demonstrate an enriched understanding of the text.

In another approach, students can check the quality of a concept map by randomly taking a sentence from Morgan's text and looking for a place for the concept. In case they can explain the connections successfully, the map is well-done. Through this, students can assess the quality of the map and make their explanation understandable (*Fisher #6*) by self-review before presenting it to classmates.

The final stage is peer-review in class. Students give presentations of their concept map. By asking and answering each other's questions, they compare maps to confirm interpretation and deepen their understanding. Students as an audience foster positive attitudes of listening attentively and making inquiries (*Long #5, #7*). Through this interactive process, they evaluate the quality of the description (*Glaser #7*) and formulate suggestions. In this stage, students can learn that there are multiple interpretations based on different perspectives. Peer-review is a crucial activity which helps them collaboratively revise and improve the work based on suggestions.

Background Research

Background Research is another assignment in the RCA course and is based on the second reading material, "The Techniques of Propaganda" by Charles U. Larson (1989). The assignment consists of two parts: research and reflection. In the research part, students choose items from the text, find information about them using printed or online sources, and report the findings. In the reflection part, they reflect on their research and write comments.

Purpose. As with other assignments in the RCA course, this assignment primarily aims to promote students' comprehension of the text. The text provides a historical account of the changes in the definition of propaganda and illustrates common tactics used by those who create and spread propaganda. It contains many items that are unfamiliar to students, such as names of historical figures and events, as well as technical terms in sociology and communication. Thus, students are prompted to research these items to find information that is not provided in the text but helps them deepen their understanding of the text.

Stages and critical thinking skills. There are four main stages that students should follow to complete this assignment.

Stage 1. Make a list of items to research
      Glaser #1: Recognize problems
      Long #5: Ask questions

The first step in the research part is to make a list of research items on a worksheet. Students are instructed to select at least ten items from the text that they need to research to understand the text better. They are also advised to keep adding items to the list as questions come to their mind. In addition to these instructions, students are provided with a guide sheet that suggests different types of items they can research, for example, key terminology, unfamiliar proper nouns, and social background. Other than these, however, the choice of

research items is left to students' discretion. Students are expected to ask questions to themselves while they read the text to identify what they do not know and choose research items accordingly. Thus, this initial stage involves *Glaser #1* and *Long #5*.

Stage 2. Make initial guesses of the items
       Glaser #9: Draw warranted conclusions and generalizations
       Long #2: Recognize own and other's assumptions
       Fisher #2: Identify and evaluate assumptions

       Before proceeding to research, students have to make guesses about the items they have selected and write their ideas on the worksheet. They are supposed to make reasonable, rather than random, guesses, based on what they already know and the information given in the text. In other words, students need to activate their schema, match it up with the text, and draw the most reasonable conclusion. Thus, this process involves *Glaser #9, Long #2*, and *Fisher #2*.

Stage 3. Research the items and report the findings
       Glaser #2: Find workable means for meeting those problems
       Glaser #3: Gather and marshal pertinent information
       Long #6: Verify information
       Long #8: Resist jumping to conclusions
       Long #10 : Seek 'truth' before being 'right'
       Fisher #3: Clarify and interpret expressions and ideas

       After making initial guesses, students set out to investigate the items. First, they have to decide where to look to obtain the information they need. When this assignment is given, students have already attended a library orientation and know what physical and digital resources are available on campus. They are expected to use the knowledge to make the decision, which involves *Glaser #2*. The actual research makes students exercise *Long #8* and *Long #10,* as well as *Glaser #3,* because it serves as a means for them to find whether their guesses are correct. After the research, students summarize the findings on the worksheet, which involves *Fisher #3*. Another important element in this stage is to identify the source of information. At the end of the summary for each item, students have to indicate where the information comes from, and if they fail to do this, the summary will not be counted into their grade for the assignment. This step corresponds to *Long #6*.

Stage 4. Reflect on one's research
       Fisher #4: Judge the acceptability, especially credibility, of claims
       Fisher #7: Analyze, evaluate, and make decisions

       The second part of the assignment requires students to reflect on their research, focusing on how useful it was for text comprehension. Students write their answers to two questions. The first question asks them to evaluate their selection of research items in terms of how useful they were to deepen their understanding of the text. The second question asks them to evaluate the quality of information they obtained from the research. They can comment on, for example, whether the information was relevant to the text or helpful to understand the text. For both questions, students are encouraged to refer to their background research sheet and make specific comments on particular items or findings. On the whole, the

reflection part provides students with opportunities to employ *Fisher #7*. In addition, if students comment on the validity or credibility of a particular piece of information or information source in their reflections, this also involves *Fisher #4*.

Conclusion

This paper examined how an academic English reading course in a Japanese university develops students' critical thinking attitude and skills in its classes and assignments. The analysis showed that this course suits the aim of the English program of this university, to nurture the skills of critical thinking through academic English. This paper only analyzed two readings and three assignments in the spring term, and further research on other assignments and other courses of the English program should be conducted to reveal whether the program as a whole is appropriately structured so it can strengthen the students' critical thinking attitude and skills. However, this paper provides an important implication that attitudes and skills are both crucial, and they function as a pair of wheels in incorporating critical thinking in education.

For the purpose of developing critical thinking skills and attitude in students, teachers' demonstration of their critical thinking is crucial. Creating a "community of inquiry" (Lipman, 2003) is a prerequisite to fully develop students' critical thinking skills and attitude. For example, when teachers have such attitudes as listening to any opinions before making decisions, students will actively participate in class, carry out an inquiry, engage in intellectual dialogues, and consequently, become critical thinkers. If teachers can make such a community of inquiry in their classrooms, students can not only build their own attitude of inquiry but also help others in order to create an academic community where they inspire and learn from each other.

At this point, it is perhaps important to acknowledge the limitations of critical thinking. While it is an essential tool in an academic context, there are times in life when emotion and sympathy are more valuable in people's decision making. For example, a critical thinker may suggest that priority seats in public transportations should be removed since the idea violates the equal rights of the passengers. This reasoning alone is logical, but the idea lacks the imagination of how it is like to be elderly or have mobility difficulties. As Lipman states that "critical thinking skills are complemented by creative and caring thinking" (2003, p. 229), teachers should inspire students to consider hypothetical situations in life and to have empathy to others as well as nurturing critical thinking.

Today, critical thinking is a topic of major discussions of education in Japan. However, research in this field is still limited in number and scope. This study may contribute to the development of research about critical thinking in the future. It may also help those educators at all levels who wish to implement critical thinking in their classes.

Notes

[1] Lipman (2003) poses five psychological and pedagogical stages to build the community of inquiry in classroom. This paper addresses the first three stages since the other two stages do not seem to be relevant to "community of inquiry" in the context of this study.
[2] Long (2003) made this list of critical thinking skills by summarizing ideas proposed by Mayfield (2007).

[3] According to *The Student Guide to Writing,* a "dictionary definition" is a common definition of a word that can be found in a dictionary. A "stipulated definition" is regarded important in an academic text because it shows what is meant with the target word in the specific context by the writer. An "extended definition" is a definition that is extended to a paragraph or longer with some supporting details. In this assignment, students are required to write the author's stipulated definitions in one or two sentences.

Acknowledgement

References

Atkinson, D. (1997). A Critical Approach to Critical Thinking in TESOL. *TESOL Quarterly,* 31(1), 71-94.

Dewey, J. (1998). *How We Think.* Dover Publications. (First published in 1909.)

English for Liberal Arts Program (2018). *The Student Guide to Writing in the ELA*. Tokyo, Japan: International Christian University.

Evans, S, Fearn, F. & Bayne, K. (2006). Fostering and Framing Critical Thinking Skills in EAP Programmes. *Language Research Bulletin,* 21, 33-47.

Fisher, A. (2011). *Critical Thinking: An introduction.* Second Edition. Cambridge, U.K.: Cambridge University Press.

Fisher, A. & Scriven, M. (1997). *Critical Thinking: Its Definition and Assessment.* East Anglia, U.K.: Edgepress and Centre for Research in Critical Thinking, University of East Anglia.

Forrester, J. (2008). Thinking creatively; thinking critically. *Asian Social Science*, 4(5), 100-105.

Glaser, E. (1941). *An Experiment in the Development of Critical Thinking.* New York: Advanced School of Education at Teachers' College, Columbia University.

Halpern, D. (2000). Teaching for critical thinking: helping college students develop the skills and dispositions of a critical thinker. In M. D. Svinicki (Ed.), *Teaching and learning on the edge of the millennium: building on what we have learned. New Directions for Teaching and Learning* (pp. 69-74.). San Francisco, CA: Jossey-Bass.

Larson, C. U. (1989). Chapter 11: The techniques of propaganda, in *Persuasion: Reception and Responsibility* (pp. 357-378), 5th Edition. Wadsnorth Publishing Company.

Lipman, M. (2003). *Thinking in education*. Cambridge, U.K.: Cambridge University Press.

Long, C. (2003). Teaching critical thinking in Asian EFL contexts: Theoretical issues and practical applications. *Proceedings of the 8th Conference of Pan-Pacific Association of Applied Linguistics.* 229-234.

Mayfield, M. (2007). *Thinking for Yourself: Developing Critical Thinking Skills Through Reading and Writing.* Boston, MA: Wadsworth.

Morgan, E. S. (1960). What every Yale freshman should know. *Saturday Review,* 43(4), 13-14.

Norris, S. & Ennis, R. (1989). *Evaluating Critical Thinking.* Lawrence Erlbaum.

Novak, J. D. & Cañas, A. J. (2008). The theory underlying concept maps and how to construct them. *Technical Report IHMC CmapTools.* (Rev. ed.). Retrieved from http://cmap.ihmc.us/Publications/ResearchPapers/TheoryUnderlyingConceptMaps.pdf

Paul, R., Fisher, A. & Nosich, G. (1993). *Workshop on Critical Thinking Strategies.* Sonoma, CA: Foundation for Critical Thinking, Sonoma State University.

Shirkhani, S. & Fahim, M. (2011). Enhancing critical thinking in foreign language learners. *Procedia- Social and Behavioral Sciences*, 29. 111-115.

Thomas, T. A. (2011). Developing first year students' critical thinking skills. *Asian social science,* 7(4), 26-35.