

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

Wang Lihui¹, Wang Huimin², Zhao Qun³ and Lin Feng⁴

¹ Ocean University of China,

Received: 12 June 2015 Accepted: 4 July 2015 Published: 15 July 2015

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.

Index terms— China, college English class; teacher questioning; critical thinking.

1 Introduction

ritical 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.

2 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 as 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, 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 metacognitive abilities. According to Phan (2010), critical thinking ability plays a pivotal role in shaping learners' motivation and self-efficacy in the learning processes.

3 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 approaches integrated into classroom and to examine the effects of different instructional approaches aiming at promoting critical thinking among college students.

4 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 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.

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. process (Brown & Kelley, 1986). Examples of the

5 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 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

?? (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.

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.

6 IV.

7 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 comfortable 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 Volume XV Issue XI Version I Teacher Questioning in College English Class: A Guide to Critical Thinking 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 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. 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 socialemotional growth (Folsom, 2006) conducive to effective learning.

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.

8 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.

Volume XV Issue XI Version I 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.¹



Figure 1:

¹© 2015 Global Journals Inc. (US)

-
- [Shen and Yodkhumlue ()] 'A case study of teacher's questioning and students' critical thinking in college EFL reading classroom'. P Shen , B Yodkhumlue . *International Journal of English Linguistics* 2012. 2 p. .
- [Yang ()] 'A catalyst for teaching critical thinking in a large university class in Taiwan: Asynchronous online discussions with the facilitation of teaching assistants. Education Technology'. Y C Yang . *Research and Development* 2008. 56 p. .
- [Nargundkar et al. ()] 'A guided problem-based learning (PBL) approach: Impact on critical thinking'. S Nargundkar , S Samaddar , S Mukhopadhyay . *Decision Sciences Journal of Innovative Education* 2014. 12 p. .
- [Zhou and Zhou ()] *A research and analysis of teacher talk in college English classroom. Foreign Language Teaching and Research*, X Zhou , Y Zhou . 2002. 34 p. .
- [Hu ()] 'A survey of the models of college English teachers' questioning'. Q Hu . *Foreign Language World* 2004. 4 p. .
- [Ennis ()] 'A taxonomy of critical thinking dispositions and abilities'. R H Ennis . *Teaching Thinking Skills: Theory and Practice*, J Baron & R, Sternberg (ed.) (New York) 1987. W. H. Freeman. p. .
- [Sun ()] *An empirical study on new teacherstudent relationship and questioning strategies in ESL classroom*, Z Sun . 2012. English Language Teaching. 5 p. .
- [Richard and Theodore ()] *Approaches and Methods in Language Teaching*, J Richard , S Theodore . 2001. Cambridge: Cambridge University Press.
- [Perkins and Salomon ()] 'Are cognitive skills context -bound'. D N Perkins , G Salomon . *Educational Researcher* 1989. 19 p. .
- [Brown and Kelley ()] *Asking the Right Questions: A Guide to Critical Thinking*, M N Brown , S M Kelley . 1986. Englewood Cliffs, NJ: Prentice Hall. (th ed.)
- [Wong ()] 'Beyond control and rationality: Dewey, aesthetics, motivation, and educative experiences'. D Wong . *Teachers College Record* 2007. 109 p. .
- [Powell and Kalina ()] *Cognitive and social constructivism: Developing tools for an effective classroom*, K C Powell , C J Kalina . 2009. 130 p. .
- [Landsman and Gorski ()] 'Countering standardization'. J Landsman , P Gorski . *Educational Leadership* 2007. 64 p. .
- [Phan ()] 'Critical thinking as a selfregulatory process component in teaching and learning'. H P Phan . *Psicothema* 2010. 22 p. .
- [Facione ()] *Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction. Research Findings and Recommendations*, P A Facione . 1990. Newark, DE: American Philosophical Association.
- [Fahim and Eslamdoost ()] *Critical thinking: Frameworks and models for teaching*, M Fahim , S Eslamdoost . 2014. English Language Teaching. 7 p. .
- [Guo ()] 'Developing critical thinking in English class: Culture-based knowledge and skills'. M Guo . *Theory and Practice in Language Studies* 2013. 3 p. .
- [Xu ()] 'Fostering critical thinking competence in EFL classroom'. Q Xu . *Studies in Literature and Language* 2013. 7 p. .
- [Tsui ()] 'Fostering critical thinking through effective pedagogy: Evidence from four instructional studies'. L Tsui . *Journal of Higher Education* 2002. 73 p. .
- [Hannel and Hannel ()] *Highly Effective Questioning*, G I Hannel , L Hannel . 2005. Phoenix, AZ: Hannel Educational Consulting.
- [Ku et al. ()] 'Integrating direct and inquiry-based instruction in the teaching of critical thinking: An intervention study'. K Y L Ku , I T Ho , K-T Hau , E C M Lai . *Instructional Science* 2014. 42 p. .
- [Clement ()] 'Introduction to research in cognitive process instruction'. J Clement . *Cognitive Process Instruction*, J Lochhead, & J Clement (ed.) (Hillsdale, NJ) 1979. Lawrence Erlbaum Associates.
- [Caram and Davis ()] *Inviting student engagement with questioning. Kappa Delta Pi Record*, C A Caram , P B Davis . 2005. 42 p. .
- [Folsom ()] 'Making conceptual connections between gifted and general education: Teaching for intellectual and emotional learning (TIEL)'. C Folsom . *Roeper Review* 2006. 28 p. .
- [Flavell ()] 'Metacognition and cognitive monitoring: A new area of cognitive-development inquiry'. J H Flavell . *American Psychologist* 1979. 34 p. .
- [Wang and Wang ()] *Promoting knowledge construction and cognitive development: A case study of teacher's questioning. Theory and Practice in Language Studies*, K Wang , X Wang . 2013. 3 p. .

- [Sandholtz et al. ()] ‘Standards gaps: Unintended consequences of local standards-based reform’. J H Sandholtz , R T Ogawa , S P Scribner . *Teachers College Record* 2004. 106 p. .
- [Sheldon and Biddle ()] ‘Standards, accountability, and school reform: Perils and pitfalls’. K M Sheldon , B J Biddle . *Teachers College Record* 1998. 100 p. .
- [Nunan ()] *Task-based Language Teaching*, D Nunan . 2007. Cambridge, UK: Cambridge University Press.
- [Bloom ()] *Taxonomy of Educational Objectives: The Classification of Educational Goals*, B S Bloom . 1956. New York: David McKay.
- [David ()] ‘Teachers’ questioning behavior and ESL classroom interaction pattern’. O F David . *Humanity and Social Science* 2007. 2 p. .
- [Shakirova ()] *Technology for the shaping of college students’ and upper-grade students’ critical thinking*, D M Shakirova . 2007. Russian Education & Society. 49 p. .
- [Bailin and Siegel (ed.) ()] *The Blackwell Guide to the Philosophy of Education*, S Bailin , H Siegel . N. Blake, P. Smeyers, R. Smith & P. Standish (ed.) 2003. Oxford, UK: Blackwell. p. . (Critical thinking)
- [Kalelioglu and Gülbahar ()] ‘The effect of instructional techniques on critical thinking and critical thinking dispositions in online discussion’. F Kalelioglu , Y Gülbahar . *Educational Technology and Society* 2014. 17 p. .
- [Khodadady and Ghanizadeh ()] *The impact of concept mapping on EFL learners’ critical thinking ability*, E Khodadady , A Ghanizadeh . 2011. English Language Teaching. 4 p. .
- [Piaget ()] *The Origins of Intelligence in Children*, J Piaget . 1953. New York, NY: Basic Books.
- [Elder and Paul ()] *The role of socratic questioning in thinking, teaching, and learning. The Clearing House*, L Elder , R Paul . 1998. 71 p. .
- [Vygotsky ()] *Thought and Language*, L S Vygotsky . 1962. Cambridge, MA: MIT Press.
- [Yang et al. ()] ‘Using socratic questioning to promote critical thinking skills through asynchronous discussion forums in distance learning environments’. Y C Yang , T J Newby , R L Bill . *American Journal of Distance Education* 2005. 19 p. .