

Critically minded podcast: An interactive curriculum

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In an effort to improve intermediate and advanced foreign language learners' critical thinking skills regarding the understanding of argumentative and persuasive passages without taking up excessive class time, podcast delivered content and text reconstruction exercises were introduced. However, the challenge of implementing these additions into the syllabus in such a way that content delivered outside the classroom remained relevant to what occurred in the classroom was considerable. In order to maintain cohesion between out-of-class and in-class experiences, text reconstruction exercises were designed to raise learner awareness of explicit podcast content. While the authors found that the increased learner involvement made up for the limitations of the software, the design and implementation of these exercises raised some interesting questions regarding software inflexibility, its use, and the rationale behind the location of text-breaks.

Background/Introduction

This paper discusses the way in which podcasting, computer-mediated activities and face-to-face classroom methods were combined to form an integrated approach to teaching basic critical thinking skills in an **ESL** context. The authors discuss the appropriateness of introducing critical thinking into the **ESL** classroom; the possible approaches to teaching critical thinking; and the blending of technology with traditional teaching methods. While this is not an in depth discussion of what is now becoming known as blended learning it does outline the authors' use of technology, their successes and their caveats. The **233**

approach and methodologies discussed in this paper relate to university students with intermediate English language skills (defined here as **TOEIC**[®] 605 or above) in a critical thinking course at Kyoei University and a reading course at Gunma Prefectural Women's University.

In 2010, responding to a perceived need for the teaching of critical thinking where it was otherwise not being taught, production of the *Critically Minded Podcast* began. The program offers learning experiences in critical thinking on two levels: first, explicit knowledge of the theories of critical thinking and the textual features associated with argument such as issue indicators, premise indicators and conclusion indicators; and second, competence in applying that knowledge during pair work or small group discussion of issues raised within a text.

This approach is naturally preceded by two questions: first, is the **ESL** classroom a suitable context in which to teach critical thinking? Secondly, what kinds of psychological and sociological processes can language teachers exploit in order to better facilitate its acquisition?

In order to answer these questions, it is necessary to define critical thinking. Within the context of the podcast and the learning program overall, critical thinking is understood firstly as a skill set and secondly as an action in which these skills are utilized. As a skill set, critical thinking is used to analyze and assess arguments by viewing each discrete component of a given argument. These components are identified by textual features such as issue indicators, premise indicators and conclusion indicators. As an action, critical thinking is not exclusively psychological and internal. Rather, it is "an iterative and reciprocal relationship between the personal and shared worlds" (Garrison, Anderson, & Archer, 2000, p. 98). Vygotsky presents a pertinent example of a child's acquisition of the skills necessary for correct use of the premise indicator "because," and he typifies this as a largely collaborative learning process (1986, pp. 190–191). Critical thinking, then, is an act of negotiated and socially constructed understanding. Assessing an argument thus requires first coming to a shared understanding of the category of issue being discussed and the components of the argument being scrutinized. As this is achieved primarily through language, the ability to notice specific lexical items and syntactic structures (c.f., Schmidt, 1990) related to argument is therefore a basic requirement of both language learning and developing critical thinking skills.

Although the "regular" classroom may be an appropriate context for learning critical thinking skills, can the same be said for the **ESL** classroom? Two recent studies (Dabaghi, Zabihi, & Rezazadeh, 2013; Hashemi & Zabihi, 2012) establish a significant correlation between English proficiency scores, performance on written tasks, and critical thinking skills development. Dabaghi, Zabihi and Rezazadeh found that logical skills, making inferences, and identifying assumptions were correlated with higher overall academic scores. They concluded that there was a significant correlation between critical thinking skills such as deduction, interpretation of evidence, and evaluation of premises and conclusions with achievement on argumentative written tasks. Hashemi and Zabihi similarly concluded that there is a strong correlation between critical thinking skills and English proficiency scores. They also suggest seven types of questions involving context, sequential order, intent, decision making, meaning and metalanguage which can stimulate critical thinking (Hashemi & Zabihi, 2012). Thus, the **ESL** classroom, with its focus on language noticing, may be an ideal context for learning critical thinking.

In answer to the second question, the literature indicates that social processes aid the
234 development of critical thinking skills and are essential to learning. Regarding planning

and problem solving, Vygotsky (1978, pp. 27–30) argues for the primacy of verbalization and social information processing over psychological information processing. Learning, in the social constructivist view, occurs when new information is mediated in the “inter-psychological plane” between two or more persons and “is then appropriated by the individual” (Gutierrez, 2006, p. 230). Teaching critical thinking therefore is predicated on reconceptualizing higher order comprehension as negotiated meaning-making.

As for specifically **ESL** related learning, research makes a compelling case for critical thinking instruction in the areas of both reading and listening. In 1967, Kenneth Goodman wrote of the “psycholinguistic guessing game” and Carrell and Eisterhold (1988, p. 74) have elaborated on this, describing meaning making as an “ongoing, cyclical process of sampling input text, predicting, testing and confirming or revising those predictions, and sampling further.” Grabe also describes how readers “sample the text as necessary to confirm hypotheses and form new hypotheses” (1988, p. 57). If this is an accurate model of meaning-making, it is also an excellent definition of some core principles of critical thinking. Skilled readers have the ability to utilize more top-down reading skills just as good critical thinkers do not accept information at face value. Skilled readers are also adept at discerning at what point they have taken in enough information to make a guess about the meaning of a text with an acceptable degree of risk of failure (Carrell&Eisterhold1988, p. 74), and so too the same is true of good critical thinkers during decision making.

By contrast, less proficient readers rely on more bottom-up skills and when they do employ top-down reading, they do it as though all the semantic cues were of nearly equal value. Among Japanese students, Osada (2004, cited in Vandergrift, 2004, p. 8) observes that Japanese students frequently attempt to understand through literal translation while listening, and he attributes poor listening performance to over-reliance on bottom-up skills. Osada notes that “less proficient learners [. . .] are fully occupied with identifying the words used in speech, and there is almost no space for top-down processing” (Osada, 2004, p. 63). Responding to this problem, Vandergrift argues for course design with “more emphasis on a top-down approach” (2004, p. 8). Critical thinking is not the only component of top-down comprehension but along with semantic competence and a broad knowledge of idioms it is one of the most important.

Thus, there is a strong case for critical thinking instruction in both general education and specifically in intermediate/advanced level **ESL** pedagogy. This paper explores the efficacy of combining explicit out-of-class instruction of critical thinking skills via mobile learning and in-class pair work involving text reconstruction exercises in which students’ engage in noticing acts that focus on linguistic elements of argumentative and persuasive writing.

Approaches to teaching critical thinking

Four possible approaches to teaching critical thinking have been proposed by Ennis (1992). Critical thinking can be (1) taught through the general approach whereby the focus of teaching critical thinking is separate from the subject matter; (2) infused into subject matter instruction; (3) immersed in subject matter instruction; or (4) taught through a mixed approach – a combination of the general approach with the infusion approach. The authors, in line with other proponents of the mixed approach such as Ennis (1985, 1992), Perkins and Salomon (1989), and Valanides (1990), take the mixed approach due to differing syllabuses and course demands on learners.

This combination of a separate thread within a syllabus aimed at teaching general critical thinking principles and skills in addition to subject-specific instruction, allows a balance between the two threads. Inevitably, however, this leads to competing demands on class time between the teaching of explicit critical thinking principles and analysis, and the discussion and examination of the subject matter. In view of Schmidt's findings that "control processing associated with novice behavior cannot be carried out concurrently with other demanding tasks" (1990, p. 136), the need to mitigate dual cognitive load by separating critical thinking instruction and small group discussion of course content was recognized. The solution was to move part of the explicit teacher fronted critical thinking content out of the classroom by transferring most of the meta-language and theory to a podcast so students could work through this part of the syllabus at their own pace, thus increasing the amount of time available in class for student-to-student discussion.

Traditionally, balancing the goals of a syllabus with class time limitations has been resolved by setting homework in the form of reading or writing assignments. However, with the use of podcasting, educators are better able to facilitate learning by offering students more closely tailored content that affords flexibility in how and when they study.

Why podcasting?

In determining what format was appropriate for their students and for the delivery of core content the advantages of the podcast format were considered. Some of these are:

1. Increased time for in-class student-student and small-group discussion (Rosell-Aguilar 2007, p. 479).
2. An interesting listening experience (Rosell-Aguilar, 2007, p. 480).
3. Opportunity for multiple listenings at a convenient time and place (Sloan, 2005).
4. Carefully worded scripted dialogues.
5. Ease in accessing scripts embedded in the MP3 files.
6. The increased technological affordances such as compactness and portability.

The use of podcasts and blogs for content delivery has increased in recent years. However, the validity of their use depends greatly upon the pedagogical assumptions on which they are implemented. The authors feel that instructors should take care to avoid simply tacking on a podcast to a pre-existing curriculum without consideration of the holistic effects of shifting from a traditional in-class approach to a blended learning style, lest students' perceive the class as lacking cohesiveness. Garrison and Kanuka (2004) define blended learning as the "thoughtful" and "effective integration" of face-to-face learning and online resources (pp. 96-97). Thus, they argue, blended learning is not a "layering" of methodologies but a cohesive "integration" (Garrison & Kanuka, p. 99) that reinforces the idea that what happens in class is relevant to the podcast content.

For that reason, *Critically Minded* was conceptualized not simply as a podcast but as an overarching structure under which the podcast was one of four elements (Figure 1):

Fifteen podcast episodes were created (<http://criticallyminded.com>) covering the basic theory and metalanguage behind the various skills required for critical thinking. In addition to the fundamentals, simple examples and quizzes were also included. Excluding vocabulary related to metalanguage, every effort was made to limit language difficulty and speed of delivery to a reasonable level. The podcast transcripts are also highlighted in different

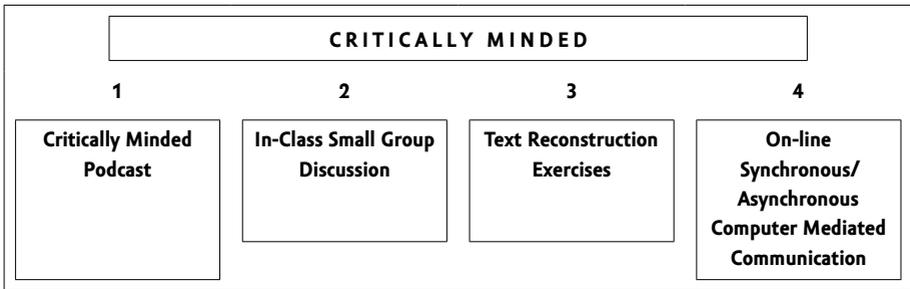


Figure 1. Four elements of the Critically Minded approach

It is unknown whether the students referred to here worked alone with the podcasts or in collaboration with each other, nor how much time they invested in the task. However, casual in-class observation and the differing examples and notes students presented suggest they were mainly done alone.

Briefly stated, the podcast content which is listened to outside of class transfers into in-class small group discussion and notebook presentation at which time the advantages of face-to-face communication are exploited. Each week, in groups of three or four, students were asked to discuss each episode and to answer questions posed by the teacher. As these questions were basic comprehension checks, these discussions tended to last about ten to fifteen minutes.

Students were expected to have made notes on prints of the podcast. The notes may have been as simple as translations of unfamiliar vocabulary. Students may have also circled or underlined passages that they did not understand. They were also asked to relate examples from their personal experience or from news stories they have read. Furthermore, they were encouraged to use their notes to better understand issues raised in the textbook. Thus, while explicit out-of-class instruction of critical thinking begins with general principles and moves toward specific issues, the in-class discussion encouraged students to make connections between their own experience and general principles; and subsequently to transfer that learning to new specific content. These discussions, in turn then prepared students for the text reconstruction exercises.

Why text reconstruction exercises?

The value of reformulation and text reconstruction tasks in language teaching methodology has been recognized since the late 1980s especially within a meaning-driven task-based syllabus. Second language acquisition theory research suggests these types of tasks aid the activation of implicit and explicit knowledge through either teacher guided or student initiated 'noticing' (Brett, 1994; Thornbury, 1997).

A text reconstruction exercise (**TRE**) involves, as the name implies, the reconstruction of a short written passage. Students are given a short passage to read and at a later time (from an hour to a week or more) are asked to reconstruct the text from a selection of sentences or sentence fragments that are presented at random in a multiple choice format on a computer screen. Learners then click on one of the choices offered in what they believe to be the correct order to recreate a coherent version of the original text (See Appendix **237**

A for a screenshot of the interface layout). The text being reconstructed may be the exact version of what the learner read previously or it may be a synopsis.

Of the various software available Hot Potatoes, a suite of programs published by Victoria University and Half-Baked Software, was selected as it is known to be a stable and secure platform. It has a simple interface that is easy for students to use, and a results and data page that can be easily downloaded by the teacher.

When teaching critical thinking, it is often necessary to focus learners' attention on the components and internal structure of argumentation. **TREs** as part of a chain of tasks offer an excellent way of encouraging learners to consciously become aware of the lexical items, textual patterns and sequencing used in the narrative. Observation of learners showed that having learners work on **TREs** in pairs was better than having them working alone as some learners who worked alone tended to be discouraged when they found part of a **TRE** too challenging for them. This results in struggling learners giving up on the process and clicking on options at random in an effort to complete the task. In pairs, by contrast, they discuss and negotiate their way to deciding on which of the options they believe is most likely to be correct. Whether this is done in the target language or not is of little importance as long as they are using their full store of linguistic knowledge to its fullest potential. The use of L1 provides scaffolding for the students to help each other (Cook, 2001). Moreover, during small-group discussions, learners' levels of motivation increase and are sustained as students develop a sense of community by interacting with each other (Rovai, 2002).

In highlighting issues related to critical thinking skills **TREs** fulfill three goals: the reinforcement of the podcast's explicit content (as passages from the podcast script are adapted to **TREs**); reinforcement of lessons learned from the podcast as students employ strategies such as noticing issue indicators, premise indicators and conclusion indicators; and pair or triad work within a learning environment grounded in social constructivism. Also, in addition to podcast scripts, some of the **TREs** exploit authentic texts, such as opinion pieces and advice columns in newspapers. In this way, both out of class content and in-class activities become relevant to one another.

Discussion

Initially, it was intended that **TREs** be used as a method of establishing a baseline evaluation of students' ability to identify an argument from other rhetorical modes, and to distinguish premises from conclusions. It was believed that this baseline could later be used to measure progress as learners became more proficient in identifying the components of argumentation during subsequent **TRE** sessions. However, two problems complicated the matter; one human and the other technical.

Firstly, although the **TREs** were designed to reinforce and develop an understanding of the components and internal structure of argumentation, students working alone either relied on avoidance strategies such as using orthographic cues like capitalization and punctuation or memorization as the most expedient way of completing a task. (This was observed through real time observation and video recordings.) In light of Mercer's observations of a male tendency towards competition and female tendency towards collaboration (Mercer, 1996, pp. 366-367), the authors attempted to circumvent this overuse of memory strategies in classes where students formed all male or all female triads (Gutiérrez, 2006, p. 243) by designating mixed gender groups with the expectation of higher quality mediation

Conventionally, the primary use of **TREs** is raising of linguistic awareness. **TREs** traditionally have been designed to facilitate noticing of grammatical or syntactical elements in order to develop a learner's interlanguage. The original exercises in this paper were designed to guide learners toward noticing the internal structure of argument and persuasive writing or speech. They were designed with sentences broken at premise joints and conclusion joints rather than before or after targeted grammatical items. Texts were chosen specifically on the basis of their rhetorical modes: problem-solution-evaluation and cause-and-effect. A good deal of effort went into creating the **TREs** so that grammatical knowledge would be insufficient for the consistent making of correct guesses. In principle, knowledge of the basic structure of argument as delineated in the podcast would be necessary to maintain a high score. Unfortunately, though, even after being instructed to employ their emergent skills at identifying premise and conclusion indicators, students tended to rely on their memory first before employing other strategies, which is consistent with results found by Gutiérrez (2006, p. 243), who also noted the difficulty in guiding students away from relying on mnemonics and conceptualizing the text as a "seen object." One solution to this problem was to design a series of **TREs** that were successively longer so that at some point explicit knowledge of argumentative form must pick up where memory fails.

Secondly, although technically the software has been easy to use, it has been difficult to implement this technology in such a way that effectively reinforces and accurately assesses a student's competence in identifying components of an argument. Technological presence can be a negative factor when it leaves holes through which learners can take shortcuts that undercut their development, as was found in the case of Texttoys' Web Sequitur – chosen because it was web based and readily available. Also in keeping with the observations of others (Gutiérrez, 2006, p. 243) the authors also noted the inflexibility of **TREs** created by using Hot Potatoes' Web Rhubarb. As this software only accepts a response if it matches the original text exactly, it leads to an over reliance upon memory. It would be far better if the software could be updated to allow more than one sequence of options to be accepted as correct. For example, consider the sentences *Jane put on her rainwear. Her raincoat was red. Her boots were bright green.* The order in which the two sentences regarding her raincoat and boots follows the first sentence is of no particular importance. So for learners to be penalized for not remembering the correct order in which they appeared in the source text or on a podcast would be assumed to be demotivating.

WebSequitur presented other problems for which no completely satisfying solution could be found. At each turn of a **TRE**, the students were given a choice of cues, – usually between three and five – and asked to select the one that follows. This was not a problem when all the segments were complete sentences. However, if sentences were divided into sections, punctuation marks and capitals offered such strong clues that the matter of selecting the correct answer required neither memory nor an understanding of argument. The options in WebSequitur exercises were generated randomly and so there was no way to avoid such an occurrence. At the time the **TREs** were being written, this was a concern, but it was not clear how often this kind of combination would occur. It was hoped that the frequency of such occurrences might be so small that they could be accounted for as test bias or noise. Unfortunately, these dead-giveaways came up too often.

Two solutions to this problem were considered. One, was to reformat the **TREs** in all uppercase letters, thus equalizing the punctuation cues for all segments, and the other was to break the sentences in places other than before or after premise and conclusion indicators, such as between main and subordinate clauses or at conjunctions.

The first option to reformat the **TREs** in all uppercase letters was a failure. It was thought that by reformatting the **TREs** in all uppercase letters the punctuation cues for all segments would be eliminated, meaning that if the preceding segment ended in a period, all four choices nevertheless would begin with a capital. However, when the **TREs** were formatted in all capital letters the typographical features of text made it look like an angry blogger's rant. From the very start the authors had reservations and were not sure how our learners would react to this. At the time the authors were also unaware of how much all-cap-fonts affect legibility and readability (see Tinker, 1963; Wheildon, 1995), so the all-caps **TREs** were piloted with an advanced level class. The learners were then questioned about their reaction to this format. Almost all reported that the text was difficult to read and looked unnatural, and some even felt the need to practice the reading of capitals, and the use of capitals was discontinued.

Subsequently, the authors decided to rework the problem of breaking long sentences into segments that would limit the use of undesirable learner strategies. Breaking a sentence at a conjunction seemed the most obvious solution, but the question of exactly where to break it proved challenging. It was found through learner feedback and observation that breaking a sentence before a conjunction and any associated punctuation reduces the hint value of the punctuation mark. However, this approach only works if the breaks at sentence endings are also done before the final punctuation mark. This is because the reduced hint value of a punctuation mark encourages the learner to read the stem-sentence carefully before deciding whether it is a standalone item to be followed by a new sentence, or the beginning of a chain of thought that will require some kind of conjunction.

Another possible solution considered was to make a text break after the subject if a better break-point could not be found. Again, this option was not completely satisfying because breaking the text at non-premise/indicator points more often than not allowed correct answers to be selected on the basis of criteria other than a knowledge of argument.

Summary and conclusion

The aforementioned difficulties notwithstanding, the use of **TREs** has been, in the view of the authors, a success in both authors' classes. The exercises have been effective in providing the cohesiveness necessary in a blended learning context as they have drawn together the explicit out-of-class podcast delivered content together with the in-class language use. Incorporating podcast scripts into some **TREs** encouraged students to read and retain many of the central points discussed in various podcast episodes. Although there remain some issues with the production and implementation of podcasts and **TREs** to be resolved, feedback from students is positive particularly with regards to the use of podcast scripts in text reconstruction exercises. Some indicate that they see these exercises as revision and consolidation, others as the culmination of their efforts. Whatever the reason for the success, the **TREs** have introduced an element of vitality and dynamism that the authors could not have hoped for. Since the beginning of the project, students have been observed working collaboratively with greater enthusiasm and more frequent L2 production than had hitherto been seen. Finally, in preparation for group project work, repeated employment of **TREs** has the potential to be used to scaffold successively more sophisticated language use.

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Appendix A

3. Traffic Accident Witnesses A and B

Rewrite the passage that you read in preparation for this puzzle.

and both believe that the white car was following the blue car too closely

suddenly walking onto the road in front of a blue car

. The blue car braked. The white car crashed into the back of the blue car

. Witness A (Kobayashi Hiro)

Your score is: 100%