

## Reflecting Critical Thinking: Global Perspectives

Jacques W. Hardy  
 Kansai Gaidai University  
 Peter A. Edwards  
 Kansai Gaidai University

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Initially, this research project was designed to investigate the role assistant language teachers (ALTs) from outside Japan might play in helping Japanese students to develop critical thinking (CT) skills. International students studying in Japan were selected as participants, many of whom expressed interest in perhaps becoming ALTs. Our project evolved into a larger mixed-methods investigation of the perceptions of CT of these international students. Analysis of participant responses to open-ended survey questions revealed perceptions of CT could be categorized in 3 types: skills of focusing on objects, skills of focusing on actors, and attitudinal factors. These disparate views of CT point to a strong need for further investigation and revised teacher training.

この研究は当初、海外からの外国語指導助手 (ALT) が、critical thinking (CT) (批判的思考) スキルを学ぶ日本人学生のために、貢献できる役割はどうかについて調査する事から始まった。従って研究対象者の多くは、日本で学ぶ留学生の中でも、特に将来ALTになる事を希望している留学生である。又、本研究ではCTの定義を確立する必要がある為、様々な方法で定義を模索する方向へと発展していった。その調査の結果、CTは「skills of focusing on objects (物事に焦点を合わせるスキル)」、「skills of focusing on actors (参加者に焦点を合わせるスキル)」、「attitudinal factors (態度要因)」の三つのカテゴリーに分類されるという結果にたどり着いた。この様なCTに対する考え方の違いは、さらなる調査が必要であり、又教員養成においても更に考慮されるべき点だと考えられる。

As nations and companies attempt to meet the demands of rapidly globalizing economies and societies, the words *critical thinking* (CT) seem to have become omnipresent in discussions of the ideal modern citizen and employee. National education systems worldwide have identified CT as a “21st Century Competency” (Ministry of Education, Singapore, n.d.) and a requirement for international cooperation in solving world crises (Duncan, 2010). Japan, too, has highlighted the need for developing CT skills in its students. Japan’s Ministry of Education, Culture, Sports, Science and Technology (MEXT, 2003) has incorporated into its education reforms the promotion of creativity and “independent thinking” as a goal of instruction. However, CT is a construct that has been notoriously difficult to pin down, with diverse definitions debated by academics and a hazy understanding widespread among the business and political communities. In ELT, too, the question has been not only *What is critical thinking?* but also *Does everyone possess a capacity for it?*

Some scholars (e.g., Atkinson, 1997) have argued that CT is at its core a Western concept that students learn as a part of the socialization process and that it is absent in Asian cultures and therefore foreign to Asian students. Others have contested these claims, countering that Asian students possess and apply CT skills and that Western ESL teachers’ biases blind them to their students’ actual abilities (Oda, 2008). Despite these counterarguments, the aforementioned preconception remains strong among even veteran Western instructors in Japan.

In this environment, informed by confusing definitions and stereotypes, it is difficult for EFL teachers to plot an effective path for their students’ CT development. As part of its efforts to accelerate the process of internationalization of the education system, MEXT has called for an increase in the number of assistant language teachers (ALTs) from abroad, mostly western countries, to be assigned to classrooms. One potentially fruitful line of inquiry is to examine potential and current ALT views of CT. Do they also have strong but unclear beliefs about CT and the nature of CT in Asia? This paper reports on the preliminary findings of a mixed-method pilot study aimed at adding to our under-

Hardy and Edwards: *Reflecting Critical Thinking: Global Perspectives*

standing of CT beliefs in different populations, especially those involved in ELT, with the goal of improving teacher training in this important area.

## Background

Although CT is clearly a desired characteristic in many domains, a coherent, and for teachers, useful description of just what constitutes CT remains elusive. Scholars in diverse fields have proposed various, often contradictory models of CT and sometimes descriptions of an idealized *critical thinker*. Outside of academia, the waters are even murkier. A recent report (Korn, 2014) in the *Wall Street Journal* found that although CT is a ubiquitous requirement of job postings in the United States, employers often have only a vague concept of what CT is, often equating it with independent thinking or problem solving ability. Teachers who are tasked with inculcating this desired faculty in their students similarly share diverse and inadequately operationalized conceptions of CT. This landscape becomes even more complicated because the word *critical* leads a double life in the related but quite different domains of critical thinking and critical pedagogy (Burbules & Burk, 1999).

Numerous definitions for CT have been proposed. Cognitive psychologist Willingham (2007) defined it as “seeing both sides of an issue, being open to new evidence that disconfirms your ideas, reasoning dispassionately, demanding that claims be backed by evidence, deducing and inferring conclusions from available facts, solving problems, and so forth” (p. 8). Paul and Elder (2006) defined CT as “the art of analyzing and evaluating thinking with a view to improving it” and described it as “in short, self-directed, self-disciplined, self-monitored, and self-corrective thinking.” (p. 4). Clearly, the definitions describe not one but several abilities in addition to behavioral traits or tendencies.

Several scholars have attempted to condense the disparate definitions into a coherent construct. Facione (1990) analyzed the discussions of 46 experts convened for a panel on CT. The agreed model of CT derived from these discussions comprised a set of cognitive skills including analyzing ideas, evaluating arguments, and the metacognitive examination of oneself and a set of “affective dispositions” (p. 25), including various attitudes and approaches toward inquiry and characteristics such as flexibility, fair-mindedness, and prudence in dealing with questions, as well as “self-confidence in one’s own ability to reason” (p. 25). The scholars in this panel were divided on whether to consider affective dispositions as properly a component of CT itself, or as qualities of a critical thinker—as something CT is or as something people with CT skills may or may not actually put into practice.

In a content analysis of descriptions of CT, Atabaki, Keshtiaray, & Yarmohammadian (2015) attempted to create a model of the CT construct. Like Facione, their analysis pro-

vided a sort of composite sketch of the state of thinking about CT. Based on this analysis, they proposed a three-part model of a general *Critical Thinking Concept* composed of *Critical Thinking Skills*, *Critical Thinking Attitudes*, and *Basic Knowledge*. CT attitudes included self-confidence, cognitive maturity, open-mindedness, and doubtful mentality. They argued that two traditional strands of thinking on CT, those of philosophy and psychology, focus on different aspects of the construct: For philosophers, the attitudinal aspect is paramount, but for psychologists, the CT skills and problem-solving aspects are emphasized (pp. 99-100).

Although neuropsychology appears less often in the CT literature than do the above approaches, it offers us some broad perspectives on how humans think. In his Great Course, Yale clinical neurologist Novella (2012) examined how our brains neurologically can take us down the path of least resistance toward deception and how “the philosophy and practice of critical thinking and science are the tools that humans have slowly and carefully honed over many millennia to compensate for the many flaws in our brains” (p. 10). This offered insights into how brain-imaging technology is telling us how different brain regions have very specific different thinking tasks, in more detail than did the oversimplified left-brain/right-brain model. As brain-based approaches are becoming more popular, we looked into related ideas from neuroscience. P. Lieberman (2009) suggested that CT involves the interplay of earlier and later evolved brain regions. Furthermore, M. D. Lieberman (2013) argued that one ability humans have evolved is the *mentalizing* skill that allows us to *mindread* other humans. This enables us to guess others’ intentions, to strategize and empathize, and to sustain intricate relationships. He suggested that this allows humans to create large and complex societies and it is distinct from other types of thinking.

This diversity of thought on CT among scholars is reflected in the beliefs of teachers. Rowles, Morgan, Burns, and Merchant (2013) similarly found diversity in participant beliefs about CT. They investigated the conception of CT among 133 faculty members at a health sciences university in the US and identified 5 themes in these teachers’ definitions of CT. Four of these were related to cognitive functions and accounted for 75% of the responses. However, they also found a smaller number of responses describing an affective aspect to CT. These responses “emphasized having awareness of multiple contexts or perspectives, diverse or different points of view, personal bias, ethics, open-mindedness, and attitudes” (p. 26). Finally, they found a third, weaker type of response that described CT in general terms—a “broad, all-encompassing” description (p. 25). They concluded that, when defining CT, most participants emphasized cognitive skills and a minority focused on “affective dispositions or intellectual traits” (p. 30).

## Background to the Current Study

In order to see the path by which we arrived at the current study, it is necessary to briefly describe the larger study of which this is a part. It is also important to clarify that this investigation has evolved from what it was at its inception. Essentially the target of research was the experiences, beliefs, and expectations of non-Japanese university students in Japan who have an interest in returning as assistant language teachers after their graduation. Initially, our reasoning for selecting this population was to investigate whether and how they might be able to contribute to improving CT skills for Japan's next generation. This stemmed from the common assumption that Japanese students may lack these skills. However, during our own teaching experience in Japan, Korea, Taiwan, and elsewhere, we have found many strong critical thinkers. Still, we wanted to more formally investigate these assumptions that persist among teachers and academics and even within the Japanese community. The most important questions we sought to answer were the following:

1. Why do international students want to become ALTs?
2. What do they think their jobs and roles will be?
3. What do they want to bring to Japanese students?
4. What do they think they can bring, specifically in terms of critical thinking?

The inquiry therefore proceeded along three general lines: (a) finding out what brought students to this point in their lives; (b) learning what they know and imagine about the environment they will be entering and the role they will play in it; and (c) discovering what they think good teaching, learning, and thinking are. We conducted focus group interviews with 11 international students on 6- to 12-month study abroad programs at a Japanese university to elicit their general perceptions about their lives in Japan, with follow-up individual interviews of four of them and one current ALT. These students were all studying at university on study abroad programs from their home institutions in the United States, Great Britain, or Australia and expressed interest in being ALTs (Edwards & Hardy, 2015).

We quickly found in our focus group interviews that there seemed to be no consensus or individual precise understanding of what CT actually is. In addition, they seemed to conflate individuality, independence, and uniqueness with good thinking. Novella (2012) spoke of CT as an important survival skill because “much of what we remember and believe is flawed or simply wrong. Our brains seem to constantly generate false observa-

tions, memories and beliefs . . . [and without CT, humans are] subject to the vagaries of perception and memory and slaves to our emotional needs and biases” (pp. 9-10). Interestingly we found such unexamined beliefs in our participants. Among these beliefs were the views that Japanese students lack initiative, individuality, and innovation. Another belief shared by some was that the education system inhibits CT and produces students with a collectivist mindset who are conditioned to do what's better to benefit the group, at the cost of uniqueness or personal desires. The participants did not necessarily see these characteristics as entirely negative, but they did seem to consider them a hindrance to optimal academic performance.

Further, the participants seemed to endorse common stereotypes about collectivism and lack of individual thought in Japan. This led us to return to the CT literature for further investigation of the various views about CT, particularly in terms of different populations. We also came to realize how our prospective ALT participants had the unique position to be at an intersection, not only of East and West, but also of studying and preservice teaching. They were currently enrolled in a Japanese university, taking classes with both Japanese and other international students. Their classes were taught by both Japanese and international professors. In other words, they were engaged in high-level reading, discussing, and thinking in a very multinational context. Their perspectives on the issues we wanted to investigate would be very valuable.

## Method Participants

To investigate the beliefs about language learning and CT of the international students/prospective ALT's, an online survey was conducted in the spring semester of 2015 at a foreign languages university in central Japan. Eighty-five students from 28 countries responded to the survey. The sample comprised 45 students from North America, 25 from Europe, 10 from East and Southeast Asia, 3 from South America, and 2 from Oceania. Female students accounted for 77% of the total and male students for 21%. One participant indicated a third option for gender. In terms of university major, the majority of the students were pursuing degrees in Asian or Japanese Studies, business related subjects, or social sciences. The majority of the participants reported themselves as being bilingual or multilingual: 61% reported speaking more than one language often. Seventy-two percent reported that they were in Japan for the first time; 59% had considered becoming ALTs.

### Data Collection Instrument

The survey consisted of three sections:

1. demographic questions;
2. 18 items from the Beliefs About Language Learning Inventory (BALLI; Horwitz, 1987, 2012) and two items (created by the researchers) related to specific beliefs about Japanese students. These items were included to further examine potential ALTs' beliefs about language learning in Japan. These beliefs lie outside the scope of this paper, so no analysis of this data is reported here; and
3. two open-ended items requesting participants to list (a) list the skills or characteristics needed to learn a foreign language successfully and (b) list the skills involved in CT. For each of these two items, respondents were instructed to provide up to two skills they considered higher in importance for the activity, three that they thought to be of middle importance, and two of lower importance. Because the items were open-ended and no answer choices were provided by the researchers, the participants could respond freely. In addition, participants were prompted to rate, again in their own words, their own ability to perform each of these skills.

### Analysis and Findings

The open-ended data from the items concerned with CT were independently analyzed by each researcher through open coding to find preliminary categories. In order to find a fresh perspective, we avoided using fixed categories from the CT literature. After debriefing, a second analysis was undertaken together to confirm the initial categories and look for connections between them, leading to the creation of larger themes influenced by literature in the area of neuropsychology. The data were then re-examined, with codes and categories checked against the larger concepts. Several categories were identified in the initial coding: analysis and problem solving, evaluating propositions and arguments, creativity, and making connections. These categories seemed to comprise a higher order concept: skills that seemed to focus on an object or problem at hand.

A second group of categories included objectivity, questioning sources, perspective taking, and open-mindedness. These seemed to focus on the actors, rather than objects—the people taking positions rather than the positions themselves. This included self-reflection and objectivity, which require the ability and willingness to take different perspectives. Several codes did not fit well within either theme; they centered around attitudinal factors. We posited a potential third, weaker theme to encompass these responses. A summary of the categories is provided below.

Table 1. Focusing on the Object or Task at Hand

Category	Representative response
Making connections	<ul style="list-style-type: none"> <li>• draw connections between all elements</li> <li>• ability to apply previously learned knowledge to the new situation/text</li> </ul>
Evaluating propositions and arguments	<ul style="list-style-type: none"> <li>• detecting the points that may reduce the validity of the statement</li> <li>• searching out contradictions or fallacies</li> </ul>
Analysis and problem solving	<ul style="list-style-type: none"> <li>• thoroughly address available options</li> <li>• addressing the problem at hand</li> <li>• holistic understanding of the situation</li> </ul>
Creativity	<ul style="list-style-type: none"> <li>• thinking out of the box</li> <li>• nontextbook style solutions</li> </ul>

*Note.* Responses were to open-ended questions about critical thinking.

Table 2. Focusing on the Actors Involved

Category	Representative response
Objectivity	<ul style="list-style-type: none"> <li>• the ability to challenge your own assumptions</li> </ul>
Questioning sources	<ul style="list-style-type: none"> <li>• questioning the source</li> <li>• Summed up as “don’t take anything at face value” and “don’t trust anyone, even your teachers” can question authority</li> </ul>
Perspective taking	<ul style="list-style-type: none"> <li>• always trying to consider the opposite point of view</li> <li>• can look into a matter from different perspectives</li> </ul>
Open-mindedness	<ul style="list-style-type: none"> <li>• reading opposing opinions with an open mind</li> <li>• Be open-minded and talk to people</li> <li>• being able to tolerate disagreement</li> </ul>

*Note.* Responses were to open-ended questions about critical thinking.



**Table 3. Attitudinal Factors**

Category	Representative response
Independence	<ul style="list-style-type: none"> <li>• make your own decisions about internalized issues</li> <li>• think for yourself (always)</li> </ul>
Time management / persistence / effort	<ul style="list-style-type: none"> <li>• digging deeper</li> <li>• effort</li> <li>• be able to accept a failure</li> <li>• patience</li> </ul>

*Note.* Responses were to open-ended questions about critical thinking.

The three major categories and 10 subcategories accounted for 75% of the coded responses. The remaining responses we considered off-topic, vague, or straddling the more clearly defined categories. The three major categories—task directed, actor directed, and attitudinal—accounted for approximately two thirds, one quarter, and one tenth of categorized responses, respectively.

### Discussion

Because participants were allowed to give up to seven responses, most of their lists included responses in both major categories. This suggests that these individuals found both task- and actor- focused skills to be a part of CT. A minority provided answers fitting into primarily or exclusively one category or the other. This may be merely a sign of their thinking at the moment of filling out the survey, or it may indicate that they saw CT generally as a process either of problem solving or questioning positions and actors. The majority of respondents who viewed CT as primarily one type of skill or the other viewed it as a process of focusing on the object or problem at hand. Fewer saw it primarily as a process of questioning and objectivity.

Although we have grouped our participants' responses in terms of their orientation or focus, our findings echo the prevailing skills vs. traits dichotomy. The categories encompassed within the *focus on task* theme seemed to match the cognitive skills proposed in previous studies. Our theme, *focusing on the actors involved*, contains many of the concepts classified in other CT models as attitudinal dispositions like flexibility and fairness (Facione, 1990), CT attitudes like open-mindedness and skepticism (Atabaki, Keshtiaray, & Yarmohammadian, 2015), or affective dispositions and intellectual traits such as seeing

other points of view and knowing one's own biases (Rowles et al., 2013). Though our *attitudinal factors* theme accounted for a smaller number of responses, it similarly fell within the range of concepts considered dispositions in other models. One surprising category we found was *Time management / persistence / effort*, which we had not expected to be a component of CT. However, persistence, though difficulties are encountered, and diligence in seeking relevant information are included among the "Approaches to Specific Issues, Questions, or Problems" listed as components of the dispositional aspect of CT by Facione (1990, p. 25).

The weaker theme, attitudinal factors, contained one particular category that stood out as relatively strong. The category *independence* contained several responses, echoing the responses we had received in interviews. A number of these participants felt that pursuing answers independently, thinking for oneself, and coming to one's own conclusions were important components of CT. These beliefs reflect the emphasis on *self* in the definition proposed by Paul and Elder (2006). This view of CT as an essentially individual and independent endeavor lies at the heart of many assumptions about Japanese students' CT abilities and practices voiced by many educators and policy makers. Anecdotally, we have heard similar views about the importance of individual thought voiced among Japanese students, as well.

### Limitations and Directions for Future Study

Although we have had interesting findings, we must reiterate that this is only a small pilot study indicating the potential of future research in this area. We make no claims to generalizability of these findings and it should be noted that the sample was specific. Although the students came from a wide range of home countries, they all attended the same study abroad institution and are similar in age. The sample studied may contain a higher percentage of women than does the population of ALTs, and the relative proportions of students from each country may differ from that of the ALT population in general. Future study might elucidate whether differences exist in the concept of CT among these different groups. In addition, English is the second language for many of the participants, and although they have a high level of proficiency (indicated by their ability to take classes in English during study abroad), their descriptions of abstract concepts related to thinking may be influenced by nuances in language difference or by second language proficiency.

The initial findings of this pilot study bring us back to Novella (2012), who stated that "to be a critical thinker is to be comfortable with uncertainty and with the limits of human knowledge and to be aware of all the many flaws and limitations of human intelli-

Hardy and Edwards: *Reflecting Critical Thinking: Global Perspectives*

gence” (p. 198). With this in mind, we hope our future research will investigate how well our students and future teachers understand and express these notions. The direction of our own ongoing research will include refining the rough categories found in this study and casting a broader net in terms of both international students interested in becoming ALTs and other populations. We hope to have more empirical evidence in the form of quantitative and qualitative data so as to better understand the assumptions that are made about CT. Then perhaps a course can be set to clear up any false assumptions and openly discuss differences such as monologic vs. dialogic CT (Gieve, 1998).

We hope that today’s as well as tomorrow’s *senseis* (teachers) will engage in open dialogue with their students about what the different interpretations of CT might be. We hope assumptions about the definitions of CT and beliefs about skills of whole groups of people are challenged more in academia, within the classroom, and most certainly as a part of teacher training. An understanding of the diversity of beliefs about CT held by students and the diversity of ways students go about *doing* CT may allow teachers to construct tasks and assessments attuned to developing the different components of CT. A one-size fits all approach to teaching and assessing CT skills may not allow students who see CT as primarily a skill of problem-solving or as a skill of understanding others to develop both sides adequately.

### Bio Data

**Jacques Hardy** is an assistant professor at Kansai Gaidai University. He holds a PhD in foreign language education from the University of Texas at Austin. He is interested in intercultural communication, sociocultural and systems theories of learning, and group dynamics in the foreign language classroom.

Originally from Washington D.C., **Peter Edwards** received his MA in literature from UC Berkeley and his PhD in applied linguistics from the University of Nottingham and has spent the past 23 years teaching and researching in Asia. Study abroad, CT, and neurocinematics hold some of his current interest while away from his residence in New Zealand.

### References

- Atabaki, A. M. S., Keshtiaray, N., & Yarmohammadian, M. H. (2015). Scrutiny of critical thinking concept. *International Education Studies*, 8, 93-102. <http://dx.doi.org/10.5539/ies.v8n3p93>
- Atkinson, D. (1997). A critical approach to critical thinking in TESOL. *TESOL Quarterly*, 31, 71-94.
- Burbules, N. C., & Burk, R. (1999). Critical thinking and critical pedagogy: Relations, differences, and limits. In T. S. Popkewitz & L. Fendler (Eds.), *Critical theories in education*. New York, NY: Routledge.
- Duncan, A. (November 4, 2010). The vision of education reform in the United States: Secretary Arne Duncan’s remarks to United Nations Educational, Scientific and Cultural Organization (UNESCO). Paris, France. Available from <<http://www.ed.gov>>
- Edwards, P. A., & Hardy, J. W. (2015). Tomorrow’s sensei: Perspectives on critical thinking and pedagogy of prospective assistant language teachers. In *Proceedings of the 1st IRI Research Forum*. Osaka, Japan: The Intercultural Research Institute, Kansai Gaidai University.
- Facione, P. A. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instructions. Research findings and recommendations*. Newark, DE: American Philosophical Association.
- Gieve, S. (1998). Comments on Dwight Atkinson’s “A critical approach to critical thinking in TESOL”: A case for critical thinking in the English language classroom. A reader reacts. *TESOL Quarterly*, 32, 123-129. <http://dx.doi.org/10.2307/3587906>
- Horwitz, E. K. (1987). Surveying student beliefs about language learning. In A. Wenden & J. Rubin (Eds.), *Learner strategies in language learning* (pp. 119-129). Englewood Cliffs, NJ: Prentice Hall.
- Horwitz, E. K. (2012). *Becoming a language teacher: A practical guide to second language learning and teaching* (2nd ed.). Boston, MA: Pearson.
- Korn, M. (2014, October 21). Bosses seek ‘critical thinking’, but what is that? *The Wall Street Journal*. Retrieved from <<http://www.wsj.com/articles/bosses-see-critical-thinking-but-what-is-that-1413923730>>
- Lieberman, M. D. (2013). *Social: Why our brains are wired to connect*. Oxford: Oxford University Press.
- Lieberman, P. (2009). *Human language and our reptilian brain: The subcortical bases of speech, syntax, and thought*. Boston, MA: Harvard University Press.
- MEXT. (2003). White paper on science and technology 2003. Retrieved from <[http://www.mext.go.jp/b\\_menu/hakusho/html/hpag200301/hpag200301\\_2\\_019.html](http://www.mext.go.jp/b_menu/hakusho/html/hpag200301/hpag200301_2_019.html)>
- Ministry of Education, Singapore. (n.d.). 21st century competencies. Retrieved from <<http://www.moe.gov.sg/education/21cc/>>

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Hardy and Edwards: *Reflecting Critical Thinking: Global Perspectives*

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- Novella, S. (2012). *Your deceptive mind: A scientific guide to critical thinking skills* [Audio transcript]. The Great Courses. Retrieved from <<http://www.thegreatcourses.com/courses/your-deceptive-mind-a-scientific-guide-to-critical-thinking-skills.html>>
- Oda, M. (2008). Thinking critically about critical thinking in TESOL. *The Journal of Asia TEFL*, 5, 145-173.
- Paul, R., & Elder, L. (2006). The miniature guide to critical thinking concepts and tools. The foundation for critical thinking. Retrieved from <[https://www.criticalthinking.org/files/Concepts\\_Tools.pdf](https://www.criticalthinking.org/files/Concepts_Tools.pdf)>
- Rowles, J., Morgan, C., Burns, S., & Merchant, C. (2013). Faulty perceptions of critical thinking at a health sciences university. *Journal of the Scholarship of Teaching and Learning*, 13, 21-35.
- Willingham, D. T. (2007). Critical thinking: Why is it so hard to teach? *American Educator*, Summer, 8-19. <http://dx.doi.org/10.3200/AEPR.109.4.21-32>