Assessment of Higher-Order Thinking Skills Required for Intercultural Learning

Etsuko Toyoda
The University of Melbourne, Australia

Abstract: Intercultural competence is essential in the transcultural world, in which many university students and graduates live. A language course in a multicultural country, to which students bring great diversity, interculturality and hybridity, interacting with each other in a language that is nobody's native-tongue, is an ideal intercultural learning environment. However, while academic articles promoting intercultural learning abound, few show how to assess intercultural competence, which is a major challenge. This article firstly conceptualises the construct of intercultural competence, using the analogy of food and body, and depicts the critical role that higher-order thinking skills play in the development of intercultural competence. It then reports the methods and results of the assessment of higher-order thinking skills. The learning environment created for the development of higher-order thinking skills was evaluated using a questionnaire, and individual skill levels were assessed by applying criteria in a rubric to students' reflective writings. The findings suggest that an appropriate learning environment enhances higher-order thinking skills, albeit with some exceptions. This article then discusses in detail successful and unsuccessful cases of higher-order thinking improvement. This study contributes to the knowledge base by presenting methods for assessing a critical aspect of intercultural competence, namely, higher-order thinking skills.

Keywords: Intercultural learning, language learning, intercultural competence, higher-order thinking skills, community-of-inquiry, assessment

1. Introduction

Intercultural competence is essential in the transcultural world, in which many university students and graduates live. The term intercultural, as used here, refers to "interaction between people from dissimilar linguacultural backgrounds", rather than interaction between people from different national languages and cultures. Although it is a well-discussed concept and most likely familiar to readers of this journal, intercultural learning in language classes deserves emphasis. Learning a foreign language exposes students to alternative worldviews through the encounters and interactions of additional knowledge of language/culture with students' existing languages/cultures (Crozet, Liddicoat & Lo Bianco, 1999; Liddicoat, Papademetre, Scarino, & Kohler, 2003) and enables students to recognize and understand others' and their own frames of reference (Scarino, 2009). Language courses tend to attract plurilingual and pluricultural students from diverse backgrounds, and this diversity among students can promote effective synergy for intercultural learning (Lee, Poch, Shaw & Williams, 2012; Soria & Troisi, 2014).

Enhancing intercultural competence, however, imposes a number of challenges, particularly for assessment (Liddicoat & Scarino, 2010; Scarino, 2010). How can we assess students' intercultural competence? Scarino (2009) claims that firstly the construct of intercultural competence needs to be conceptualized. Although what is entailed in intercultural competence is still debatable, some components of intercultural learning have been identified (Deardorff, 2006), such as knowledge (e.g., culture-specific knowledge, knowledge of Self and Others), awareness (e.g., cross-cultural awareness, self-reflective awareness), and skills (e.g., discovery skills, comparative thinking, problem solving, higher-order thinking) (Lee, Poch, Shaw & Williams, 2012; Deardorff, 2006; Laal & Laal, 2012; Sheets, 2009). Deardorff (2006, p. 247) defines intercultural communicative competence as the "ability to communicate effectively and appropriately in intercultural situations". In addition, Baker (2016) emphasizes intercultural communicative awareness (which I would call meta-intercultural awareness because it is meta-level awareness of intercultural learning), which is "a conscious understanding of the role culturally based forms, practices and frames of reference can have in intercultural communication, and an ability to put these conceptions into practice in a flexible and context specific manner in communication" (Baker, 2011, p. 202).

Toyoda (2016) claims that knowledge/experience, awareness/comprehension and higher-order thinking skills nurture effective and appropriate communication and behaviour in intercultural situations. However, she reported that intercultural input per se was not sufficient to develop intercultural competence, and that higher-order thinking skills, i.e., skills to reflect, relate, interpret, analyse, and evaluate, were crucial for transforming knowledge/experience into awareness/comprehension. It was confirmed that, as Deardorff (2011) emphasises, higher-order thinking skills play a pivotal role in intercultural learning.

These components of intercultural competence may be depicted as follows using the analogy of food and body, although the dynamics of interactions between components cannot be expressed in this simplistic analogy.
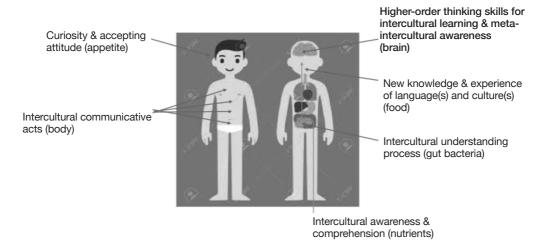

Figure 1. Components of Intercultural Competence

First of all, food (linguacultural knowledge and experience input) is necessary. In order to turn them into rich nutrients (intercultural awareness and comprehension), good gut bacteria (intercultural understanding processes) are required. Once appropriately processed, nutrients (restructured intercultural awareness and comprehension) produce a healthier body (intercultural communicative acts, both verbal and non-verbal). When a healthy body is maintained, one is likely to have good appetites (curiosity and accepting attitude), which make the person become open to more new food (knowledge and experience of languages and cultures from plurilingual and pluricultural others). Not all these components are easy to examine. Whereas food (knowledge and experience) and body (intercultural communicative acts) are perceptible, gut bacteria (intercultural understanding processes) and nutrients (intercultural awareness and comprehension) can only be made to observable through the use of the brain (higher-order thinking skills for intercultural learning and meta-intercultural awareness).

In addition, the development of intercultural competence requires an intercultural learning environment. Swan, Garrison, and Richardson (2009) claim that the development of higher-order thinking skills (hereinafter, HoT) requires a community of inquiry, a learning environment that consists of three core elements, Teaching Presence, Social Presence and Cognitive Presence. Teaching Presence includes teacher's design and organization, direct instruction and facilitation. Social Presence includes a friendly social setting where students communicate openly and a sense of group cohesion. Cognitive Presence requires a "triggering" event to stimulate students' curiosity, and opportunities for exploration, integration and resolution.

While the quest of Scarino (2010) is assessment of intercultural communicative acts, this study focuses on the assessment of HoT, which is a critical aspect of intercultural competence. Specifically it investigates whether students' higher-order thinking (HoT) skills can be enhanced in an appropriate community of inquiry. Firstly, it describes the learning environment for an advanced Japanese course at an Australian university, which was created using Community of Inquiry (hereinafter, CoI) Framework (Garrison, Anderson, & Archer, 2000). Secondly, it considers the results of analysis of a CoI questionnaire conducted in the middle and end of the course. Thirdly, it compares the questionnaire results with the results of analysing students' reflective journals, which are the representations of HoT skills.

2. Intercultural Learning Environment

The University of Melbourne offers a year-long advanced Japanese course, comprising two consecutive content-based language subjects, aimed at developing intercultural competence. Students come from diverse backgrounds (i.e., linguistic and cultural heritages, year levels, and study areas). Topics dealt with in the course are various issues arising in Japan due to globalization and associated effects from, and on, other countries.

A group video project is a core feature of class activities (visit http://interculturaljjapanese. weebly.com for details), and is a central means of promoting intercultural learning. Across two semesters, students discuss findings and opinions concerning their research and create two videos in semester one and another two with a different group in semester two. For each of the four videos, students maintain reflective journals, in which they record their activities and reflections on their learning. Although the language for interaction in class is Japanese, the use

of Japanese in reflective journals is not enforced, as the journals are for the development of HoT skills rather than language skills. Also plurilingual students often employ a hybrid linguistic system for thinking (Baker, 2016) rather than multiple separate languages.
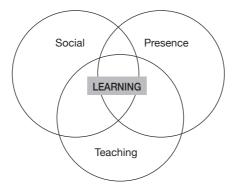

Figure 2. Community of Inquiry Model

The three Presences of CoI are provided as follows (see Figure 2):

1) Teaching Presence: Authentic materials on controversial issues; teaching methods based on educational theories; spoken and written statements of course objectives and expectations; online and offline cognitive activities; scaffolding; formative/summative assessments and feedback.
2) Social Presence: Face-to-face classroom discussions, collaborative group work with classmates from various cultural backgrounds, international internet exchanges with Japanese university students, communication with the teachers.
3) Cognitive Presence: Exposure to topical and controversial issues; opportunities for brainstorming and discussion; research (video) presentations; opinion exchanges; essay writing; reflective journal writing.

Scaffolding is a critical element of Teaching Presence. Giacumo, Savenye, and Smith (2013) recommend the use of both facilitation responses (i.e., teachers' guidance and feedback on students' thought process) and a rubric (i.e., a graded grid showing the depth of HoT) as key forms of scaffolding. In our course, facilitation include explanation of course objectives (why intercultural learning is important), *wh*-questions for fostering deep thinking, and feedback on students' writing. In order to show a clear direction, a rubric for deeper HoT is provided. Using Bloom's Revised Taxonomy (Anderson & Krathwohl, 2001) and Webb's Depth of Knowledge (Webb, 1997) as references, three stages of development in HoT skills have been set as follows:

- Stage 1: Acknowledging facts/events/others' thoughts; showing understanding towards facts/events/others' thoughts; expressing feelings towards facts/events/others' thoughts; and explaining facts/events/others' thoughts.
- Stage 2: Identifying and relating facts/events/others' thoughts in comparison
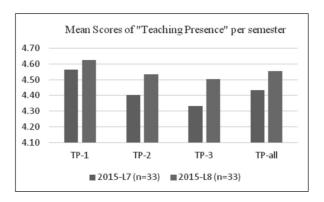
with previous knowledge and experiences; applying facts/events/others' thoughts in different situations; identifying problems in facts/events/others' thoughts; interpreting facts/events/others' thoughts; and offering counter arguments or alternative points of view with some supporting evidence.

- Stage 3: Analysing facts/events/others' thoughts; analysing relationships between facts/events/others' thoughts; finding reasons and causes of facts/events/others' thoughts; forming opinions with concrete reasoning; proposing solutions with supporting explanation for problems identified; and drawing judicious conclusions.

As a platform for demonstrating HoT skills, the keeping of journals is incorporated in intercultural group work (group video presentations of research findings and opinions). The above-described rubric of three-stage HoT skills is shown to students prior to the fortnightly reflective journal writing task, and the same rubric is used for assessing the current level of HoT skills. Feedback is given to students on each submission in order to encourage deeper thinking.

3. Evaluation for Intercultural Learning Using CoI Framework Questionnaire

The aim of this study is to investigate whether an appropriate CoI enhanced students' HoT skills. In order to evaluate whether the learning environment was perceived by students as an appropriate CoI, a questionnaire was prepared. The questions within this questionnaire were originally sourced from the official CoI site (https://coi.athabascau.ca), and were tailored to suit our environment. With three questions for each sub-category of each Presence, altogether 30 questions were prepared, and their order randomized using an online randomizer. The questionnaire sheets were distributed to students at the end of each semester. Volunteer students were asked to mark on a 5-point Likert scale by choosing from *strongly agree* to *strongly disagree*. There were 66 students in the first semester, decreasing to 56 in the second semester. The data used for the analysis came from 33 students who completed the questionnaire on both occasions. The background survey conducted at the start of the course shows that the breakdown of these 33 students are: 22 females and 11 males; 9 first year students, 9 second year, 7 third year and 8 unknown; 19 local students, 7 international and 7 unknown). The students' responses were analysed using the Wilcoxon signed rank test comparing semesters one and two.
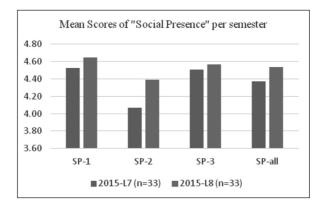
Teaching Presence was perceived highly from semester one (median = 4.43) and increased in semester two (4.56), with a significant difference between the semesters ($z=-2.54$, $p<0.05$). This increased Teaching Presence appears to be due to students' better understanding of teachers' instructions and facilitation.

Graph 1. Results of Teaching Presence

Mean Scores of "Teaching Presence" per semester

2015-L7 (n=33)   2015-L8 (n=33)

Notes: TP-1 = teaching design and organization, TP-2 = teachers' instructions, TP-3 = teachers' facilitation, TP-all = TP overall. Left bar = first semester, Right bar = second semester.
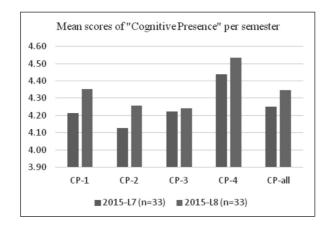
Social Presence was also high from semester one (4.37) and increased in semester two (4.54), and the difference was significant ($z=-3.02$, $p<0.050$). In particular, improved open communication among students contributed to this overall increase.

Graph 2. Results of Social Presence

Mean Scores of "Social Presence" per semester

2015-L7 (n=33)   2015-L8 (n=33)

Notes: SP-1 = friendly social setting, SP-2 = open communication, SP-3 group cohesion, SP-all = SP overall. Left bar = first semester, Right bar = second semester.

Cognitive Presence was also well perceived from semester one (4.25) and more so in semester two (4.35), and the difference was significant ($z=-2.17$, $p<0.05$). This may be taken as evidence that students became metacognitively aware of their cognitive activities over time.

Graph 3. Results of Cognitive Presence

Mean scores of "Cognitive Presence" per semester

Notes: CP-1 =triggering event, CP-2 = exploration, CP-3 = integration, CP-4 = resolution, CP-all = CP overall. Left bar = first semester, Right bar = second semester.

4. Analysis of Reflective Journals

The above results of the CoI questionnaire revealed that the prerequisite of providing an appropriate intercultural learning environment for the development of HoT skills (Swan et al., 2009) was fulfilled. Now this section reports whether there were individual differences in the development of HoT skills. In order to examine individual students' HoTs, the results of Cognitive Presence of the CoI questionnaire were re-reviewed, because the score of Cognitive Presence is a good indicator of perception of cognitive stimuli, which are needed for HoT use. While most students showed a moderate to high Cognitive Presence value (the range of 3.3 to 5.0) in the mid-year and slightly higher Cognitive Presence (a difference of 0.1 to 0.5) towards the end of the course, the following six students showed a considerable increase or decrease in their Cognitive Presence score.

The following table shows the six students' biographical information, their Cognitive Presence scores on the CoI questionnaire and the stages of their HoT skills based on the criteria in the rubric.

Table 1. Six Students' Cognitive Presences and HoT skills

Sts	Gender	Year	Status	Education mostly in	1st language	Parents' language	CP-mid	CP-end	Diff	HoT mid	HoT end
A	F	3	Local	Australia	English	English	4.1	4.7	+0.6	2	3
B	F	2	Local	Korea	Korean	Korean	4.4	5.0	+0.6	2	3
C	F	3	Local	Vietnam	Vietnamese	Vietnamese	4.3	4.9	+0.6	2	3
D	M	3	Local	Indonesia	English	English	4.1	3.3	-0.8	3	3
E	M	3	Local	Australia	English	Malay	4.4	3.4	-1.0	2	1
F	M	1	Local	China	Chinese	Chinese	4.0	3.0	-1.0	1	1

The six students' journal entries were analysed. The assessment of the students' HoT stages was conducted and negotiated by 1) the author, 2) the teacher in charge of the course (a native speaker of Japanese) and 3) a lecturer (a native speaker of English) who was not involved in the intercultural learning project. The students' background survey results and also observations recorded by the teacher in charge were used as supplementary data. In the following section, these students' HoT skills will be described using two examples of their journal entries, one from each semester, together with their perceptions of Teaching, Social and Cognitive Presences. Where the language of the entries was Japanese, English translation (by the author) is provided in *italics*, while for the entries in English, the original form is kept.

Student A was a cheerful and active third year student. This student showed high Teaching Presence (4.0) in the mid-year and rose (to 4.5) at the end of the year. Her Social Presence score was moderate initially (3.4) while in a group with a member indifferent to group work. In the second half, her Social Presence score markedly increased (to 4.7) as she formed another group with more dedicated members. In her new group, one of the members was a first-year international student whose English was not strong, requiring the group members to use Japanese to communicate with each other. This made her feel that the group members were communicating on a level playing field (without a power relationship of English native speakers and non-native speakers). Over the latter half of the year, a considerable change in her classroom discussion participation was observed. As she actively exchanged opinions with the others, her Cognitive Presence score also increased (4.1 to 4.7). Student A's journal, written in a mix of Japanese and English, showed an improvement in her HoT skills. Her entry from week seven of semester one concerned the way English is learned in Japan. After describing how hard Japanese students study, she compared it with the situation in Australia, and interpreted the difference (Stage 2), as follows:

> Their students work harder so that they pass their entrance exams and make their families proud. In Australia, students are slightly more laid back, and the work involved with learning a foreign language like Japanese is overwhelming to them. This may be why the numbers of Australian Japanese learners are dropping.

In week six, semester two, in relation to Japan's role in WW2, she wrote about a speech made by the Japanese Prime Minister Abe. After investigating further, she found evidence to support his speech, and expressed her opinion (Stage 3).

In the speech, Mr Abe said "we should not put the responsibility of continuing to apologise on our children who have no relation to that war". I accept this statement. 80% of Japanese population were born after the war. So, why are they held accountable still for their great grandparents' mistakes?

Student B was a local mature student (in her 30s) with a Korean background. Probably due to her maturity, she held high Teaching Presence scores throughout the year (4.5 and 4.6). Likely due to having lived in various countries, her Social Presence score was high mid-year (4.4) and by the end of the year, it reached the maximum score (5.0). While in the first group, she was acting as a big sister for the group, and was sometimes frustrated with one of the members who did not contribute to group tasks as much as the others did. Her second group members were all dedicated and contributed equally to the group video presentations. Along with this improved social situation, her Cognitive Presence score also increased (from 4.4 to 5.0). Student B's journal was all written in Japanese, except two entries early in semester one. An improvement in her HoT was observed from the middle of the first semester, and further developed in the second semester. In week eight of semester one, she identified a cause of her dissatisfaction about the Japanese students' comments that she had received (Stage 2).

All four students support compulsory English education, and their opinions are that Japanese English ability is decreasing because there is a flaw in the system. These are comments, so they don't need to be persuasive, but I felt that something was lacking. It would have been good if there were objective opinions based on research.

In week eight of semester two, she analysed why the majority of religious people in Korea are Christians. After presenting a commonly accepted reason, she offered her own opinion with concrete reasoning (Stage 3).

One of the reasons is said to be that Christianity has been actively supporting education and medical institutions, and has won Korean peoples' hearts. However, I think that globalisation is having the largest effect. You can say that the admiration for the strong economic power of the West is not small. I think there is a certain degree of tendency for copying the Western way of thinking and living.

Subject C, who has a Vietnamese background, was a reticent student, and initially did not express her opinions openly during the discussion sessions. However, it seems she was receiving information and opinions from her group members and other classmates, which she used to engage herself in deep thinking. Her Social Presence score was high (4.0) and increased in the second semester (4.8). Towards the end of the year, her verbal and non-verbal communication was often observed during group discussions. Her rating for Cognitive Presence was also high from semester one (4.3), and improved considerably in semester two (4.9). Her high Teaching Presence scores (which rose from 3.8 to 4.6) showed that she understood the teacher's intention and appreciated instruction and facilitation. Student C's early entries simply showed short descriptions of newly acquired information accompanied by her feelings towards them. From

around week seven of the first semester, a remarkable improvement, both in quantity and quality, in her HoT was observed. In semester two, she took the initiative in investigating the issues dealt with in class time, and reflected in depth on the findings. The following is an excerpt from her entry in week eight, semester one, which showed her ability to identify problems, and relate the issues arising in Japan to those of her parents' country (Stage 2).

> Vietnam also faces a problem similar to the "English fetish" (that Japan is experiencing). It is believed that using English words is cool and clever. However, those who are not good at English do not use them. Only those who are good at English, can use it. Sometimes elderlies and people who cannot understand English have troubles. In this sense, Vietnam also suffers from English fetish.

In semester two, her entries showed deeper thinking. She related the issue of discrimination in Japan to her own experience, and then analysed it using the knowledge she had acquired in her media class. Her HoT reached Stage 3, as she proposed a solution with supporting explanation for problems identified.

> I have seen a large number of stereotypes directed towards me or my friends, or other people. And now, through my knowledge from my media subject, I know that stereotypes are largely the products of media presentation. Not only false representation of an ethnic group or a race in media can lead to mass discrimination, but the lack of representation also cause problems. Exposure to other ethnicity or race is a powerful way to reduce discrimination. Especially minority groups within any given communities should demand correct and better representation of themselves. I think this is the first step to change people's perception.

Student D is a local student with a British background, who has completed most of his schooling in Indonesia. This student had significant intercultural knowledge and experience, which he gained through growing up in Indonesia, and visiting Palestine (and witnessing first-hand military occupation and group punishment). From the beginning, this student demonstrated deep observational and analytical abilities, both during discussions in class and in journal entries. He indicated a high Teaching Presence rating from the first semester (4.0), although it did not increase significantly in the second semester (4.1). This student's entries suggested that he had a high expectation of his group in the first semester (Social Presence 4.1). However, he was disappointed by his group members, who did not express their opinions, or simply made remarks without deep thought (3.2). It seemed his frustration regarding them affected his learning negatively, which may have contributed to the lower Cognitive Presence rating in the second semester (dropped from 4.1 to 3.3). Despite the decreases in Social and Cognitive Presences, he maintained a high level (Stage 3) of HoT skills throughout the year, as shown in the following examples. He showed his analytical skills (Stage 3) as early as week three of semester one.

> It is clear that there are positives and negatives to the overflow of borrowed words. I

have noticed a strange overlap of conservatism between Japanese culture and my own. For a Japanese person to be strongly against imported words, they may be considered partially conservative or even nationalistic in Japan. For a Westerner to be against the cultural or linguistic imperialism that the excess of English words in Japanese certainly represents, they would surely be considered leftist or humanistic. This would be difficult to convey in Japanese, but perhaps an interesting point to make in the video, as it highlights the complexity of this issue when viewed from different cultural backgrounds.

Another example shown below is an excerpt from his entry in week nine, semester two, which demonstrated his ability to analyse an issue in a wider context (Stage 3).

 (In the video) I wanted to confront the discrimination against indigenous people in Australia. At the same time, I wished to present Australia's future with optimism.

Part of this optimism is the discussion of reconciliation. Reconciliation however is not simply an event that occurs and signals the beginning of change, rather it is the dismantling of a thoroughly reinforced system. As residents of Australia, we live in and are part of this system. Analogy can be drawn between the occupation of Palestine as mentioned in the previous video, as well as many other countries in the world that have been affected by occupation and colonialism (including Japan). A history of colonialism is a history of the modern world, and so the simple topic of discrimination quickly becomes a part of something much larger.

Student E was a local student with an Indian background, born in Singapore and educated in Malaysia before migrating to Australia. Prior to enrolling in Advanced Japanese, he spent one semester in a university in Japan. He did not see the benefits of intercultural learning, as he wished to learn deeply about the language per se. His lack of enthusiasm in collaborative intercultural learning reflected in his Teaching Presence and Social Presence ratings. Despite the low to moderate Teaching and Social Presence ratings (2.9 and 3.3 respectively), his Cognitive Presence rating was high (4.4) in the first semester, most probably because he tried to understand the nature of group work. In semester two, however, it decreased considerably (3.4), although his Teaching and Social Presences increased (2.9 to 3.6 and 3.3 to 4.3) as he realized some value in working in a group. The teacher's observation notes suggested that this decrease in the Cognitive Presence was probably due to having an unmotivated member in this group. This student's journal indicated that he focused solely on group work in the first semester, and on completing videos in the second semester. His early entries suggested that he did not appreciate group work. At the beginning of the year, he expressed his concerns that his group members may be lazy and unreliable, "as often the cases of team-based assignments at the university". In weeks seven and eight of semester one, he tried to interpret his group using Tuckman's Stages of Group Development (Stage 2).

I came to a realization in learning that we are definitely "storming" as a group according to Tuckman's model. The storming stage is where conflict and competition are at its greatest. I was surprised in the beginning that xx decided to take the reins, during

which I became frustrated with his directing style. But for the others, I believe that they were thankful. [...] We have somewhat come in to the "norming" stage. The norming stage is the time where the group becomes a cohesive unit. I have learnt to see that the process is still always going to be needing some fixing to ensure a full maximization.

It seems however, that he used less HoT in semester two (dropped from Stage 2 to Stage 1). The following is his entry from week five of semester two.

This is my first time doing film editing and I am pretty nervous. However, for all of us, when we are trying a new skill, we need to have a starting point where we can fail and make mistakes for the projects, even if they are the more minute in nature.

Student F was a local first year student with a Chinese background. This student had a general apathetic attitude. In semester one, he had group members who covered for his weakness, despite frustration on their side, of which he may not have been aware. In semester two, he ended up being ignored after a period of great tension. His Social Presence and Cognitive Presence plummeted in the second half of the course (3.9 to 3.0 and 4.0 to 3.0 respectively). The questionnaire results however showed that this student had a moderate Teaching Presence rating throughout the year (3.9 and 3.8), although the following examples of his entries suggest that he did not really understand the teacher's intention, instruction and facilitation. In semester one, he only reported what was talked about during the lectures and seminars, and in semester two, he reported what he did for the group work, both without any form of reflection. He remained at Stage 1 throughout the year, as shown in the following examples.

In week nine (of semester one), the main focus of the topic in the lectures and seminars were, what is the most common language learnt around the world and why people want to learn those languages, It seems as if Japanese isn't the most popular due to the economy and contemporary Japan. However, people that take an interest in Japanese culture or things such as Anime or Manga may find themselves learning Japanese.

(In week eight of semester two) My topic was the forms of discrimination in Japan. I researched my topic by going through online Japanese community to look through the potential forms of discrimination in Japan, who they are targeted at and how the discriminations occur. I then, went through articles that were written by local Japanese people who described their own experience with discrimination.

5. Discussion

The pattern shown by students A-C was the most commonly observed case, where Cognitive Presence scores shown in the CoI questionnaire correlated with the display of HoT skills in reflective journals. 30 students of 33 who experienced intercultural learning using the Japanese language showed this tendency. The three who showed a marked increase in Cognitive Presence scores on the questionnaire indeed demonstrated development in their HoT skills.

These students understood the objectives of the course, exploited the social environment, and improved their HoT skills. These results confirmed the importance of a learning environment with the established three Presences. The results of the qualitative examination of the students' journals suggest that there is a correlation between students' appreciation of CoI and the growth of HoT.

The cases of the three students who had shown a decrease in their Cognitive Presence scores revealed some interesting insights. Student D's case was particularly interesting. Despite the fact that his Cognitive Presence score in the second semester was considerably lower than the first semester, he displayed sophisticated HoT skills throughout the year. His journal suggested that the drop in Cognitive Presence was affected by Social Presence. There was little intellectual stimulation within the collaborative work, as his group members' HoT skills were not at his level. Collaboration and reflection are essential for educational learning experience (Garrison et al., 2001), including intercultural learning (Toyoda, 2016). In the process of collaboration, students are exposed to different opinions, and through later reflection, students develop HoT. However, can a student with markedly higher HoT skills than their group members benefit from collaboration? Research findings on the effects of second language proficiency differences in paired assessment suggest that regardless of proficiency differences, students can benefit from a harmonious collaborative relationship between participants (Watanabe & Swain, 2007). In the current study, student D had two passive students as his group members. Had he more active group members, would he have benefited from the group work not withstanding his being the most critical thinker? This question remains for further studies.

Student E was a multicultural/multilingual student. Since researchers claim that intercultural experience results in the increase in sociocultural awareness and HoT skills, which become entry points for deep reflection (Byram, 2008; Deardorff, 2006; Lee et al., 2012; Scarino, 2009; Toyoda, 2015), that was the expectation of this student. However, his entries were mere descriptions of his group and video tasks. It seems that previous intercultural experience is not always a good predictor for one's HoT skills. Interestingly, the CoI questionnaire showed that his Teaching Presence and Social Presence scores increased while his Cognitive Presence score decreased. His understanding of the teacher's intention, instruction and facilitation increased. However, this itself did not guarantee that he appreciated intercultural learning. His perception of social interactions seemed to have improved after understanding the difficulties of group work after applying Tuckman's team development model to his own group. However, this understanding did not lead to stimulus learning from group members. The case of student E raised doubt in simply equating the state of CoI measured by a questionnaire and the level of HoT, as suggested by Swan et al. (2009).

Student F's case underscored the importance of a collaborative group, in which each member contributes. According to Johnson and Johnson's structured cooperative learning model (Johnson, Johnson, & Smith, 2007), collaborative learning can enhance group members' learning performance provided that members 1) share knowledge and resources, 2) exercise interpersonal skills (e.g., discussion), and 3) monitor their achievements towards group goals. In his case, he made little contribution to any of these. His withdrawn attitude affected the learning of both himself and his group as a whole. His lack of maturity (first-year student) cannot be the sole cause of his behaviour, as other first-year students performed and reflected

well. A lack of understanding and appreciation of the importance of intercultural learning may be the main factor. Interestingly his Teaching Presence scores were not low. As in the case of student E, this student showed understanding of the teacher's intention, instruction and facilitation. However, he appears not to have fully understood nor appreciated the concept of intercultural learning. The cases of Students E and F suggest that the development of HoT requires an *appreciation* of a good CoI.

Another crucial factor affecting students' HoT development is group work and its members. Researchers advocate collaborative work with students from diverse backgrounds. By bringing diverse students together in meaningful discourse, learners are exposed to unique cultural knowledge offered by their peers (Gurin, Nagda & Lopez, 2004) and may have their values and beliefs challenged (Smith & MacGregor, 1992). Dynamic interactions may push students to think in more complex and divergent ways, thus promoting HoT (Gokhale, 1995) by questioning conceptual frameworks of Others and Self. However, students A, B, D and E were all adversely affected by their group members. A group becomes dysfunctional when group dynamics are negatively affected by misbehaving members (e.g., free riders) (Felder & Brent, 2001).

Hsiung, Lou, Lin, and Wang (2014) argue that identifying dysfunctional groups and troubled individuals is critical so that remedial actions can be taken. In our learning environment, the teacher in charge was aware of the troubled individuals and their negative impacts on the groups from observing group work. The teacher therefore has intervened by talking to the individuals and/or the group members. Over-intervention such as removing a member from the group was not taken, because it may have adversely affected group dynamics and led to an abrupt end to group development. Changing group dynamics is sometimes beyond the capacity of one teacher. Millet, Trimbut and Wilkes (1994), while acknowledging that many variables are beyond a teacher's control, emphasise the importance of orientation. Currently, as recommended in Toyoda (2015), interactive orientations are given in order to enhance Teaching Presence. It seems necessary also to provide orientation to enhance Social Presence.

This study is not without limitations. The questions on the questionnaire were initially obtained from the official CoI site and were tailored to suit our environment, resulting in having some unverified questions. However, the questionnaire served its purpose, which was to evaluate whether the intended learning environment was perceived by students (not for evaluation of a perfect CoI that can be applied in any learning). The second limitation is that the HoT skills were assessed based on small snippets of thinking processes demonstrated in reflective journals, and therefore may not be a representation of a whole HoT. However, given that there are about 20 entries per student (10-12 weeks x 2 semesters), this demonstrated that reflective writing can be considered to be a good indicator of HoT. Thirdly, the languages permitted to be used for journal entries were limited to English and Japanese, in which some students, particularly international students from non-English backgrounds, may have found difficulty in expressing their thinking processes fully. The six students appearing in this paper are all local students, and therefore, this problem was unlikely. Fourthly, the analysis of the unsuccessful cases were based on only three students' results, because only three showed a decrease in Cognitive Presence. Lastly, although students' gender and language used for journal writing may be affecting factors, the sample was too small for an analysis. Despite these

limitations, implications from this study are extensive and valuable for future studies and future intercultural education.

6. Conclusion

While academic articles promoting intercultural learning abound, few show how to assess intercultural competence. This article contributes to the knowledge base by presenting a method for assessing a critical aspect of intercultural competence, namely, HoT skills. Specifically, the current study examined whether a learning environment providing a CoI would enhances HoT skills, as claimed by Swan et al. (2009).

The findings suggest that in general this is the case. The results of the evaluation using a questionnaire showed that the majority (91%) of students perceived the three Presences highly, and thus revealed that the learning environment was a CoI. The results of the journal analysis using the criteria of the HoT rubric revealed that most students who showed an increase in Cognitive Presence as well as Teaching and Social Presences, demonstrated an improvement in their HoT skills. A few students who showed a decrease in Cognitive Presence exhibited varied patterns, which gave us some valuable insight and information.

This study focused on the development of higher-order thinking skills. The assessment of intercultural competence in language learning involves other aspects, which may include conventional assessment of linguistic and sociolinguistic knowledge. However, not all assessment can be done using the "target" language. If intercultural learning in language classes seeks the transformation of knowledge input into intercultural awareness, which is later expected to result in the demonstration of effective and appropriate intercultural communication, the assessment of conscious controls (i.e., higher-order thinking skills and meta-intercultural awareness) is most critical. Such assessment, however, may be best conducted in the language or a mix of languages in which plurilingual students can express freely. This may impact language teachers who do not share common languages with the students.

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Appendix: CoI Survey

Name:

ID #:

Questions	*Degree of agreement (5 being strongly agree and 1 being strongly disagree)*				
1. The teachers have clearly indicated main course goals. (e.g., developing knowledge and skills for intercultural communication and reflection).	5 Agree	4	3	2	1 Disagree
2. The teachers have clearly communicated main course topics. (e.g., changes in the Japanese language).	5 Agree	4	3	2	1 Disagree
3. The teachers have provided appropriate learning activities to support the course goals (e.g., reading, discussion, video project, diary writing)	5 Agree	4	3	2	1 Disagree
4. The teachers have provided the background information and linguistic knowledge required for intercultural discussions.	5 Agree	4	3	2	1 Disagree
5. The teachers (and the Japanese students) have helped to focus discussion on relevant issues in a way that helps me to learn.	5 Agree	4	3	2	1 Disagree
6. The teachers (and the Japanese students) have provided feedback and/or explanations that help me learn.	5 Agree	4	3	2	1 Disagree
7. The guidance by teachers (and the Japanese students) towards understanding course topics has helped clarify my thinking.	5 Agree	4	3	2	1 Disagree
8. The teachers (and the Japanese students) have helped me identify different opinions on course topics, which helps me to learn.	5 Agree	4	3	2	1 Disagree
9. The teachers (and the Japanese students) have helped me stick to the task at hand, which helps me to learn.	5 Agree	4	3	2	1 Disagree
10. I have a sense of belonging in the course.	5 Agree	4	3	2	1 Disagree
11. I have formed distinct impressions of some course participants.	5 Agree	4	3	2	1 Disagree

12. Through course activities, I feel close to some course participants.

    5   4   3   2   1
    Agree   Disagree

13. I feel comfortable conversing with other classmates.

    5   4   3   2   1
    Agree   Disagree

14. I feel comfortable conversing with Japanese students in (face-to-face) discussions.

    5   4   3   2   1
    Agree   Disagree

15. I feel comfortable conversing with Japanese people in Japanese via social networking sites (SNS).

    5   4   3   2   1
    Agree   Disagree

16. I feel comfortable conversing with my video group members (even when disagreeing with them).

    5   4   3   2   1
    Agree   Disagree

17. I feel that my point of view has been acknowledged by other group members.

    5   4   3   2   1
    Agree   Disagree

18. The video project helps me to develop a sense of collaboration.

    5   4   3   2   1
    Agree   Disagree

19. Background knowledge (lecture) and weekly readings increase my interest in the course topics.

    5   4   3   2   1
    Agree   Disagree

20. Classroom activities pique my curiosity.

    5   4   3   2   1
    Agree   Disagree

21. Activities outside the classroom (such as individual research) pique my curiosity.

    5   4   3   2   1
    Agree   Disagree

22. I feel motivated to explore content-related questions.

    5   4   3   2   1
    Agree   Disagree

23. I utilise a variety of information sources to explore problems (in relation to the topics) posed in this course.

    5   4   3   2   1
    Agree   Disagree

24. Brainstorming and finding relevant information help me resolve content-related questions that I have.

    5   4   3   2   1
    Agree   Disagree

25. Various learning activities (e.g., reading articles, discussion) help me construct explanations/solutions to my inquiries (my curiosities).

    5   4   3   2   1
    Agree   Disagree

26.	Perspectives expressed by other people (e.g., authors of articles, classmates, Japanese students) help me see issues from a wider perspective.	5 Agree	4	3	2	1 Disagree
27.	Self-reflection (diaries) helps me understand fundamental concepts of Self and Others in this class.	5 Agree	4	3	2	1 Disagree
28.	I can apply the awareness and comprehension (about Japan and other countries) acquired in this course to my work or other non-class activities.	5 Agree	4	3	2	1 Disagree
29.	I can apply the skills (e.g. language, social interaction, research, reflection) that I acquired in this course to my work or other non-class activities.	5 Agree	4	3	2	1 Disagree
30.	I can apply the intercultural competence (e.g., understanding more about Self and Others) that I acquired in this course to my work or other non-class activities.	5 Agree	4	3	2	1 Disagree