

The interplay of oral English development and critical thinking training in a centralized EFL curriculum

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This paper reports on a study which explored how critical thinking can be integrated into a centralized EFL curriculum and how critical thinking can develop college students' oral English proficiency. The study implemented activities such as redefining the pre-set assessment of the students' performance in the class, providing supplements, peer reviewing, asking guiding questions and doing repeated revisions. Using qualitative data from observation and interviews this paper identifies the track of a three-stage conceptual development in the students' oral presentations as well as the development of more fluent and interactive oral speech. The findings show students changing from simply assembling information to arguing with the support of evidential connections and finally to generalizing. The paper offers the pedagogical implication that critical thinking training is a useful option for advanced EFL courses.

Keywords: oral English; critical thinking; centralized curriculum; EFL; China

Introduction

English as a foreign language (EFL) students at college level are found to stagnate in their oral English progress (Cai, 2010; Hinkel, 2003). In a typical EFL setting like China, college students often complain that advanced English courses still hone their basic linguistic skills, which they have sufficiently practiced for 10 years in their elementary and secondary schools (Wen, 2012). Although pedagogical efforts in curricular reform have been made such as shifting the pedagogical priority to teaching English for communicative purposes (Cai & Liao, 2010), the constraints typical of EFL contexts place great obstacles in the path of significant oral English improvement. Such constraints include a severe shortage of qualified non-native English speaking instructors who are capable of teaching native-like and idiomatic oral English (Cheng & Sun, 2010); a centralized curriculum that assesses students' performance only on the basis of standardized tests; and the reluctance of EFL learners to speak English with each other due to a lack of authenticity (Jia & Zheng, 2004).

Taking all the constraints into consideration, one workable solution to the problems identified above is to integrate critical thinking training into EFL classes. Cognitively, critical thinking facilitates mental processing in oral communication and as a science of thinking it can be practiced in any language and beyond any particular domain of knowledge (Resnick, 1987). Therefore, teaching critical thinking requires no natively-like oral English ability, any course of English for general purposes can serve the purpose. Importantly, practicing critical thinking engages students in speaking English for a real purpose.

Critical thinking and oral English

Critical thinking, as a higher-order cognitive process, involves an intellectually disciplined process that runs at three major levels: 1) collecting and filtering information from or generated by observation, experience, reflection, reasoning, or communication; 2) conceptualizing, applying, analysing, synthesizing, and/or evaluating the collected information; and 3) constructing the understanding of a problem and offering a solution (Dewey, 1982; Scriven & Paul, 2009). When the three levels work simultaneously, they develop the ability of critical thinking to ‘construct meaning and articulate and evaluate arguments, as well as evaluate sources and support’ (Mazer, Hunt, & Kuznekoff, 2007, p. 176). This ability is needed by advanced EFL learners who are developing their oral English.

In the EFL context, oral English is usually constrained to formal speech such as listening to or giving lectures (Hincks, 2010). In processing oral information, L2 learners are found to carry a heavy cognitive burden, which is largely attributed to three components working simultaneously in the working memory, i.e., a conceptualizer, a formulator and an articulator. The conceptualizer runs when speakers generate the intended message, which the formulator then encodes into the correct grammatical and phonological forms, and passes to the articulator to deliver phonologically (Levitt, 1989). While L2 learners are speaking, the three components often compete for attentional resources. Usually, the conceptualizer dominates in the mental processing and consequently, the speech is slow and faltering (VanPatten, 1990). Because critical thinking helps relieve speakers of the burden in processing information at different levels, L2 learners with well-trained critical thinking skill are found to better conceptualize the intended message and are thus able to reallocate more attentional resources for the formulator and the articulator. The result is more fluent and eloquent speech (Buck & Tatsuoka, 1998; Byrnes, 2002).

Numerous empirical studies on EFL oral English confirm the positive role that critical thinking plays in the development of EFL oral English proficiency. These studies conclude that thinking critically involves processing information in a coherent cognitive pattern, which facilitates communication between listeners and speakers. For example, Clerehan (1995) noticed that listeners had much less difficulty understanding an oral text with a coherent discourse. Jung (2003) also found that EFL students recalled more information from the lectures with clear discourse signaling cues. Olsen and Huckin (1990) suggested that point-driven lectures, structured with successive steps of clear logical argumentation, facilitated greater comprehension than information-driven ones.

While these and similar studies confirm a positive relationship between critical thinking and oral English development, they are not generalizable to the EFL teaching setting in China, which is characterized by a centralized curriculum, large class sizes and standardized final examinations. This study aims to examine how critical thinking training can help EFL learners develop oral English in such a context by addressing the following questions:

1. How can critical thinking training be integrated into the centralized EFL course?
2. Will critical thinking enhance oral English in Chinese EFL context? and if yes, how?

Methodology

Participants

The participants consisted of 137 first year undergraduate students in a tier 1 public university in China. They registered for a compulsory EFL course known as College English which aimed at further developing their comprehensive English competence. To guarantee a wider representation, participants were selected who majored in three disciplines: chemistry (natural science), library science (social science) and history (humanities). Under the centralized curriculum, the participants were assigned to an English class based on their major and each class was randomly assigned to an instructor. With the consent of the three instructors, the researcher intervened in their regular teaching by integrating critical thinking training. The participants had learned English for at least 10 years. Their admission by the tier 1 university indicated that they had reached an advanced level in English proficiency because only those who scored 135 or higher out of 150 in English on the National Higher Education Entrance Examination were admitted to the university.

Curricula requirement and redevelopment

Being framed in a centralized curriculum, the course was quite rigid in its content selection, teaching sequence, test coverage, class hours and grading policy. The textbook was theme-based and organized into units. Each unit contained two 800-word reading passages covering a particular theme such as global markets, man and nature, and intercultural communication.

Although the centralized syllabus was rigid, there was still some limited autonomy for instructors in designing learning tasks, reallocating class hours for different skill training, using supplementary resources and judging students' performance through formative assessment that contributed to 40% of students' final grade. Before the intervention, the researcher acted as a coordinator to guide the three instructors who collaborated to redevelop the curriculum in three specific ways. First, a certain proportion of the 40 points of formative assessment were assigned to every in-class and out-of-class task or activity so that students would be at least extrinsically motivated to participate in these activities. Second, the most recent authentic supplementary reading and visual materials were selected from multiple sources such as online and the university library and in particular the open TED talks, which were a set of well selected and informative talks on the theme of 'Ideas Worth Spreading' (TED, n.d.). The materials selected conformed to the themes of the textbook units. Finally, an account was opened on a social media site where supplementary materials could be retrieved and comments could be exchanged.

Procedure

The intervention covered one semester encompassing 72 hours of teaching which were divided into three phases, introduction, revision and reinforcement, following the three theoretical levels of critical thinking (Scriven & Paul, 2009). The participants' presentations in the first two phases were mandatory. The third phase, as an additional round of presentation, was voluntary because it was more cognitively and academically demanding. However, excellent performance in the third phase would earn bonus credits.

Willingham (2007) found that beginner learners developed critical thinking more efficiently when scaffolding was provided to help them recognize metadiscourse cues

and pattern, assemble evidence from multiple sources, and develop background knowledge. This finding, along with the constraints of the centralized curriculum, prompted the following instructional design: First, the large classes (45 students on average) were broken into 8 small groups. Second, on a weekly basis, the participants watched a couple of TED talks with a similar theme to that of the current unit in the textbook. For example, two relevant TED talks were played in the class as supplements for a textbook article about China's economic development. They were *Is China the New Idol for Emerging Economies* and *Why Nations Should Pursue Soft Power*. In addition, participants were asked to read two supplementary handouts which were also consistent with the theme. Supplements were selected on the basis of developing more background knowledge to facilitate the practice of critical thinking (Willingham, 2007); formulating more insightful ideas for deeper thinking by connecting the content from multiple sources (Mulnix, 2012); and providing a good model for the participants to follow because the selected supplements were logically designed and eloquently argued.

Because critical thinking is a learned skill and beginners often find that searching for evidential connections is messy (van Gelder, 2005), professional guidance is vital. The researcher designed specific questions to guide the participants while they were going over the supplements. The questions were integrated with the elements of critical thinking so as to teach the participants "to grasp inferential and evidential connections" (Mulnix, 2012, p. 474). For the above example, while participants were watching *Is China the New Idol for Emerging Economies*, they answered the question "How was the talk constructed?" The question was accompanied by a request to provide relevant information relating to the five general components of the talk: introduction, argument, evidence, suggestion and conclusion. Guiding questions were also used to help the participants to connect ideas presented separately in the text, the TED talks and the reading supplements.

As a final step and with sufficient input, the participants were asked to work out and present their own argument. Initially, participants were required to brainstorm new ideas because the development of critical thinking is a gradual process and easier activities should be mastered through repetition before harder ones are introduced (van Gelder, 2005). During the brainstorming they decided on a topic by considering several dimensions, i.e., the TED talks, the supplementary reading handouts, the textbook and their own background knowledge or experience. This required them to use the TED talks and the supplementary reading as evidence to support their argument or position. To keep the learning track within the prescribed syllabus, all the presentation topics were consistent with the theme of the unit in the textbook that would be covered on the final exam. For example, one group was assigned to do a presentation about man and nature. They first watched two TED talks, one about climate change and the other about entrepreneurship in Somalia. They then read *Silent Spring* written by Rachel Carson, an American writer and ecologist. Using these supplements with the textbook, the group worked out their argument and delivered a presentation about how college graduates could be volunteers in green peace activities. While one group delivered a presentation, all the other groups reviewed and graded their performance according to a criterion list that contained essential elements of critical thinking.

After all the groups had completed their first presentations and peer review, the training entered the second phase, where the participants revised their drafts based on feedback from their peers and the researcher. Participants then continued to revise and present the same drafts one or more times until they were satisfied with the outcome. Peer review was important in assisting participants to revise their presentations. In the aforementioned example, the group used the feedback to revise their presentation to

relate more to their personal lives. Their revised topic was *How College Graduates Can Be Entrepreneurs of an Organic Chicken Farm that Produces Green Food Using the Barren Hills in The Suburbs*. In concluding that the development of critical thinking is a process of repetition, empirical studies (Dawson, 2000; Mulnix & Mulnix, 2010; van Gelder, 2005) have suggested that teachers cannot expect students to think critically without giving them sufficient guided opportunities to hone their newly learned skills.

Data collection and analysis

The study used two data sources: classroom observation and interview. The researcher and his two assistants videotaped and wrote field notes independently in the classroom observation and interview. The participants' presentations show how well they had developed their critical thinking ability because presentations require the combination of professional knowledge, the ability to analyse and synthesize information and arguments, and the skills to inform, relate, argue and persuade (Mulder, 2014). Sixty-five presentations were recorded. Those recordings were supplemented by participants' presentation slides.

The second data set is from interviews including informal and formal questions. Informal questions are important to elicit more natural and in-depth responses (Patton, 2002) while formal questions were used to explore the participants' understanding, perception and comments about critical thinking and the course. Interviews was administered after the English final exam as a measure of good ethical practice because at this point respondents would not have felt constrained by any real or imagined pressure from the researcher, thus potentially increasing the response rate and reducing bias (Denscombe, 2000).

To establish inter-coder reliability, 6 samples were randomly selected and, using a coding frame based on the three levels of critical thinking (Scriven & Paul, 2009), the researcher and his two assistants each coded the samples independently. Disagreements such as whether and what critical thinking skills were demonstrated in the data were discussed and resolved. Finally, the researcher examined and organized the patterns and clusters emerging from the coded data.

Results

The data indicate a significant change over the period of the course in how critical thinking training can be integrated into a centralized EFL course and how critical thinking improves oral English. Generally, a three-stage cognitive developmental track emerges in the three rounds of presentations.

Cognitive demanding processing

A number of indicators of poor performance emerged in the first presentations (Table 1). They were crowded with general bullet points. The participants tended to search for general information online so their presentations were mainly based on downloaded information, or *downloadge* (downloaded knowledge). This resulted in the major problem that students' displayed only a superficial understanding of its content and thus presented topics without personal analysis and argument. For example, while talking about unsuccessful intercultural communication, presenters simply listed all the major points leading to unsuccessful communication such as stereotypes, different language connotations, nonverbal misinterpretations, and insufficient experience, which amount to easily available common sense information. Another salient weakness was low

fluency, e.g., poor connection between different points or ideas, overuse of *and*, dependency on note-reading and faltering speech.

Table 1. The participants' performance in the first stage

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1. Listing major points and explaining them with superficial understanding
 2. Disconnection between different points or ideas at cognitive and metadiscoursal level
 3. Overcrowded presentation with condensed content
 4. Downloaded content and information
 5. Information borrowing (no personal comments, opinions and arguments)
 6. Note-reading
 7. Superficial flowing on the surface
 8. Faltered speech

Interview responses partly explain participants' performance in the first stage. When asked how they worked on the assigned topic, 85% of those interviewed admitted that they sought and downloaded relevant information online. Because they were not familiar with the assigned topics, they had to resort to "professional sources" as one of the interviewees called it. Since they knew little about the topic, they might not be able to explain it clearly and fluently even in Chinese. When they presented in English, their mind was fully occupied with multiple tasks: explaining the content, monitoring grammar, selecting words, and paying attention to pronunciation. The consequence is that they read notes, moved around only on the surface of the topic and faltered (Table 1).

More rhetoric presentation

Five weeks after the first round of presentations, the participants delivered their second round presentations which revealed the improvement of three major connections: conceptual, evidential and personal (see Table 2). First, the participants sought and connected separated information to introduce a concept or present an argument. They also began to tie general concepts to specific examples to clarify a point. For example, to illustrate intercultural communication, one group used three different MacDonald's TV commercials that were tailored for audiences from different cultural and ethnic backgrounds. Another change was their personal involvement which included the connection of general concepts with personal experience or life. They learned how to use personal examples to illustrate a general concept or theory. For example, while arguing about the effects of climate change, one group used one presenter's hometown as an example that showed how the area of lakes in her hometown had shrunk and disappeared over the last 30 years. The second round also featured more logical mental coherence. Presentations were rhetorically organized to present an idea or justify an argument. Finally, as Table 2 shows, their oral English was more conversational and spontaneous. They paid more conscious attention to how fluently they could speak rather than exclusively thinking about whether their speech was grammatically correct and the accuracy of each word they used.

Table 2. The participants' performance in the second stage

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1. Investigating, analysing and illustrating a point
 2. Connecting separate information sources
 3. Tying general concepts with a particular example, familiar scenarios and personal experience
 4. Using rhetoric technique to persuade instead of giving good reasons
 5. Speaking with conversational English
 6. Developing mental coherence
 7. Using more complicated or longer sentences and more expressive vocabulary

Interview responses suggest three crucial reasons leading to the visible improvement. The first was the specified topics for presentation. All those interviewed agreed that the revised presentation topics in the second round served as clear guidance that helped them construct ideas and arguments. For example, one of them used the topic, *The making of a happy or unhappy boy/girl: Implications of my personal story in my childhood*. The more specific topics allowed participants to apply information to a particular case or story. Another reason for their improvement was peer review. The interviewees recognized the positive function of peer review, which, as quoted from one interviewee's response, "crystallized his mind and pulled him out of the vagueness in constructing an argument". Another stated that because part of their final grade came from their peer review of other groups' performance, they had to listen to and judge others' presentations carefully. The interviewees highly recommended the dual functions of peer review. On the one hand, when they reviewed other groups' presentations, they had to strictly refer to each item of the grading benchmark. After several rounds of review, they were quite clear about the major elements of a strong argument. As one of them put it, they learned to judge from "experts' eyes". On the other hand, those who presented also found it beneficial. The peer's comments were more specific, informal and organic compared with the researcher's, which, as some of them admitted, were more comprehensive, academic and formal. What's more, the participants also found that giving online feedback was beneficial, which particularly appealed to those who were too shy to give or receive face-to-face feedback. Due to the importance of *mianzi* (face) in Chinese culture, most of the interviewees admitted their reluctance to give critical face-to-face comment that might stimulate strong defensive responses or argument. Finally, the participants attributed their improvement to the mental relief of their working memory. Two-thirds of the interviewees felt their mind was less occupied in the second round. One compared the human mind with computer memory. When too many applications were working simultaneously the computer ran very slowly and sometimes got stuck. Two major reasons accounted for the mental relief: constructing well thought-out arguments and using personal experience or familiar knowledge. In particular, they said that when they told their own stories instead of discussing unfamiliar concepts, they were able to allocate more attention to wording, structure and pronunciation. They felt more relaxed, maintained more frequent eye contact with their audience and were more predictive about what would come next.

Eloquent and expressive speech

After the two rounds of presentation, the participants reviewed and reflected on the sample presentations selected by the researcher. Most of the groups chose to do

presentations a third time after they revised the previous ones based on the review and reflection. Table 3 shows the participants' improvement in 5 parts. First, the additional round generally revealed a vertical order of conceptual connections, inductive way of thinking and active interaction with the audience. They learned to further narrow down their argument and understood that a more specific argument was easier to handle. For example, for the topic, *What Would Happen to Wild Animals if Global Warming Continues for Another 100 Years?*, instead of horizontally combining several effects such as the extinction of many rare species as they did in the second round, one group established the interconnectedness between their personal lives and penguins in the Antarctic. The group revised the topic as *What Would Happen to Penguins in the Antarctic after 100 Years If We Increase the Consumption of Fossil Fuel?* They connected the following major points as a chain reaction: excessive emission of CO² in the atmosphere → global warming → greenhouse effect → glaciers melting in the Antarctic → decrease of salt content → shrinking of phytoplankton (a tiny plant in the sea) → sharp fall of krill, the primary food source for penguins.

Another significant change is that they were learning how to generalize from collected facts or information. To discuss what practical skills college students were supposed to develop at campus, one group collected interviews from about 100 alumni and concluded that three major skills were essential yet ignored on campus: organizational, self-management and interpersonal communication skills. Also worth mentioning is that they began to use visuals to illustrate intended meaning, to clarify technical terminology and to sustain the audience's attention. Finally, the speakers learned to interact with their audience with follow-up questions.

Table 3. The participants' performance in the additional stage presentation

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1. Connecting separate information sources at hierarchical levels.
 2. Generalize theories or concepts from a particular case.
 3. Better-knitted discursual construction that facilitates fluent and coherent speech.
 4. Using non-verbal methods to deliver a speech
 5. Eliciting audience's response and questions

In the interviews, participants pointed out their two important conceptual changes: working out their own argument and understanding reasoned evidence. Most of the participants found that the review and reflection of the previous presentations were really helpful. One interviewee said that it was more effective in learning when they revised an old paper than started over on a new one. The interview also confirmed that supplements that acted as useful scaffolding helped them move above their current capability. Take the above example again, based on two recommended articles, *Antarctica Explored* and *the ABC of Global Warming*, the group identified the interconnectedness between the use of fossil fuel and penguins in the Antarctic. The lower-performing groups especially attributed their improved performance to the step-by-step guidance that led them to a higher order of thinking. Due to the lack of training in their prior learning experience, those in the lower-performing groups were weak in executing effective learning strategies. They were not good at using academic search engines and did not easily see how things were related at a deeper level. They found the content, vocabulary and guiding questions in the supplements were quite rewarding because they were set slightly above their current cognitive level. For example, the

questions of finding out the food chain of penguins and the causal relationship between fossil fuel and glacier melting crystalized their argument in the presentation.

Finally, the presenters and the audience interacted more frequently. The content of the presentations invited more questions and challenges from the audience. Personal opinions or challenging arguments on the status quo captured the listeners' attention more easily and provoked their stronger responses. Such an interactive scenario is rarely seen in EFL settings dominated by Confucian culture, as is the case in China (Cai, 2010). The participants expressed strong interest and support for the "genuine use of English", as one of them put it. One participant attributed her improvement in oral English to the use of English for a specific purpose: "I was actively involved in an academic activity. I hadn't done it before in Chinese but now I could do it in English!"

Discussion

This study has empirically confirmed that the teaching of critical thinking can be effectively integrated into a centralized EFL course. Because critical thinking is not restricted within certain subject areas, it can be applied without requiring English teachers to develop additional content knowledge (Mulnix, 2012). Hence, general English courses are a natural arena to practice critical thinking. Second, when English teaching is construed as preparing students to use English as a lingua franca, teachers actually "capture ELF in its purest form" (Seidlhofer, 2004, p. 211), which means they are not obliged to attach English to the norm and the cultural identity of English speaking countries. "Idiomatic usage, slang, phrasal verbs, puns, proverbs, cultural allusions and the like" are not relevant to practical use in the discourse of English (Jenkins, 2000, p. 220). With the removal of such an obligation, non-native English speaking instructors can develop the intended skills by reallocating class hours, assigning relevant tasks and supplementary materials, and defining credits of assessment accordingly.

To answer the second research question, this study reveals that critical thinking helps improve oral English and it also finds a developmental track in three stages. The first stage reveals a rather cognitively demanding process for multiple tasks. When L2 speakers process multiple tasks, they have low levels of automaticity and working memory, which will inevitably slow down their speech, and cause them to falter, mumble or utter Chinese words. Studies in psycholinguistics indicate that automation and working memory as psycholinguistic constraints greatly affect speech performance (see, for example, Finardi & Weissheimer, 2009). Research suggests that when L2 speakers are pressed to monitor both meaning and form, the conceptualizer competes with the formulator and the articulator, their working memory is more cognitively demanded and the consequence is slow and effortful speech production (see, for example, Kormos, 2006; Levelt, 1989). To relieve the burden in their mental process and facilitate their fluency, speakers have to rely heavily on note reading, which turns oral speech into formal essay reporting.

The second stage reveals a significant improvement for three major reasons: specified guiding questions, peer review and relief of working memory. The presentation topics are designed to be more thought-provoking, which require the participants to use knowledge or experience previously learned to construct arguments or generate ideas with logically reasoned evidence. Without a clear path leading them to a higher thinking order, they may spend much more time moving around at the bottom searching for ways to move upward. Language use, whether written or oral, is a deeply rooted social act (Vygotsky, 1978). During peer reviewing, the members of each group

interact by discussing, consulting and arguing. Such interaction brings forth the cognitive and social aspects of language by allowing group members to internalize thought within the interactive context (Mendonça & Johnson, 1994). What further reinforces the effect is online reviewing, which avoids losing face as it does in face-to-face review. Krashen contends that affective factors such as low confidence decrease the proportion of language learners' input and intake. When the affective filter is lowered, real language acquisition occurs (Krashen, 1985).

In the third stage the participants are capable of working out stronger arguments that can be justified with reasoned evidence. Such further improvement is attributed to fine-tuned assistance, which targets the students' weaknesses precisely. Since repetition is strongly recommended in critical thinking training (van Gelder, 2005), the participants are asked to revise as many times as they can and present revisions again. What's more, such repetitive activity is set in Vygotsky's (1978) Zone of Proximal Development, i.e., first identifying students' current needs and then setting achievable goals. Vygotsky (1978) suggested that students could not achieve learning without the assistance of the teacher or peer. The customized assistance actually helps the participants achieve learning by pushing them to a higher level of critical thinking.

Conclusion

English is one of most important compulsory courses in China running from elementary school to doctoral programmes. Although it covers students' entire formal schooling, there is no clearly defined course regarding what should be taught at different grades, though lexical density, syntactic complexity and content difficulty may increase at higher grades. What makes the matter more confounding is the centralized curriculum adopted in almost all EFL programs in China. English learning is intended with three major purposes: learn about it, learn to use it and learn through it (Coyle, Hood, & Marsh, 2010). The College English course is actually entering a crucial period of shifting from learning to *use* it, to learning *through* it. This study addresses how critical thinking can be ushered into College English in a centralized curriculum and it concludes that critical thinking training can be safely incorporated in the course. Another important conclusion is that the introduction of critical thinking training maximizes the effect of English learning at the advanced level. If advanced English courses intend to teach students how to learn through English, to be able to think critically is a valuable takeaway, especially because non-native English speaking teachers are not usually trained to teach content-based courses through English. Thus, this study offers a significant pedagogical implication and raises a fundamental question regarding what English teachers in the EFL context of the Expanding Circle (Kachru, 1992) can teach beyond the linguistic knowledge and skills.

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