Teacher Questioning in College English Class: A Guide to Critical Thinking

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Abstract- Amidst the great revolution in China's education system, promoting critical thinking in school education to prepare students for the needs of modern world has been advocated by more and more educators. Critical thinking is a learned skill that needs to be cultivated by effective instruction. Research suggest that teacher questioning plays an important role in promoting students' critical thinking through classroom interaction. This article reviews literature on how critical thinking relates to teacher questioning instructional approach and advocates effective use of teacher questioning technique in college English class to actively engage students in the learning process and guide them to critical thinking.

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Abstract- Amidst the great revolution in China's education system, promoting critical thinking in school education to prepare students for the needs of modern world has been advocated by more and more educators. Critical thinking is a learned skill that needs to be cultivated by effective instruction. Research suggest that teacher questioning plays an important role in promoting students' critical thinking through classroom interaction. This article reviews literature on how critical thinking relates to teacher questioning instructional approach and advocates effective use of teacher questioning technique in college English class to actively engage students in the learning process and guide them to critical thinking.

Keywords: *China, college English class; teacher questioning; critical thinking.*

I. Introduction

Critical thinking, widely recognized as an essential skill for the knowledge age, is often regarded as "a fundamental aim and an overriding ideal of education" (Bailin & Siegel, 2003, p.188). A national survey in the United States showed that employers, policy-makers, and educators reached consensus that the dispositional as well as the skills dimension of critical thinking should be considered an essential outcome of a college education (Tsui, 2002).

Critical thinking skills are important because they enable students "to deal effectively with social, scientific, and practical problems" (Shakirova, 2007, p.42). To put it another way, in order for being able to live, work, solving problems, and making decisions effectively in our constantly changing world, merely having knowledge or information is not enough, learners must be able to think critically.

Amidst the great revolution in China's education system, promoting critical thinking has been advocated by more and more Chinese educators (Guo, 2013; Xu, 2013) and has been written into the college curriculum requirements by the Ministry of Education of the People's Republic of China in 2000 (Shen & Yodkhumlue, 2012). Thus cultivating a critical mind has become an indispensable part of college education in China. College English is a compulsory course in Chinese universities. In learning English, students are experiencing the culture of which the English language is part of, the history of the language, the literature of English-speaking countries, and the different thinking dispositions loaded to the English language. Students'

understanding, interpretation, and critique of these aspects engage the comprehension, application, analysis, synthesis, and evaluation activities in their cognition. That is critical thinking (Facione, 1990, p.3). Hence, integrating critical thinking into class to engage students in active learning has become a goal for college English teachers.

However, in a typical English class in China, language teachers usually dominate the class and do most of the talking, while most students are busy taking notes. In this way, students become accustomed to merely memorizing and recalling information, hence, being passive learners. As Clement (1979) stated that "we should be teaching students how to think. Instead, we are teaching them what to think" (p.1). The quote reflects this unproductive teaching and learning situation in the Chinese English class.

How can college English teachers integrate critical thinking into their English class and engage the students as active thinkers? The answer may be in our instructional methods.

II. Critical Thinking and Instruction

a) Definition

An early definition of critical thinking was proposed by Bloom. According to Bloom, critical thinking involves the cultivation of a set of skills such as knowledge, comprehension, application, analysis, synthesis, evaluation, and the ability to apply these skills in novel situations (as cited in Fahim & Eslamdoost, 2014, p.141). Ennis (1987) defines critical thinking as the skills introduced by Bloom (1956) in addition to the habits of using the skills. Critical thinking has also been referred to as the process of "thinking about thinking" (Flavell, 1979).

A high-profile definition about critical thinking was developed by American Philosophical Association Delphi panel of 46 experts, including leading scholars in this field such Ennis, Facione, and Paul:

> We understand critical thinking to be purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based. … The ideal critical thinker is habitually inquisitive, well-informed, trustful or reason, open-minded, flexible, fair-minded in evaluation, honest in facing

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personal biases, prudent in making judgments, willing to reconsider… and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit. (Facione, 1990, p.3)

Critical thinking has significant theoretical and educational implications in that it has been found to be associated with other higher-order cognitive and meta-cognitive abilities. According to Phan (2010), critical thinking ability plays a pivotal role in shaping learners' motivation and self-efficacy in the learning processes.

b) How Critical Thinking Relates to Instructional Methods

Critical thinking is not an inborn capability, rather, it is a learned skill that needs to be cultivated by teaching and practice (Perkins & Salmon, 1989). However, merely memorizing facts or accept what they read or are taught, students won't be able to develop critical skills, because critical thinking requires students to use higher-order thinking skill to think about their own thinking. Therefore, lecture and rote memorization do not promote critical thinking; critical thinking must be developed, practiced, and continually integrated into the curriculum by engaging students in interactive investigations of intellectual activities so that they can discover and understand important cognitive rules for themselves (Wong, 2007).

In the 1980s, western educators advocated a shift from knowledge-based instruction to new educational approaches in which the main focus is to foster thinking ability of learners (Fahim & Eslamdoost, 2014). Since then, a large number of empirical studies have been conducted to devise activities and strategies to translate this objective to real instructional approaches integrated into classroom and to examine the effects of different instructional approaches aiming at promoting critical thinking among college students.

Findings of research in this vein showed that instructional approaches such as concept mapping (Khodadady & Ghanizadeh, 2011), problem-based learning (Nargundkar, Samaddar, & Mukhopadhyah, 2014), inquiry-based learning (Ku, Ho, Hau, & Lai, 2014), and questioning approach (Shen & Yodkhumlue, 2012; Yang, 2008; Yang, Newby, & Bill, 2005) contribute to critical thinking. Recently, a comparative study investigating the effects of different instructional approaches on critical thinking in online learning settings showed that questioning was the most effective in advancing critical thinking skills (Kalelioğlu & Gülbaharand, 2014).

III. THINKING IS DRIVEN BY QUESTIONS

a) Questioning Instructional Approach

Thinking is driven not by answers but by questions. Teacher questions that stretch students' mind, invite curiosity, stimulate interest, and instill a sense of wonder can not only keep students engaged but also can develop their critical thinking ability.

Brown and Kelley, in their book "Asking the Right Questions: A Guide to Critical Thinking", documented the premise that students' critical thinking is best supported when teachers use critical questioning techniques to engage students actively in the learning process (Brown & Kelley, 1986). Examples of the questions include:

- What do you think about this?
- Why do you think that?
- What is your knowledge based upon?
- What does it imply and presuppose?
- What explains it, connects to it, leads from it?
- How are you viewing it?
- Should it be viewed differently?

Questions stimulate students' ideas, engage them in clarifying their thinking, assessing their evidence, making inference, and promote the depth and breadth of their thinking. Therefore, when questioned about their thinking process, students can begin thinking about their thinking.

Students engaged in questioning process benefit from the clarification of concept, emerge of new ideas, and enhancement of problem-solving skills. By questioning, teachers assess students' knowledge, explore students' ideas, correct misunderstanding, and encourage students to think at higher cognitive levels.

b) Theoretical Basis

Teacher questioning instructional approach can be seen as teaching practice based on Piaget's cognitive constructivism learning theory (Piaget, 1953; Powell & Kalina, 2009) which proposes that knowledge is not passively received but is actively constructed by the learner and Lev Vygotsky's social constructivism learning theory (Powell & Kalina, 2009; Vygotsky, 1962), which emphasizes that social interaction is an integral part of learning. Both the two theories value the question-and-answer instructional approach and suggest that constructivism applied to education is characterized by teachers as facilitators and students who actively construct their own understanding based on their existing knowledge (Powell & Kalina, 2009, p.245).

Teacher questioning in language classrooms can also be seen as is in line with the features of Communicative Language Teaching (CLT) method. In CLT (Richards & Rodgers, 2001), students are expected to interact with the teacher and fellow students, and to use the target language both as a means of communication and as an object of learning. By responding to teachers' questions, students learn the language and also learn to think and communicate with the language.

c) Questioning in College English Class in China

Recently, more and more Chinese educators have noticed the importance of employing questioning instructional approach in college English class. However, these previous studies mainly focused on the relation between teachers' questioning behavior in the classroom and students' oral output (David, 2007; Hu, 2004; Zhou & Zhou, 2002) and how questioning instructional approach enlivens classroom atmosphere, facilitates interaction between teachers and fosters positive teacher-learner relationship (Sun, 2012). Very few research have discussed the potentiality of teacher questioning in promoting students' critical thinking in the Chinese context (Shen & Yodkhumlue. 2012). Therefore, it is important that college English teachers be aware of the power that teacher questioning plays in nurturing critical thinking and strategically employ questioning techniques to advance students' ability to learn, discover, understand, and solve problems on their own.

d) Guiding Students' Critical Thinking

According to questioning expert and educational consultant Lee Hannel (Hannel & Hannel, 2005), teachers who ask the right questions kindle fires of critical thinking and create effective problem solvers.

Bloom (1956) described seven different types of questions. These include: memory, translation, interpretation, application, analysis, synthesis, and evaluation. Other researchers identified more types of questions and argue that different types of questions have different effects (Elder & Paul, 1998).

For example, questions on information guide students to search and revisit their knowledge base and assess the quality of their knowledge; questions on interpretation guide students to examine how they organize and give meaning to information and to consider alternative ways of giving meaning; questions on assumption guide students to examine what they take for granted; questions on implication guide students to follow-up where their thinking is going; questions on relevance guide students to discriminate between what does and what does not bear on a question; questions on precision guide students to give details and be specific; questions on consistency guide students toward thinking about contradictions.

Situated within the problem-solving framework, teacher questioning may also become a tool for controlling students' behavior (Nunan, 2007, p.80) and, therefore, brining them to both intellectual and social-emotional growth (Folsom, 2006) conductive to effective learning.

For example, questions that require student to observe, may instill students the habit of observing and find valuable clues and information that would otherwise be habitually ignored; questions that require students to think and react in another person's position may evoke them to place themselves into another persons shoes to solve conflicts in a decent way; questions that require students to look for connections among seemingly unrelated ideas or things may guide students to logically integrate their thoughts, to make sure that it makes sense within a reasonable systems of some kind.

IV. Effective Questioning

To engage students effectively with questions, educators proposed several strategies (Caram & Davis, 2005; Wang & Wang, 2013).

First, teachers should create a classroom culture open to dialogue in which students are encouraged and willing to respond, and feel confortable thinking through an answer rather than simply having an answer. Positive body language such as smiling, nodding agreement to constructive responses can encourage students to participate in discussions. Teachers should pose questions in nonthreatening ways and receive answers in a supportive fashion. Harsh tones should be deliberately avoided in posing questions and responding to answers.

Second, teachers should select an appropriate level of questions based on students' needs and tailor questions so as to elicit maximum number of responses. Tricky questions and those that simply require a Yes or No response should be avoided because tricky questions may frustrate students and simple Yes-or-No questions without further probing rarely contribute to critical thinking.

Third, teachers should be explorative in mind, allow an indeterminate number of acceptable answers, and open the floor to students' ideas. In this way, the interaction is dialogic and interactive and can create opportunities for students to use English to communicate their thinking with the teacher and peers.

Fourth, teachers should use both pre-planned and emerging questions. Pre-planned questions are those prepared by the teacher to engage students in brainstorming, introduce new concepts and topics, and steer the students' thinking toward specific directions. Emerging questions may derive from students' responses and reactions. Most of the time, emerging questions would bring depth and breath to the discussion and guide both the teacher and the students to unexpected higher-level thinking.

Fifth, teachers should give sufficient wait time. Wait time is the amount of time the teacher waits for students to respond. Generally, five or ten seconds are needed for students to generate responses. Questions at higher cognitive levels tend to require longer wait time. Sufficient wait time is necessary for students to think at higher levels.

Sixth, teachers should respond to students' answers. Listen carefully to the answers given by students; do not interrupt unless where they seem unfocused or straying far off course. Respond to

constructive answers with positive reinforcement. Keep questioning and probing until the student run out of thinking because only when an answer generates a further question does thought continue its life as such.

V. Closing Thoughts

Improving students' critical thinking ability is considered to be an important aspect of teaching at the university level by most educators today. Traditional instructional method in China's college English class as it is usually practiced does not meet the real-world need for developing students' critical thinking ability. Hence, how to cultivate students' critical thinking ability has gained increasing attention in research in China. Drawing from previous research, teacher questioning is an effective instructional approach that promote students' critical thinking. In order for the teacher questioning instructional approach to work as an effective teaching tool in the college English classroom, it is crucial that teachers strategically use and formulate questions of different type and effect to guide students toward critical thinking.

To promote students' critical thinking in college English class in China, equally important may be the shift of focus of curriculum and assessment system. Research (Landsman & Gorski, 2007; Sandholtz, Ogawa, & Scribner, 2004; Sheldon & Biddle, 1998; Wong, 2007) suggest that the standardized curriculum and focus on test scores undermine teachers' ability to address critical thinking in the classroom. The emphasis on "teaching to the test" distracts the learning process from student-centered instruction and places the emphasis on the content. Therefore, to promote critical thinking in English language classroom, besides continuous search for effective instructional approaches, further studies on a shift of focus of curriculum and assessment system would be equally desirable.

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