A blended learning environment for individualized English listening and speaking integrating critical thinking

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ARTICLE INFO

ABSTRACT

Critical thinking (CT) and English communication are recognized as two essential 21st century competencies. To equip students with these competencies and respond to the challenges of global competition, educational technology is being developed to enhance teaching and learning. This study examined the effectiveness of integrating CT into individualized English listening and speaking instruction using Moodle, a virtual learning environment. Individualized instruction was designed with three key elements, namely proficiency level grouping, individualized instructional strategies and materials, and individualized feedback. Participants were 83 students enrolled in a semester-long general education course at a large university in Taiwan. The four dependent measures were CT skills (CTS), CT dispositions (CTD), English listening, and speaking proficiency. Results from the one-group pretest–posttest design were evaluated by paired *t*-tests and a mixed design ANCOVA (analysis of covariance) in order to identify any statistically significant improvements following the intervention. The results of the study showed that learners participating in the treatment significantly improved in terms of English listening and speaking, as well as on all CTS subscales, with little change in CTD, apart from significant improvement on the subscale of open-mindedness. Limitations and suggestions for successful online CT-integrated instruction and implications for future research are provided.

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1. Introduction

Teachers and researchers are facing increasing pressure to promote student acquisition of "21st century skills" (Partnership for 21st Century Skills, 2011), which include communicative competence in local and international languages, higher order thinking abilities, such as critical thinking (CT), and proficiency in information communication technology. Both challenges and opportunities emerge from a focus on 21st century skills, often related to the role of technology in evolving learner characteristics and learning environments.

In the 21st century, characterized by increased globalization, competence in international languages, such as English, is invaluable. In Taiwan, and many other nations where English is a foreign language, students' listening and speaking skills are often weaker than their writing and reading skills. According to Yang, Gamble, and Tang (2012), who studied the acquisition of oral proficiency skills with Taiwanese undergraduate students, this may be due to the following three reasons. First, there is a lack of an authentic English language environment for English oral communication. Second, the prevailing pedagogy for English learning emphasizes examinations as a primary method of assessment, focusing on vocabulary, grammar, reading, and comprehension quizzes. As a result, teacher-centered and rote instructional methods often provide little instructive feedback to students and tend to emphasize literacy skills over oral communication. Third, there is considerable variance in English proficiency among students, creating an inequality of opportunities for engaging in classroom learning and difficulties for many students due to a mismatch between their abilities and the course content. Overcoming these obstacles to English listening and speaking proficiency is the first motivation of our research.

Critical thinking is another key 21st century higher order thinking skills related to success in both academic and employment endeavors. Due to the influence of a collectivist-oriented culture and a limited view of the learner's role in education, students in Taiwan have not traditionally been challenged to think critically and reflectively (McBride, Xiang, Wittenburg, & Shen, 2002). However, a current climate of

educational transformation has fostered an increasingly proactive orientation toward curriculum reform and innovative teaching and learning. This positive attention and generous governmental funding for programs and initiatives seeking to incorporate higher order thinking skills at all levels of education has created key opportunities for teaching and research (e.g., Yang, 2008; Yeh, 2012). Effective integration of critical thinking instruction in higher education is, therefore, the second motivation of this research.

1.1. Enhancing English listening and speaking

English is a compulsory foreign language for higher education in Asia, including Taiwan, due to a growing awareness that learners will require English language skills in order to gain competitive advantage in the workplace of the future (Nunan, 2003). Since English is the most used language among Internet users—565 million people, or 27% of all Internet users, use English for online communication according to Internet World Stats (2011)—English language proficiency allows users to connect to others around the world and access a vast storehouse of knowledge available online.

Given the importance of English language skills in the 21st century, standardized tests for English proficiency are often required for job placement and matriculation from institutes of higher learning. The TOEIC® test (published by Educational Testing Service) is one such internationally recognized test, which defines specific skills for assessing listening and speaking. For listening comprehension, participants respond to questions of four types: (a) photo descriptions, (b) selecting appropriate responses to questions, (c) questions based on conversations, and (d) questions based on short talks. Speaking tasks evaluated by the TOEIC® include criteria for pronunciation, intonation, grammar, vocabulary, cohesion, relevance, and completeness. These speaking tasks include reading text aloud, describing pictures, responding to questions, proposing solutions, and expressing an opinion.

Research into effective English listening and speaking instruction for EFL learners can be useful in addressing elements of the three key barriers to learning discussed above, namely lack of authentic interaction in the target language, an emphasis on teacher-centered instruction, and the difficulties posed by learner heterogeneity. Strategies for supporting authentic English oral communication, learner-centered pedagogy, and appropriate scaffolding of EFL learners have received a great deal of attention from researchers. In terms of authentic materials and activities, for example, Yang (2002) found that the teaching materials used in Taiwan were often boring and tedious, while Wu (2009) further pointed out that an authentic learning environment and learning materials, such as audio/video materials (Larsen-Freeman, 2000), are essential factors for successfully acquiring the English language in Taiwan. In fact, the goal of authentic communication is central to English listening and speaking because the very nature and purpose of language is communication (Hadley, 1993; Richards & Rogers, 2003).

Student-centered instruction is also key to the acquisition of English listening and speaking skills (Yu & Wang, 2009). In contrast to lecture-based instruction, technology enhanced learning has been proposed as an optimal means for providing students with an environment wherein they simultaneously express their ideas, engage in conversation, acquire new knowledge, and stimulate thinking (Khan, 1997). Online learning, or e-learning, has also transformed the nature of English listening and speaking instruction, allowing updating, storing, retrieving, and sharing of instructional information online (Rosenberg, 2001). Collaborative learning has long been recognized as a positive language teaching approach in both physical face-to-face classrooms (e.g., Kim, 2008) and computer assisted language learning (e.g., Lund, 2008). As a result, students show a positive attitude toward learning environments which incorporate computers and collaborative learning (AbuSeileek, 2007).

Finally, addressing learners' needs is one step toward overcoming barriers to English oral communication among English language learners. For effective language instruction, teachers should allow students sufficient time and flexibility through strategies such as grouping students according to their learning needs (Larsen-Freeman, 2000). Feedback is also key to assisting learners in language acquisition. Using an audio blog to assist English speaking and listening, Hsu, Wang, and Comac (2008) found that this format made it possible to provide individual feedbacks with a positive effect on learners' speaking and listening.

1.2. Fostering critical thinking

Critical thinking (CT) refers to the process by which one thinks, discovers problems, looks for related information, and makes decisions in order to solve problems (Bean, 2011; Fisher, 2001). CT is a cognitive strategy influencing learning (Pintrich, Smith, Garcia, & McKeachie, 1991) and is essential in helping improve learners' leadership abilities, decision-making, critical judgment, and a competitive advantage for success in the international job market (Partnership for 21st Century Skills, 2011). For contemporary learners, who increasingly rely upon online sources of information for their studies, aptitudes and cognitive strategies for critically sourcing, evaluating, and applying information are indispensable (Barak, Ben-Chaim, & Zoller, 2007; Wen & Shih, 2008). Cultivating learners' CT, therefore, is one of the highest priorities for higher education (Halpern, 1999; Halx & Reybold, 2005; Yang & Chou, 2008) and is receiving considerable attention from researchers in the field of instructional design (Mok, 2010; Nagappan, 2001).

Generally speaking, CT consists of two main elements: a cognitive component, CT skills (CTS), and an affective component, CT disposition (CTD). While CTS refers to the cognitive forces behind problem-solving and decision-making, CTD refers to the internal motivation to engage in critical thinking. On the basis of a systematic inquiry into the construct of CTS and CTD adopting the Delphi Method, a set of six cognitive skills were defined: interpretation, analysis, evaluation, explanation, inference, and self-regulation (Facione, 2007). CTD, additionally, consists of seven conceptual elements: inquisitiveness, truth-seeking, analyticity, systematicity, CT self-confidence, open-mindedness, and cognitive maturity. For definitions of these skills and dispositions, see Table 1.

Studies from undergraduate EFL classroom settings have advocated strategies for fostering CT which emphasize the core concepts of authenticity, learner-centered instruction, and scaffolding of learner needs. In terms of authentic content, Florez (2000) advises a gradual scaffolding of materials, working from simpler to more complex cases, with topics that are relevant and interesting, making use of authentic texts. The role of content in CT-based instruction is crucial, since learners must first have a grasp of the topic before developing the confidence and capacity to think critically about related issues. Thus, content-based language education stems from student interaction with authentic texts which offers experience in using language and developing skills necessary for other courses (Dantas-Whitney, 2002), an important step toward transfer of learning.