A DIALECTICAL APPROACH TO CRITICAL THINKING IN EAP WRITING

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ABSTRACT

Few would disagree that high quality thinking is a necessary condition for high quality writing. Yet, writing courses in English for Academic Purposes (EAP) often focus only marginally on principled and rigorous development of dialogical thinking and idea generation in preparation for written work. This study examines the effect of a model of critical thinking instruction (CTI) in a university level EAP writing course. Recent studies on CTI in EAP (Alnofaie, 2013; Hashemi & Ghanizadeh, 2012; Liaw, 2007; Shirkhani & Fahim, 2011; Yang & Gamble, 2013) have utilized models of CTI that, while reflecting varying degrees of attention to social context, inevitably center on the more traditional concepts of logicality and rational thinking skills. In contrast, this study's distinct model of CTI is based on Paul's (1995) concept of dialogical and dialectical thinking and guides students to consider and understand social issues and controversy through the analysis and evaluation of the differing belief systems behind opposing viewpoints. After the course, student interviews were conducted and analyzed through grounded theory and narrative analysis. Interview data revealed that CTI was found to be a practice that was typically unavailable in the students' home countries and previous L2 English education, and was perceived as a challenging yet valuable addition to this EAP course curriculum. To varying degrees, students found the activity of critical thinking to align with their personal values and expressed a perceived need for critical thinking in order to succeed in future studies at the university level. The data contained frequent reports of students using critical thinking in their personal lives as a result of CTI. In addition, findings revealed a need to carefully position critical thinking as a tool with specific domains of use and limitations. These

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findings raise important questions about the inclusion of CTI in EAP and what forms are appropriate.

INTRODUCTION

As a writing teacher in English for Academic Purposes (EAP), the act of guiding my students to produce high quality written work implicitly requires that I facilitate the rigorous discussion of multiple viewpoints, in order to produce ideas that are well-reasoned, and expansive, rather than reductive. As a student of L2 writing instruction, I found that teaching materials offered little guidance as to how I could engage students in a principled thinking process, with intellectual integrity and fairness at the core, so that their writing might benefit. This concern led to an investigation of critical thinking and its application in the classroom.

Recent research in critical thinking instruction (CTI) in EAP has revolved around concepts of logical and rational thinking skills (Alnofaie, 2013; Hashemi & Ghanizadeh, 2012; Liaw, 2007; Shirkhani & Fahim, 2011; Yang & Gamble, 2013). While these skills are essential to the practice of critical thinking, alone they fail to account for the nature of multilogical problems in society (Paul, 1995), problems that require the exploration of multiple ways of thinking in the pursuit of whole truth. Whole truth is unattainable, but the only way to move closer is through rigorous investigation of various plausible viewpoints and the belief systems that generate those viewpoints. This study examines the effect of an approach to CTI utilizing concepts of dialectical thinking (Paul, 1984a, 1995) to produce academic discussions and written work in an EAP context. The effect of this instruction is explored through individual interviews with the students and a qualitative analysis of narratives and themes in the data. This paper argues that CTI practices in EAP must move past the teaching of individual thinking skills towards a more robust concept of dialogical and dialectical thinking in order to deal with issues of self-deception, contextual considerations in logic, and multi-categorical ethical issues that are particularly relevant in the second language classroom.

Definition and Application of Critical Thinking

In order to frame the approach to CTI used in this study, a review of critical thinking research and examples of instructional approaches to CTI in EAP are needed. Ennis (1985) offers a simple definition of critical thinking: “Critical thinking is reflective and reasonable thinking that

is focused on deciding what to believe or do" (p. 45). This particular definition emphasizes the practical use of critical thinking. In other words, improvements in the quality of our thinking will improve our decisions, and our lives as a result. More detailed elaborations of the nature of critical thinking and its instruction are found in education and psychology research (Ennis, 1985, 1989; Facione, 1990; Halpern, 2014; Kahneman, 2011; Kuhn, 1999; Lipman, 1988; McPeck, 1981; Norris, 1985, 1992; Paul, 1984a, 1995, 2005). Despite the extensive work done in this area, there is no agreed upon definition for critical thinking. However, a review of critical thinking literature (Fischer, Spiker, & Riedel, 2009) revealed that themes of reasoning/logic, judgment, metacognition, reflection, questioning, mental processes, and purpose were common among most researcher definitions. Although some researchers (Atkinson, 1997; Burbules & Berk, 1999; Johnson, 1992) rightly point out that there is much to be desired of this rather obscure definition of critical thinking, few would argue against the claim that greater quantities of better organized reflective thinking are beneficial for people. Indeed CTI can be useful for students' lives as well as for their academic careers.

In the EAP classroom, CTI provides a content base for tasks that can help to improve academic language proficiency. Simply put, critical thinking requires a degree of academic language use to facilitate rigorous analysis of texts and discussion of opinions. Research in task-based language instruction (Ellis, 2003; Richards & Rodgers, 2001) calls attention to the benefits of using language tasks that promote communicative language practice. The theory is that tasks provide the input and output necessary for language acquisition by implicitly or explicitly requiring communicative processes such as negotiation, modification, and rephrasing. In addition, tasks are believed to improve learner motivation, and thus learning. CTI tasks, in particular, have been shown to be effective at fostering interaction and producing significant gains in language proficiency.

Such gains in language proficiency were demonstrated in a study of freshman English reading and listening classes in Taiwan (Yang & Gamble, 2013). Using a framework developed by Ennis (1987), Yang and Gamble focused on teaching four critical thinking skills: metacognition or 'knowing about knowing,' logically evaluating information sources, problem solving, and selecting appropriate strategies or solutions. Yang and Gamble demonstrated that textbook-based language proficiency post-test scores were significantly higher for the group that received CTI over a control group that received non-critical task-based instruction. Their study

adds to the body of research suggesting that CTI supports improvements in language proficiency while at the same time providing students with valuable critical thinking skills.

This type of approach to CTI could be called a "CT skills" approach because it centers on a list of target critical thinking skills and uses language tasks to improve those skills. In critiquing such CT skills instruction, Paul (1984b) suggests that it often minimizes or outright ignores issues of self-deception (not recognizing one's own bias), contextual considerations in logic (reasoning varies by context), and multi-categorical ethical issues. In contrast to CT skills instruction, the method of instruction used in the present study focuses explicitly on these issues and guides students towards awareness of egocentric and sociocentric beliefs through dialectical thinking activities. I make this distinction here not to draw a false dichotomy between CT skills approaches and dialogical/dialectical approaches, but to highlight that CT skills approaches appear to be the more prevalent conception of CTI currently, and that there is room for improvement in CT skills approaches. I next review other studies that have applied CT skills approaches in distinct ways to facilitate a more comprehensive comparison with the approach used in this study.

Also taking a CT skills view of critical thinking, Liaw (2007) designed a content-based English curriculum for junior high school students in Taiwan and measured critical thinking skills using a test based on Bloom's Taxonomy (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956). This taxonomy of cognitive skills presents a traditional framework for separating lower-order thinking skills from higher-order ones. Higher-order thinking skills (analysis, synthesis, and evaluation) are considered critical thinking skills when utilizing this framework. An increase in language proficiency post-test scores and critical thinking skills post-test scores was reported, illustrating the positive effect of CTI in second language teaching. Liaw's study added to the body of empirical evidence suggesting the importance of CTI in L2 learning contexts and also defined critical thinking as being contained within a framework of higher-order thinking skills.

Pally (1997) used CT skills instruction in combination with a sustained content approach, which fostered academic language and critical thinking skills through discussions on literary texts. Gains were found in language and critical thinking proficiency in students of three separate EAP courses. Although Pally (1997) also defined critical thinking as a collection of thinking skills contained within the domains of EAP, cognitive psychology, and critical pedagogy, she placed emphasis on the complex interaction and relationship of these skills,

producing a more robust CT skills approach. Also, some of the literary texts assigned in the course dealt with multi-categorical and ethical issues that naturally bring the subject of egocentric and sociocentric bias to the forefront of discussions. In this way, Pally's version of a CT skills approach gives much more attention to problems of self-deception, contextual considerations in logic, and multi-categorical ethical issues. This illustrates that CT skills approaches are not limited to targeting atomic technical thinking skills, but instead vary in the degree of attention given to the theoretical underpinnings of a dialogical/dialectical approach to CTI (Paul, 1984b). However, issues of egocentrism and sociocentrism are formidable obstacles to fair and rigorous evaluation of ideas and will not likely be brushed aside by an approach that does not directly address them as obstacles. In the next section, I elaborate on the approach to CTI used in this study and how it addresses these concerns.

A Dialectical Thinking Approach to CTI

Paul's (1995) concept of dialogical and dialectical thinking goes beyond logical and rational thinking skills and points out the necessity of social dialog and social context within critical thinking. In this approach, rather than deducing the correct and errorless point of view, students engage in the rigorous assessment of various plausible points of view that are formed from entirely different belief systems. Students are challenged to systematically evaluate fundamental differences in norms, values, and the definitions of concepts that shape opposing viewpoints, and, in doing so, explicitly address the issues of egocentrism and sociocentrism in the evaluation of ideas. There is no authoritative "answer" at the end of the inquiry, but instead a heightened understanding of the issues that is negotiated by the students themselves.

One of the strongest criticisms against critical thinking is regarding its assumed element of objectivity (Atkinson, 1997), the idea that a capable critical thinker can deduce the "truth" through an unbiased process of questioning, gathering evidence, analyzing, evaluating, and self-reflecting. Atkinson pointed out that some conceptions of critical thinking are reductive and do not include contextual considerations in thinking and logic. As an example of Atkinson's concern, in a class discussion, students in this study debated over the legalization of marijuana and its benefits and costs to society. The students proceeded to specify a particular social context and analyze the issue, cautious of fair-mindedly evaluating the benefits and costs for that particular context. The resulting table of factors represented a well-worked out list of criteria that

highlighted some strong benefits as well as costs, but leaned toward supporting a decision to not legalize marijuana. The problem with this thinking activity was that the effort and perceived fairness of the process led students to believe that they were being sufficiently fair-minded, when in fact there was insufficient consideration of opposing viewpoints. To illustrate, at one point in the discussion, the group arrived at the conclusion that while marijuana use may be fine for the individual, it may have adverse effects on the people related to that individual (children, co-workers, family). Therefore, the group made a belief commitment that instances of negative effects on the community, even if they are infrequent, weaken the case for marijuana legalization. The group failed to construct and evaluate a reasoned counter viewpoint, for example, one that views infrequent negative effects of marijuana on the community as a natural and necessary sacrifice for the greater good. After the discussion, as the teacher, I pointed out the opportunity for dialectical thinking to highlight the shortcomings of a one-perspective analysis.

The fact that students were able to use a systematic process of critical thinking to reach a reasoned answer is undoubtedly a good thing, but this is only the starting point for dialectical thinking. After fashioning one's own viewpoint in a systematic, fair-minded, and reasoned manner, the next step is to deeply consider and seek out the voice that declares it all wrong. The necessity of social context and dialog between different perspectives to critically understand "truth" is highlighted here. John Stuart Mill (1860/1999) addressed such a concern:

> In the case of any person whose judgment is really deserving of confidence, how has it become so? Because he has kept his mind open to criticism of his opinions and conduct. Because it has been his practice to listen to all that could be said against him; to profit by as much of it as was just, and expound to himself, and upon occasion to others, the fallacy of what was fallacious. Because he has felt, that the only way in which a human being can make some approach to knowing the whole of a subject, is by hearing what can be said about it by persons of every variety of opinion, and studying all modes in which it can be looked at by every character of mind. No wise man ever acquired his wisdom in any mode but this; nor is it in the nature of human intellect to become wise in any other manner. (p. 19)

Mill (1860/1999) points out that in order to achieve wisdom, people must consider the ways in which they might be mistaken. However, the main obstacle to such dialogical/dialectical thinking is the mind's natural disposition to consider itself rational (Paul, 1984a). Human beings

are naturally unmotivated to examine their own faults comprehensively. Yet, people gain critical understanding from the consideration of all arguments, especially the strongest one that can be made against their own. The goal of dialogical/dialectical thinking is to use this critical understanding to make better decisions of higher quality that reflect fair-mindedness and intellectual and moral integrity. The model for CTI used in this study follows this line of thinking by proposing the following three principles, which I explicitly taught to the students through handouts and discussions to aid in the analysis of opposing viewpoints:

- Be as sympathetic as possible to opposing viewpoints.
- Strongly criticize our own viewpoints.
- Be thorough and clear in definitions of all assumptions and concepts.

These principles can be used by students to discuss and evaluate opposing viewpoints of controversial issues in the local community, in literature, and especially in social media (an abundant source for current controversial issues in society). The process of understanding opposing viewpoints starts by unearthing the belief system that forms assumptions, which in turn form viewpoints. Here, I use the word "unearth" intentionally because these belief systems are deeply rooted beneath the surface of most opinions. This is the reason why many controversial issues, and disagreements on a personal level, are not easily resolved.

To design lessons and activities that promote critical thinking, I created and provided my students with decision-making criteria lists that provide a useful way to better understand the underlying assumptions behind viewpoints. Below is an example of a practical list of decision-making criteria, based on Lipman’s work (1988):

- Standards / Norms - What standards must we adhere to?
- Laws / Rules - What rules must be followed?
- Goals / Ideals - What goals in life are inherently correct or good?
- Methods / Procedures - What is the proper way to do things?
- Belief / Trust - What things or people are naturally trustworthy?
- Credentials /Reputation - What credentials are valid and meaningful?

These criteria pose basic ontological and epistemological questions about the perceived nature of "truth" and "how things are" in the world, and help to critically analyze disagreement and controversy. This notion is in line with Hatch's (2002) explanation of *research paradigms* in which he attributes disagreement among various camps of researchers to ontologically and

epistemologically different belief systems, or paradigms. In the model of CTI used in this study, students engaged in a sort of "paradigm hopping" process by utilizing lists of criteria to analyze and evaluate various opposing viewpoints surrounding relevant social controversies against their own.

Utilizing Learners' Cultural and Cognitive Resources in the L2 Classroom

One of the benefits of the dialectical approach to CTI in this study is that it affords EAP learners more opportunity to bring their cultural knowledge and cognitive skills into the classroom activity. Wallace (2003) contests that conventional conceptions of L2 instruction position the identity of the learner as a novice, insufficient in terms of linguistic ability. That a class will not more than superficially utilize and validate students' cultural knowledge and cognitive skill is certainly the norm rather than the exception. According to Wallace (1992), conventional L2 reading classes are deficient in that there are a lack of provocative texts, there is little emphasis on the connection of texts to social contexts, and there is no method taught for critical analysis of texts. While a dialectical approach to CTI by no means addresses the entirety of these issues, it does provide learners with the opportunity to bring their cultural knowledge and cognitive skills into the curriculum, allowing them to analyze and evaluate content in readings and discussions against their own logic and various other competing viewpoints born from distinct paradigms. This makes for a dynamic and personally relevant classroom experience and validates students' brought-in cultural and cognitive resources.

Research Questions

In order to explore the effect of a dialectical thinking approach to CTI on EAP students' experience, this study presents broad questions about students' perceptions and feelings in order to avoid limiting the scope of the observation.

1. What are students' perceptions of an approach to CTI in EAP that utilizes concepts of dialectical thinking?
2. What issues do these perceptions reveal concerning the implementation of CTI in EAP?

METHODS

Participants

The seven participants were adult L2 speakers of English between the ages of 20 and 44, the majority in their 20s. They were full-time students studying in an EAP writing course at a university in the United States and were considered upper intermediate/low advanced in proficiency. The students' average years of prior classroom English instruction was 8 years (SD = 2.87). In general, the students reported very limited to no experience with critical thinking in their L2 English education or general education. None of the students reported receiving any formal or explicit instruction on critical thinking skills or principles. However, one student, Bao[1], had taken one class at an ESL school in the United States in which he was required to read a best-selling book dealing with the use of principles in economics to examine daily life. This could be considered loosely related to critical thinking because Bao engaged in questioning commonly held "truths" in society. However, he did not receive explicit instruction on the principles or the process of critical thinking, while, as mentioned previously, CTI is principally concerned with the "how" of questioning and reasoning.

Course Structure

The course was an 8-week academic writing course that focused primarily on the compare and contrast rhetorical mode. The class met 4 times a week in one-hour sessions. There were 8 students in the course, but only 7 participated in the study. The course utilized a textbook and covered units on the rhetorical modes of narrative and compare/contrast essays. Sample essays accompanied by writing activities were used to familiarize students with the basic structure of these modes and of essays in general. With regards to CTI, students read various articles from the internet[2] and completed assignments such as: analyze a popular article listing 13 things mentally strong people do and discuss its effect on society; discuss the opinions on gender discrimination regarding the publishing of an article featuring sexual content in a university newspaper; discuss the opinions surrounding a controversial commercial promoting multiculturalism in the United States. The course readings featured clear and powerful opposing

[1] All names are pseudonyms.
[2] Huffington Post, Forbes, CBSlocal, Psychology Today, etc.

viewpoints, which students analyzed and evaluated through whole-class and group discussions. In addition, I gave students handouts and lectures on the previously mentioned three principles of critical thinking to aid in dialectical thinking. Also, there was instruction and practice in building criteria lists and identifying differences in paradigms. Following the discussions, students wrote essays comparing and contrasting the opposing viewpoints from the readings, prioritizing fairness and academic responsibility in their writing. For the final written assignment, a research element was added; instruction was given on methods of research and citation, as well as how to apply dialectical thinking principles to the research and writing process. For this final essay, students were allowed to choose their own topic.

Interview Method

In line with the exploratory nature of this study, I conducted post-course interviews utilizing Holstein and Gubrium's (2004) concept of the *active interview*, which offers greater capability of discovering important themes outside of the area of direct inquiry. The act of interviewing is unavoidably collaborative, and both the interviewer and the interviewee are active participants who work together to construct knowledge. Under the principles of active interviewing, interview questions are less structured, and the interviewer engages the interviewee in such a way that alternate considerations and possibilities for understanding emerge. Kvale and Brinkmann (2009) express a similar perspective in their discussion of conducting interviews as a semi-structured conversation, where knowledge is created between the interviewer and the interviewee. Rather than contain the interview in a standardized framework, active interviewing (Holstein & Gubrium, 2004) seeks to provide an environment conducive to a wide range of possible productions of knowledge. This element of flexibility, allowing for follow up and expansion on unplanned areas of inquiry, proved useful as there were reoccurring themes in the data that were not prompted by the predetermined line of questioning.

The research questions of this study are broad and represent a beginning step towards building more knowledge in the area of CTI in EAP, specifically with regards to dialectical thinking. In interviews, I only asked some of the questions on the interview schedule (Appendix A) due to variation in response to participants' comments. Questions were designed to be general in order to cast the widest net and avoid missing unexpected, yet important, issues. There were

three major areas of inquiry (questions in parentheses are representative of the type of questions asked with respect to these areas):

- Undirected reflection on the course (What did you think of the class?)
- Contrasting this CTI EAP course with other EAP courses without CTI (Was this class different? How so?)
- A discussion of feelings and impressions regarding cognitive and cultural resources used in the course (How did thinking deeply about your writing make you feel? How did you feel about needing to use your personal knowledge and experience?)

I conducted the interviews within two weeks after the course had finished and grades were distributed. Interview sessions took place at a classroom at the EAP school and lasted between 45 and 60 minutes each. Students were asked for consent to voice record the interviews. I transcribed the interviews with exact wording, including pauses because I believed they were important in conveying meaning (Appendix B). I am proficient in both English and Japanese, so I encouraged Japanese students to use their L1 if they felt they could communicate their intended meaning more clearly. I transcribed the Japanese translations in a similar fashion by staying close to exact wording, but favored English words that accurately portrayed meaning over direct translations.

Analysis

Data from the interviews were analyzed first through a focus on the content using grounded theory (Charmaz, 2006). Analysis was carried out by remaining open to possibilities, staying close to the data, and using short codes (3-5 words long), among other notions. I identified frequent themes in the data and organized them into larger categories capturing students' perceptions. As this was a qualitative and exploratory inquiry, I included infrequent instances of salient themes in the analysis because they also raise important issues regarding students' perceptions of the effect of CTI.

While the analysis focused primarily on content, attention was also given to context and form. Drawing from research in narrative analysis (Barkhuizen, 2010; Pavlenko, 2007), caution was paid towards falling into an overly reductive treatment of the data. I was the interviewer and researcher, as well as the teacher of the EAP writing course, and the context of a student/teacher conversation was certainly relevant in terms of how the student positioned elements of the class,

for example, his or her own success and failure. Thus, although the focus of the analysis was content, context and form, as well as how student narratives fit into larger discourses, were also considered.

RESULTS AND DISCUSSION

Analysis of the data revealed three reoccurring themes: managing bias in writing, usefulness of critical thinking in academic writing, and usefulness of critical thinking in social life (Table 1 on next page). Since the interview was explicitly about the academic writing course, the themes of *managing bias in writing* and *usefulness of critical thinking in academic writing* were natural results of the inquiry. However, it is important to note that the theme of *usefulness of critical thinking in social life* was not directly part of the inquiry, yet it was a strong reoccurring theme in the data across participants. It is possible that the real-life application of critical thinking skills was perceived as an important part of the course, and thus students may have considered it obvious to mention real-world applications of critical thinking in the interview.

Managing Bias in Writing

The management of bias in students' writing was a frequently reoccurring theme in the data. Several students reported that they had never before been required to consider an opinion opposite their own and represent it equally in writing. Aya reported, "I tend to have bias. Sometimes I can't find equal point. I see only one side." Kenji mentioned that the writing assignments were difficult because in order to keep the content balanced, he had to suppress the amount he wrote in favor of his own opinion. He found it difficult to elaborate on alternative and opposing opinions. It is no surprise that students found this central aspect of the course difficult.

Table 1

Reoccurring Themes

Name	Age	Country	Prior CT Instruction	Difficulties/ Challenges	Usefulness (Academic writing)	Usefulness (Social life)
Jia	27	China	None	Elaborating on viewpoints opposite from her own/Unfamiliar topics a little frustrating	Thinking deeply/ Moving past "just writing"	Useful for future career to protect yourself in situations concerning business ethics
Aya	28	Japan	None	Thinking of examples/Being equal, not biased	Using evidence, writing about many viewpoints equally, not just my personal opinion	Useful for life outside of Japan
Bao	20	Vietnam	One Critical thinking class in the U.S.	Suppressing own biased opinions	Questioning standards and locating biased perspectives	Used CT in an argument with Aunt to understand her/ Used CT to understand a U.S. university rankings article more deeply
Yuka	26	Japan	None	Needs high English level/ Difficult to represent viewpoints equally/Can be stressful	Considering many viewpoints not just own opinion	Used CT in a conversation with cousin about whether to do community service or not
Masa	44	Japan	None	Flexible thinking	Logical and academic way of thinking	Important for work at a company/Not needed for daily conversation
Lin	24	Taiwan	None	Looking for information in the internet/Thinking deeply	Learning about the opinion opposite her own for her paper on same-sex marriages	(nothing specific mentioned)
Kenji	22	Japan	None	Writing more for the other side which is not my position	Learning content/ Thinking about many things	Used CT to evaluate a news article in Japanese about the bad image of tourists near his hometown

(T = Teacher)

The students were required to engage in dialectical thinking, which is reasoned and fair evaluation of opposing viewpoints. However, as mentioned previously, it is not the natural disposition of the human mind to be open-minded (Paul, 1984a). Jia elaborated the difficulty she had managing her bias through a comparison of her experiences in this course with her experiences in other ESL writing courses:

T: Does it make you feel different? Have you taken um a class with critical thinking before?
J: Nope, never.
T: Ok. So it was very different?
J: Yeah.
T: From other English classes you…
J: Yes. Yes.
T: So as a student, did you feel differently in the class?
J: Yeah I feel different. But, it's a little harder than the another class. Yeah, because we need thinking more and we need to use our words to describe what I think.
T: Okay.
J: Yeah, because another class we just uh, follow the questions and answer it. We don't need thinking more things or more stuff of the questions. Just uh like a common sense. Answer it. But in your class we have to thinking more and we have to like stand the opposite way to thinking this one, to thinking one things.

Jia used the words "common sense" (line 12) to illustrate the different level of cognitive demand in courses without CTI. Also, she reflected on how she was required to use English to talk about her thinking on a level she had not experienced previously in ESL courses, which shows that she was aware of CTI's effect on her language development as well.

Usefulness of Critical Thinking in Academic Writing

Here, it is important to note that the perceived difficulty in managing bias and writing in an equal fashion was also described as a desirable ability and a useful point of CTI in academic writing for many students. Bao mentioned that the hard work he put into challenging his own bias became a source of interest in the course:

15 B: I think it's because I like challenging, so I think it's something that's difficult is also
16 enjoyable. So like when you talk about the fairness. So first, I really feel like there's the beast
17 inside me, so "No this can't be fair, but this is true," and like another, "No no it's no way
18 another can be true." But I realize, I think that's because my ego. It's like blind my reason.
19 So I think the most interesting part of the writing class is like try to like put down the ego and
20 give me more like more reason.

Bao's description of his conflict with the "beast inside" (lines 16-17) reveals the significant effort he put into establishing a fair and open-minded disposition to write his final essay. It shows that he was able to understand the value in the principles of critical thinking and internalize them. It is reasonable to assume that Bao's level of engagement in the CTI content would improve his motivation in the classroom, and have a positive effect on his learning of critical thinking, as well as academic English proficiency, particularly with regards to academic language used in CTI tasks. Aya, Yuka, and Lin had similar thoughts about using critical thinking to improve on the management of bias in order to write more equal representations of alternative and opposing viewpoints. They considered this aspect of dialectical thinking to be challenging, but valuable, and also unique to this writing course.

Jia elaborated on differences in the writing process in this CTI writing course compared with other L2 English writing courses she had taken. She described the additional effort required for writing with critical thinking in order to portray it as something more substantial and valuable than writing without critical thinking:

21 J: It's different.
22 T: because you have to work harder?[3]
23 J: Hmm, yes. And I need to think more and I need to take time to thinking not just writing.
24 T: Interesting. How much time did you take to think?
25 J: For example I take two hours to writing and I have to take three hours to thinking or less
26 than three hours, two to three hours to thinking. Because I can, I have a lot of idea in my

[3] This question was used to illicit elaboration. It was already apparent that Jia was referring to harder work when she said "different" (line 21). She had mentioned so earlier in the interview (line 8-9).

mind. But I don't know which one is equal or which one is good, like this so I need to try it, $haha$ I hate to try it, so it take my time.
T: I see, and so don't you do this in your other classes too?
J: Before?
T: Yeah other writing classes? Other English classes?
J: Before I didn't do it.
T: How do you do your writing then, you just go? Just write?
J: Yeah well I take the topic and uh "Okay I know that!" Just write.
T: Oh!
J: Yeah and uh write some outline or brainstorm, just it. And we don't need the thinking deeply or we don't need thinking the equal things. It's really the argument paper or compare paper we don't need the thinking "Oh this one it's a little high so I need increase this one. That's make equal." I don't think this I just "Okay this one. This side oh blah blah blah. This side blah blah blah." Like this. We don't need to … like account? Which percent is each way. Which percent each way. Just uh write it we don't consider the percent of each one. (.) Just my opinion $hahaha$.

Jia's statement of spending equal or greater time thinking compared with time used for writing (lines 25-26) reveals that writing assignments in her previous courses did not require much of her cognitively. Jia (line 28) jokingly revealed again her perception of the difficulty in managing the bias in her writing. Later (lines 36-42) it becomes clear that she valued and endorsed the merits of the extra cognitive effort in her writing, and she portrayed writing assignments in other classes as simple and undemanding. In addition, Jia's hedging statement towards the teacher (line 42) illustrates that she suspected that I might not agree with her view of non-CTI writing courses, and yet was still willing to make her views clear, which also indicates her value of the deeper thinking that CTI encourages. Jia's example reveals a positive student perception of CTI writing classes requiring deeper cognitive processes and more time commitment than writing classes without CTI. Table 1 indicates that each interviewee shared a similar perspective regarding CTI instigating additional thinking and studying efforts that were useful for academic writing. This consistency among students was also discovered with respect to students' views of using critical thinking in their life outside of school.

Usefulness of Critical Thinking in Social Life

Six of the seven students interviewed chose to elaborate on applications of critical thinking in their social lives. Bao, Yuka, and Kenji told stories of how they were inspired to use critical thinking outside of school during the 8-week course. Bao lived with his aunt and recalled an argument they had over time limits for use of the house bathroom. He said that this CTI writing course made him constantly reflect on the standards by which people make decisions, and so in this situation, his mindset allowed him to understand his aunt's thinking more clearly. Yuka told a story about her cousin arguing that Yuka's volunteer work in community service was a waste of time. Yuka had felt that her time spent doing community service was a good experience for her. She recognized a connection to the CTI lessons in this course and attempted to understand her cousin's point of view. When Kenji was asked about the difference between an English class with CTI and a class without CTI, he noted a deeper level of thinking and elaborated with a narrative about a Japanese news article about his hometown that he had recently read:

(Translation from Japanese)

K: Up until the point when I took this class, I didn't really, I just "Oh I see." Something like that. But, after I took this class. When I saw Japanese news, although it's written like this… it is… for example, if I use a recent example, Ishigaki Island, my hometown is now, the quality of the tourists there has changed. Everybody… a new airport, a new international airport has been built. Airplane tickets can be purchased cheaply. So, it's become easier to go there. It's a very good thing that there are more tourists, but the quality of the tourists has become worse, for example, young people come to Ishigaki Island, and they come without understanding anything about Okinawa, anything about Ishigaki. And they say things like "Okinawa's *soba* (buckwheat noodles) is not *soba*." In the article, it was written that they are destroying Okinawa's culture. The young people always using their smart phones. The tourists from before would come for the purpose of communicating with the local people. They came with a special feeling. But, among the people now you don't see it. As soon as they arrive at Ishigaki Island, with their smart

phones, "I'm at Ishigaki now," like that. They don't communicate with the local people. Something like that was written. But, what I realized was… I'm interested in tourists… and wondered if there was a way to use those smart phones. I looked at that article for a different… they are saying it's bad but, it's possible to connect it to a more positive direction. Use the smart phones and many of the tourist venues would grow… that kind of thinking, I did recently.

T: So, in this way you used critical thinking.

K: I used it.

T: So, probably if you didn't take this class then…

K: I probably wouldn't have done it. I would have only thought "Those tourists are no good."

This recount of Kenji's use of critical thinking in a personal and relevant context shows his investment in the concept of critical thinking. His description of the content of the article was not condescending, but rather he portrayed it as a reasonable argument that the quality of tourists has worsened. However, Kenji stated that he took his thinking beyond the perspective of the article and attempted to take a positive stance that opposed the negative stance of the article. In lines 59-60, he explained how he imagined how his hometown could develop businesses around the use of smart phones in order to benefit from the tourists, rather than to see them as disconnected from their destination. In lines 62-66, both Kenji and I cooperatively affirmed his improvement in his critical thinking abilities. The content of the story as well as the context of the storytelling, through which Kenji communicated his improvement in critical thinking ability, highlight Kenji's positive valuation of his learning of critical thinking in this course. Again, this level of commitment to the CTI content of the course, that Kenji would use critical thinking in his personal life, suggests a level of engagement in the course activities that could lead to increased learning of critical thinking and academic English. The use of critical thinking in the students' personal lives certainly supports the use of CTI in this EAP course, and provides evidence that CTI can result in increased ability to recognize and understand variations in perspectives. It is particularly relevant for international students to be able to engage in critical thinking between their own perspectives and the distinct perspectives that they encounter while studying in a foreign culture.

Feelings and Impressions Regarding Cognitive and Cultural Resources Used in the Course

Although it was an explicit goal of this inquiry to explore students' feelings and impressions regarding CTI's utilization of cognitive and cultural resources in the course, it did not appear in the data as a reoccurring theme. However, as it is the goal of this study to explore important issues surrounding the use of CTI in EAP, Masa's reflection provides insight into the potential ways the inclusion of CTI in the EAP classroom can affect motivation and a sense of achievement. In his interview, Masa revealed his initial insecurities with the high level of logical and academic thinking required that he perceived in the course. He spoke of how he had more difficulty than other students, whom he perceived to be much more comfortable and successful in the class. Masa was 20 years older than most of his classmates and had worked at a Japanese corporation for many years. He contrasted his professional work experience with his CTI coursework and highlighted that, although this was his first experience with CTI, he was able to find success:

(Translation from Japanese)

67 M: If you ask what it is, critical thinking is truly about thinking about everything logically,
68 it's really focused on that, and there, honestly, it was really big that I could get the ability
69 to do it. The reason why is because I have never, even once, done it before in my life.
70 The way of thinking when you are in a company, things from an actual business scene
71 and academic things are totally different. Really, the way of thinking that's focused on
72 studying, focused on academics, becoming able to think in that way became a great asset for
73 me.
74 T: Fantastic.
75 M: When you are in a company, no matter what, in a business scene, like being used to
76 things, after all things like that, well, with experience and things like that, up to a certain
77 point you can read what's going to happen. How you should negotiate, for the most part,
78 you can predict it.
79 T: Yes.

M: When you are negotiating. And, "What is this person thinking?" for the most part, how they are moving their eyes, if you look at their attitude, for the most part you can understand. And so that is really there. (.) However, this kind of academic thing I have absolutely no experience with, it's starting from that point, so at first, I don't know what I should do. And from that point, step by step, I went through your class, and that "How to think" I was taught logically, and from there, little by little, when I become able to do it, after all, it becomes fun.

Masa distinguished his professional business self from his academic self and described how the process of struggling, slowly progressing, and finally achieving the ability to use critical thinking was a source of enjoyment and gave him a sense of achievement. Masa perceived CTI as *logical* (論理的) and *academic* (アカデミック) (lines 67 and 71). He expressed how he valued coming into ownership of this ability through the use of the words *great asset* (大きな財産) (line 72), which is a particularly strong statement. Throughout the rest of the interview, Masa went on to elaborate on how he dealt with feelings of failure and not having confidence in the class. He recommended that students in a CTI course should not be overly concerned with understanding 100% of the critical thinking concept right away, but instead be satisfied with understanding just 60% and continuing to progress. Masa's advice to other would-be students of CTI signals his feelings of achievement. Masa's narrative places him within a "success story" discourse, and lines 82-86 highlight Masa's views of the value and usefulness of CTI, and his internalization of motives to pursue an identity of someone who is capable and successful in logical thinking and academic study (Deci & Ryan, 1985). Masa's experience reveals that students of CTI courses can perceive substantial difficulty and struggle with the focus on logical and academic thinking, but it also suggests that that these challenges can be overcome to provide a greater sense of achievement in the classroom. Nevertheless, the greater cognitive demands of a CTI writing course, and how they might affect students coming from various contexts, should be considered carefully.

Cultural Positioning of CT

The data also contains three instances of students positioning critical thinking as something not of their country and culture, yet something that is needed for their academic studies and

social life in the United States. In a discussion about what cognitive abilities EAP students bring with them to the classroom, Bao explained that, in Vietnam, he was not taught to think about alternative viewpoints, but rather to think in one way. Rather than positioning critical thinking as something foreign, he expressed that critical thinking was something that was universal and for anyone to take and use for their own purposes. It was something that was not available to him in his secondary schooling in Vietnam, but he could now acquire it for himself and use it for his own advantage. Bao later generalized the absence of CTI to all "Asian countries" (line 87), and then elaborated on CTI's usefulness for international students:

87 B: I think in Asian countries. My opinion is that they don't really teach about um critical
88 thinking.
89 T: Okay.
90 B: This is a chance for me to learn about critical thinking. And also I know that critical
91 thinking is important for university and when I go to university I have to know about
92 critical thinking. And also, uh I when I try to use uh critical thinking, cause I think in
93 English so I think it's also the way to, like improve my English too. I don't know why.
94 Maybe because you teach us uh (.) critical thinking in English so I when I think about
95 critical thinking I always thinking about thinking in English.

Aya reflected in her interview on the inconsistencies between critical thinking and Japan's culture. She mentioned that she felt she needed critical thinking because she was studying in the United States and that if she were back in Japan, she wouldn't need it. Her reasons were strong and culturally based, and her perception was different from Bao's in that she viewed critical thinking as a tool she would not inherently be interested in acquiring, but for the specific usefulness in her context in the U.S.:

(Translation from Japanese)

96 A: In Japanese society people don't really need their own opinions. If you ask me why, if
97 someone thinks by themselves, "Ah this person ah…" how can I say it, if you think too
98 much on your own, in a company, for its rules, if you go against it or… everyone is

together in Japanese society. In America, more of their own opinions, ideas, or things like that, they respect them in society, I felt. In Japan, if you show too much of your individuality you will be shut down, in society or in a company or something like that. So, for everyone it is difficult to say their own opinion. It is difficult to push it out.
T: I see.
A: So, critical thinking or something like that, everyone might have it but, they don't bring it out. So, at school or something like that, they don't really require it.
T: Right, so in order to use critical thinking, after all you first have to…
A: Right, You have to first have your own way of thinking, but that isn't really sought after. So, probably, Japanese are not good at it. I think so. Critical thinking. But if you are here, you need it more and more.
T: In that way, did someone in your group of friends, in your classmates try to say their opinion, but after all…
A: Something like that.
T: Was there a time like that?
A: Sometimes. After all, "What will I do if I fail?" or something like that. Japanese people, after all, fear failure. So, that's why they are shy and can't really say things. And there, even if they are the same Asian person, Koreans and Japanese are different, I think.
T: Koreans will more…
A: More so they will have their own way of thinking, more so, probably, they will have a stronger opinion, I think. Japanese don't have that, maybe, if you ask if it's one or the other. But, there are people who are not like that.
T: Oh, of course. Of course. Each person is different.
A: Yes, although that's true.
T: Generally speaking.
A: That's what I think.

In lines 99-101, Aya elaborated on the differences she perceived between Japanese and American culture. She depicted Japan as having more stringent rules that govern the extent to which people express their personal opinion. In this way, she determined that personal opinions are not particularly sought after in schools and companies in Japan as they are in America (lines

104-107). She also mentioned Japanese people's fear of failure (lines 114-115) as one reason why they don't express their individual opinions. Aya highlighted a cultural incompatibility between critical thinking and Japan, where "everyone is together in Japanese society" (lines 98-99).

These data illustrate that caution should be paid to how the practices and principles of critical thinking are positioned in the classroom. It is reasonable to assume that Aya would have been offended if critical thinking were directly or indirectly positioned to be superior to analytical and evaluative thinking practices in her own country. The way that CTI is presented in terms of cultural bias can greatly affect the students' perceptions of critical thinking and subsequently affect their motivation and learning in the classroom. In the case of Aya, her narrative indicates that she believed critical thinking is useful, but not in Japanese society. In order to avoid detrimental effects on motivation and perceptions in general, CTI must clearly communicate that critical thinking is a tool with specific uses and limitations. For example, one main assumption of critical thinking is that all parties to a discussion are mutually invested in carrying out a fair-minded analysis and evaluation. Aya perceived that in Japanese society there are situations when there is substantial risk involved with sharing individual opinions (lines 100-102). The benefits of critical thinking are exceedingly limited in this context.

Jia told a narrative about her time studying at a midwestern U.S. university that is in line with Bao and Aya's perception that critical thinking is needed by international students who wish to study in that specific context. Jia reflected on the demands of her professor to use critical thinking in a paper for her studies in business administration, despite her having received no formal training in critical thinking. Jia had received training in logic and analysis during her undergraduate study in China, but this did not help her in the U.S. to write her essay which required critical thinking:

J: I have already start my master's degree. And I take the big problem when I study my master's degree. It's about, it is writing. I don't know how to critical thinking, and uh so I don't know how to analyze the topic from my teacher. So, I take, I get the lower score of my paper. And I talk to the teacher and teacher, they don't, they didn't clearly explain the things what they want like us to do. They just told me you have to read the topic again and uh maybe you can find some American people to explain you what's the topic, what does the

topic mean, or what you can do for the topic. And after you write your paper you can find the writing center to help you to correct the grammar or the spelling something. It doesn't make sense for me because I don't understand, "You are my teacher, and you can't explain me what you want. How can I get the answer from another people?" Yeah, it's, it's too shock for me. Yeah, so I take the lower score of my master's degree. So, I think the critical thinking is so important for the university student to write the research paper.

[break]

J: In the master's degree you need analyze the major like the, the things what you learn. So, if you just keep the simple thinking, it's difficult to write the research paper, yeah. And we just read the sentence from source paper, and we just like translate or just rewrite the sentence from the source paper. It's not enough. You need analyze it, and you need keep, you need thinking, thinking more about that. Maybe you, maybe you disagree this sentence, so you have to write why you disagree this sentence but I can't do it. I couldn't do it. I just write the simple things. It's totally different American people to write.

Here, Jia brought up the need to learn higher-order cognitive thinking skills in order to meet the demands of university study in the U.S. It is unclear whether the difficulty she encountered was rooted in critical thinking skills or language proficiency in writing critically. However, what is clear is that she did not receive explicit instruction or help with either. Later in the interview, she reflected on her own speculation that all Americans take critical thinking classes or are somehow prepared to do critical thinking before starting university studies. Although this is clearly not true, in this way, Jia felt that she was at a great disadvantage in her studies due to the expectations placed on her by her professor, and she said that writing her paper caused her a lot of stress. She perceived critical thinking, and the ability to write with it, to be a kind of resource that was not available to her through her education in China and one that she had been denied access to at the university she was attending. Here, it is important to consider strengthening the ties between the critical thinking demands at universities and what is included in a CTI EAP curriculum. Although there is evidence hinting at a variety of possible benefits of CTI in

students' academic careers and lives, these data also point out a number of caveats to consider regarding culture and context.

CONCLUSION AND IMPLICATIONS

Students' Perceptions of CTI

It is unclear from these data to what degree the action of critical thinking or the learning of critical thinking was personally endorsed by the students. As mentioned previously, the students were from countries with distinct value systems, which may or may not agree with the values inherent to critical thinking. Regardless, the students' various recounts of the use of critical thinking in their personal lives outside of school provide reassuring evidence that CTI was indeed valued by students. This suggests that CTI may have a positive effect on students' general learning experience and motivation, and thus the acquisition and learning of English (Dörnyei, 2003), specifically academic English that is used in critical thinking discussion and writing. More research is needed to investigate the effect of CTI in terms of student attitudes and motivation.

The instances of Bao, Aya, and Jia positioning critical thinking as something not of their country and culture bring into view a concern regarding the cultural bias of critical thinking (Atkinson, 1997; Burbules & Berk, 1999; Davidson, 1998). Atkinson's ultimate suggestion was that educators should be cautious when importing thinking skills instruction into L2 classrooms. While it is outside the scope of this study to investigate the exact nature of cultural bias in thinking skills instruction, the topic of indoctrination is worth consideration here. Even if not wholly culturally situated, critical thinking may well have versions or parts that are context-specific culturally valued practices. Therefore, when requiring such practices or principles in the classroom, educators should be cautious of indirectly marginalizing modes of thought and education that have practices and principles distinct from critical thinking. However, drawing from De-Shalit's (2006) work on political neutrality, it can also be said that not everything that is born from a specific cultural context is necessarily tied to and restricted by it. It is undeniable that North America is the birthplace of modern day concepts of critical thinking; however this fact does not limit CTI's ability or appropriateness to become a well-explicated and educationally useable concept globally.

Pedagogical/Contextual Considerations for Implementing CTI

It is the goal of this study to draw out important pedagogical issues from students' accounts of the effect of CTI on their learning experience and on their attitudes as EAP students. These data shed light on a well-known issue in second language writing research: a focus on a mechanical conception of the writing process. Teaching writing through the basic structure of paragraphs and essays fails to prepare EAP students for the scholarly work they aspire to in their careers as students and researchers at the university level (Zamel, 1987). High quality thinking is a necessary condition for high quality writing. However, these data reveal that students viewed thinking critically, analytically, and deeply about their academic writing in English as new and distinct (they didn't already know it), challenging (it required more effort than they were used to), and valuable (they endorsed it to various degrees) in their studies. There appears to be an opportunity to improve EAP students' writing on complex topics by teaching and practicing the principles of dialogical/dialectical thinking. Currently, however, there is much more investigation to be done. Although these data highlight the importance of CTI in EAP studies, it is unclear how critical thinking principles can best translate into classroom activities.

The data concerning the cultural positioning of critical thinking reveal that caution is required in developing pedagogical methods for CTI, regarding sensitivity towards various modes of thought and education that are inexplicably tied to cultures and countries. The dialectical thinking approach to CTI used in this study satisfies this requirement through a deliberate focus on social and contextual factors, geared specifically towards resisting hasty impositions of any one standard, which would silence the voices of credible alternative points of view. However, it is crucial that critical thinking be properly explained and positioned in classroom instruction as a cognitive tool for decision-making and understanding issues, with its own domains of use and limitations.

These data leave many practical questions to answer: Should CTI be implemented for students who intend to study in the United States? Other countries? If a student studies EAP for use solely in their home country, should CTI be implemented? How should the implementation be different? Would a combination of education in atomic thinking skills and dialogical/dialectical thinking principles be appropriate for the curriculum? There are many

avenues to consider and explore. In general, more research on the effect of explicit and implicit forms of CTI across various contexts is needed in EAP pedagogy.

Limitations of this Study and Suggestions for Future Research

The broad research questions of this study necessitated the use of a general inquiry into students' perceptions of CTI in EAP. As such, the conclusions that can be drawn from this study are in the form of more specific questions and areas for further investigation. Studies in CTI using larger groups of students are needed, utilizing quantitative measures of affect and language proficiency to produce more generalizable results. In addition, the seven students in this study were all from Asian countries. Deeper qualitative analysis would also be useful to understand the experience of students from various countries and cultures.

This CTI approach incorporates many ideas from Paul's (1984b, 1995) concept of dialogical/dialectical thinking, which he proposes as a solution to the dangers of teaching rational and logical, yet egocentric/sociocentric thinking. However, only a fraction of these concepts could be implemented in this study, partially due to the time constraints inherent in an 8-week course, but mostly due to the limited body of research available for CTI in EAP. Much more work is needed in the form of practical curricula and lesson plans that expand conventional CT skills approaches toward a more robust concept of dialogical/dialectical thinking that accounts for the complex differences in belief systems, vested interests, and perceptions of human beings, people, who are exchanging information across boarders and around the world. If teachers are aware of approaches and activities that will benefit students' thinking, they will be better equipped to raise the quality of students' writing, as well as the quality of education.

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APPENDIX A

Project Title: **Learner Perception in Critical Thinking Language Tasks**

Interview schedule for students:

1. How long have you been taking classes at [school name]?
2. What classes have you taken or are you taking?
3. What is your experience with learning English in the past?
4. How do you use critical thinking?
5. What is your experience with critical thinking in English studies?
6. What is your experience with critical thinking and academic reading and writing?
7. What did you think of your [school name] writing class?
8. What have you enjoyed the most in the class?
9. What was difficult in the class?
10. What would you change (if anything) about the class, the readings, or the activities?
11. What did you think of the critical thinking materials in your [school name] writing class?
12. What did you think of the critical thinking activities in your [school name] writing class?
13. Compared to other [school name] classes, what was different about this class?
14. Coming from a different country, you have unique cultural knowledge and experiences that are different from your classmates. How did you feel about needing to use your personal knowledge and experience?
15. How did thinking deeply about your writing make you feel?

APPENDIX B

Transcription Conventions

…	short pause (less than 1 second)
(.)	pause (1-2 seconds)
$___$	laughing voice
“___”	direct speech
!	emphatic tone
?	rising contour