Designing Online Instruction for developing Cultural Intelligence (CQ): Intercultural journeys in a blended learning environment

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This study reports on the implementation of an intercultural learning experience as part of a university course at a Japanese university. Building on earlier efforts aimed at the development of cultural intelligence (CQ), the current study expands our framework to utilize instructional design (ID) theory and experiential learning in a blended learning environment. Students participated in a 15-week course that involved an online exchange with international counterparts, a workshop with students in a study-abroad program, lectures, topical readings and media. Measures of cultural intelligence (CQ) were obtained pre- and post-course. Results presented here include curriculum and course development and student evaluation/reflection. Suggestions for enhancing cultural awareness in the design of instructional systems are discussed against the backdrop of continued course refinement.

Keywords: *instructional design; cultural intelligence; experiential & blended learning.*

Introduction

The steady incursion of technology in the areas of education and training has obliged governments, corporations, schools and universities worldwide to increasingly make use of some form of blended learning to educate, train and develop their members and students. Similarly, the wave of globalization fostered through the internet continues to connect people from historically very different cultures in faster and easier ways than ever before. The resultant diversity is already evident, making a demand in the form of an expected level of intercultural competence, or cultural intelligence (CQ) (Ang, Van Dyne & Tan, 2011), recently identified as an important skill for the modern global workforce (Fischer, 2011). CQ is defined as 'an individual's capability to function effectively in culturally diverse settings' (Ang et al., 2011).

These developments suggest that regardless of whether educational efforts tend towards the more traditional or incorporates the digital, learning environments need to be cognizant of culture's pervasive

presence in the learning process (Clem, 2004; Thomas, Mitchell & Joseph, 2002). The impetus for the designers of instructional systems should thus be clear: the complexity of cultural influences can no longer neglected in the design process, as some studies have indicated (Henderson, 2007; Parrish & Linder-Vanberschot, 2010).

Moreover, computer-assisted learning and the Internet has radically changed the teaching paradigm (Alonso, López, Manrique & Viñes, 2005). Problematically however, it has not (yet) comprehensively incorporated or adapted appropriate pedagogical principles accordingly. Thus, the speed and ubiquity with which educational technology is adopted has opened a significant disconnect… "between the profusion of technological features and the shortage or non-existence of teaching principles" (Alonso et al., 2005, p. 218). Central to the current study then, is the question of how to address these issues with the relevant educational means while simultaneously managing and incorporating the best advantages current technology can offer.

The present investigation partially addresses some of these issues through a continuation of earlier research work that aims to develop cultural intelligence (CQ) through the application of instructional design (ID) theory (Roux & Suzuki, 2016, 2017). Our current effort reports a blended learning intervention that investigates how such methods may support and enhance the stated project goals. Blended learning describes learning that mixes various event- or experience-based activities and may include: live e-learning (synchronous), self-paced learning (asynchronous) and face-to-face classrooms (Alonso et al., 2005).

Expanding on a framework to support intercultural learning (Roux & Suzuki, 2016, 2017) we designed and implemented a 15-week intercultural communication course that combined: 1) traditional educational methods; 2) experiential learning activities in a facilitated format; 3) one multi-cultural workshop; 4) online media, quizzes and feedback formats to enhance learning; and 5) an asynchronous online discussion forum with international counterparts. Measures of cultural intelligence (CQ) were obtained pre- and post-course. Results presented here include curriculum and course development and student evaluation/reflection.

Research Design, Methods and Procedures

Fourteen undergraduate (2nd year) Japanese students, selected for their interest in short/long-term study abroad programs enrolled in a 15-week course. The average age was 19 and the gender balance was 57% female, 43% male. Students met weekly for a 90-minute, face-to-face class with the instructor in a room equipped with Wi-Fi and desktop computers. Textbook study consisted of academic-type readings with comprehension activities, some Japanese translations in a word-list format and downloadable listening of the readings. Classroom work typically varied between facilitated group- and/or pair work, engagement with online media, short lectures, online (asynchronous) discussion and learning reflection, utilizing online feedback/evaluation formats developed by the instructor.

The online discussion forum (Moodle-based), titled 'International Virtual Exchange project' is a collaboration with the Muroran Institute of Technology (Japan) and several other local and international counterparts. Our class was teamed with colleges in Tokyo and Colombia. We repeated the initial multi-cultural workshop to obtain further data from this source, and to investigate if/how it would perform as an enhancing experience embedded within a larger course framework. To track intercultural education and its influence on the development of CQ, we surveyed participants pre- and post-course with the Cultural Intelligence Scale (CQS) using a 7-point Likert type scale. The CQS captures a self-rated ability to perform and adapt in diverse environments and can be used as a diagnostic tool for intercultural success (Ang et al., 2011).

Results and Discussion

Results I: Curriculum development

The first result is a curriculum with course components and their rationale (Table 1). The curriculum is cognizant of Fischer's (2011) observation that the area of intercultural training needs a pedagogy that can support the development of CQ. Three broad areas are covered: 1) learning content, 2) assessment and evaluation and 3) research. Each of these domains are broken down into summarized segments, indicating the relevant learning considerations and rationale in relation to CQ development.

Table 1
A Curriculum for Intercultural Learning to support the development of CQ

		Content and Rationale
Learning content	▪ Textbook (8 chapters)	Title: *'Culture and Conflict: Changing the World for the Better'* Developing cultural understanding - CQ knowledge/behaviour.
	▪ Classroom worksheets	Instructor-developed, topical experience- and/or content-based worksheets to enhance the text. Focused on personal CQ development and linguistic support.
	▪ Mini-lectures (8)	Short topical lectures developed to enhance the text.
	▪ Experience-centred learning activities	Topical activities (brainstorm, group & pair discussions, mini-presentations, 'show-and-tell' activities, etc.) to enhance conceptual understanding and peer-interaction.
	▪ Multi-cultural workshop (1)	Title: *'Does race matter?'* Voluntary attendance to an open workshop. Mixed audience with local and international students.
	▪ Online media	Topical videos, talks provided by teacher and/or students. Eg: YouTube & TED Talks. Subtitles provided where possible.
	▪ IVE Project (4 topics/8 weeks)	Moodle based, asynchronous online discussion exchange with international counterparts to develop linguistic skills (English as a 2nd language) and intercultural competence.
	▪ Homework	Reading for comprehension, listening, vocabulary study and answering topical questions in relation to the content.
Assessment and evaluation	▪ Online review quizzes (4)	Summative quizzes for learning assessment purposes
	▪ Online feedback surveys (13)	Formative evaluation for a qualitative understanding of learning progress and problems.
	▪ IVE Project	Qualitative evaluation of online discussions to gage levels of interaction, issues, topics and potential problems.
Research	▪ CQ Scale	Surveyed pre/post course to establish a self-measurement of cultural intelligence and the postulated development thereof.
	▪ Online surveys (weekly)	Formative/summative evaluations and feedback were combined in one survey-type quiz to provide a sense of learning progress.
	▪ IVE Project	Analysis of online discussions to obtain a quantitative and qualitative sense of engagement and learning patterns.

Results II: Course development

We developed a 15-week course plan with weekly lesson contents as shown (Table 2) with the concomitant learning elements and research dimensions. Each lesson comprised the elements we presented in Table 1, thus focusing and learning contents that supported intercultural learning (e.g. text study, related media, activities), supplemented by an online, self-reported feedback utilized as data. In so doing, our initial framework (Roux & Suzuki, 2016, 2017), was adapted for a blended learning environment to address and review class contents, track student issues and problems, and take stock of the impact of materials and activities through self-

reports. In addition to the weekly short online feedback self-reports, we added online formative and summative reflections/reviews every 3rd lesson to enable student assessment and course evaluation.

Table 2

A 15-Week Intercultural Learning Course to support the development of CQ

	Lesson contents	Learning elements	Research elements
1	▪ Introduction ▪ CQ Scale	▪ Content orientation & overview	▪ CQ Scale: Time 1
2	▪ Chapter 1: *Thinking about Culture*	▪ Mini-lecture & activities to address CQ development ▪ Learning reflection 1 (online)	▪ Formative feedback 1 (online)
3	▪ Explanation and enrolment: IVE Project – Unit 1: *Introduction*	▪ Asynchronous online discussion for linguistic & CQ development	▪ Qualitative analysis of online discussions
4	▪ Chapter 2: *Hidden Culture & Differences*	▪ Mini-lecture & activities to address CQ development ▪ Learning reflection 2 (online)	▪ Formative feedback 2 (online)
5	▪ Review 1: Chapters 1&2 ▪ IVE Project – Unit 2: *My Place*	▪ Online Quiz 1: Summative evaluation ▪ Learning reflection 3 (online)	▪ Formative feedback 3 (online)
6	▪ Chapter 3: *Conflict*	▪ Mini-lecture & activities to address CQ development ▪ Learning reflection 4 (online)	▪ Formative feedback 4 (online)
7	▪ Chapter 4: *Identifying Conflicts*	▪ Mini-lecture & activities to address CQ development ▪ Learning reflection 5 (online)	▪ Formative feedback 5 (online)
8	▪ Review 2: Chapters 3&4 ▪ IVE Project – Unit 3: *Events in our lives*	▪ Online Quiz 2: Summative evaluation ▪ Learning reflection 6 (online)	▪ Formative feedback 6 (online)
9	▪ Chapter 5: *Values and Belief Systems*	▪ Mini-lecture & activities to address CQ development ▪ Learning reflection 7 (online)	▪ Formative feedback 7 (online)
	▪ Workshop: '*Does race matter?*'	▪ Multi-cultural workshop ▪ Learning reflection	▪ Analysis of audience feedback
10	▪ Chapter 6: *The role of Values in Intercultural Conflict*	▪ Mini-lecture & activities to address CQ development ▪ Learning reflection 8 (online)	▪ Formative feedback 8 (online)
11	▪ Review 3: Chapters 5&6 ▪ IVE Project – Unit 4 (final): *Plans for the future*	▪ Online Quiz 3: Summative evaluation ▪ Learning reflection 9 (online)	▪ Formative feedback 9 (online)
12	▪ Chapter 7: *Perceptions*	▪ Mini-lecture & activities to address CQ development ▪ Learning reflection 10 (online)	▪ Formative feedback 10 (online)
13	▪ Chapter 8: *Stereotypes*	▪ Mini-lecture & activities to address CQ development ▪ Learning reflection 11 (online)	▪ Formative feedback 11 (online)
14	▪ Review 4: Chapters 7&8	▪ Online Quiz 4: Summative evaluation ▪ Learning reflection 12 (online)	▪ Formative feedback 12 (online)
15	▪ Consolidation & reflection ▪ Conduct CQ Scale	▪ Learning reflection 13 (online)	▪ Formative feedback 13 (online) ▪ CQ Scale: Time 2

Results III: Learner Responses

Learner responses were recorded in a formative and summative fashion utilizing online survey forms (via Google). This provided a useful measure of progress along the blended learning pathway, adding an adaptive dimension to the contents and approach to instruction possible as the course progressed. Accordingly, in Table 3,

we provide a sample of data taken from the first 7 weeks to show preliminary results of the investigation. Due to space limitations, we suffice with a few key observations to summarize learner engagement and response. Firstly, the summative quizzes all delivered high scores, which were probably a result of the open-book format; we followed this approach to gain maximum depth engagement with the study material. Secondly, qualitative feedback obtained through the formative online evaluations revealed learner response along the following themes: 1) a very personal engagement with learning materials and a potential link to self-growth; 2) varying levels of difficulty expressed with study contents, such as theoretical concepts embedded in cultural understandings and/or their real-life applications; 3) reference to language ability, such as vocabulary depth and reach. Although interactions from the online VIE remain to be fully analysed, first impressions are that they mirror the preceding three observations, and appears to have increased interest and/or motivation in cultural differences, knowledge and interaction. The CQ scale data that is currently being analysed could lend further insights to this observation.

Table 3

Investigating CQ development: Sample of summative and formative learner responses

Investigation			Results: Learner Response (sample)	
Methods & Tools		Measure	Value	Comments & Feedback
Summative	Review 1	Average quiz score	90%	*S1: I can learn some ideas of culture in this class; this is valuable time.* *S2: I didn't prepare by reading so the class was a little difficult.*
	Review 2	Average quiz score	90%	S1: *I could learn about conflicts. I was surprised because conflicts have positive synergy and negative aspects.* *S2: People are different; we should try to understand others.*
	Review 3	Average quiz score	85%	*S1: When I compare my answer with my partner, I found differences in ranking… each person has own values and opinions.* *S2: This chapter was difficult for me.*
Formative	Experience & Learning Survey I	Reflective survey		*S1: Before this lecture, I think culture depend on each country or community. But now I think culture have more deep meaning. For example, visible culture, hidden culture and cultural roots.* S2: *I want to use only English in this class. So please speak only English, and instruct other students to do so.*
	Experience & Learning Survey II	Reflective survey		*S1: Some words in the text are difficult for me and ideas were difficult to understand.* *S2: I can learn why the conflict occurs and how to behave right way when conflict occurs. This lesson enriched my life, I think.*
	Virtual International Exchange (VIE)	Participation frequency	46% 38% 16%	wrote 1-4 comments /study unit wrote 5-8 comments /study unit wrote 9 or more comments /study unit
		Engagement & reflection		*S1: I could exchange my country's information, my dream and so on with some other country's students.* *S2: It was a little bit difficult for me, but it was interesting.*

Conclusion

Building on earlier efforts to utilize instructional design (ID) theory and experiential learning in a comprehensive framework to develop CQ (Roux & Suzuki, 2016, 2017), the current study reported on an

expansion and application in a blended learning environment. Results presented here included the designs for a curriculum, a 15-week course and selected student evaluation/reflections from the implementation of the course thus far. Qualitative data revealed that learners engaged actively with course materials and found course contents stimulating on cognitive and personal levels. Specific challenges in terms of cognitive demand and linguistic requirements were noted, but appeared not have detracted from learning advances and enjoyment. First observations from the online discussion forum (VIE) are positive, suggesting that this dimension was accommodated well within our existent framework and added qualitative value to the course. Further data analysis continues to look for and determine the postulated links to CQ development that we investigated here through the application of a blended learning environment.

References

Alonso, F., López, G., Manrique, D., & Viñes, J. M. (2005). An instructional model for web-based e-learning education with a blended learning process approach. *British Journal of Educational Technology*, *36*(2), 217–235.

Ang, S., Van Dyne, L., & Tan, M. L. (2011). Cultural intelligence. *The Cambridge Handbook on Intelligence*. Cambridge, Cambridge University Press.

Clem, F. A. (2004). Culture and motivation in online learning environments. *Association for Educational Communications and Technology*, 183–192.

Fischer, R. (2011). Cross-cultural training effects on cultural essentialism beliefs and cultural intelligence. *International Journal of Intercultural Relations*, *35*(6), 767–775.

Henderson, L. (2007). Theorizing a multiple cultures instructional design model for e-learning and e-teaching. In A. Edmundson (Ed.), *Globalized e-learning cultural challenges,* 130–153. Idea Group Inc. (IGI).

International Virtual Exchange Project (IVE) (2017). Retrieved from: https://iveproject.org/

Lee, S.I. & Rogers, L. (2014). *Culture and Conflict: Changing the World for the Better.* Tokyo: Shohakusha.

Parrish, P., & Linder-Vanberschot, J. A. (2010). Challenges of multicultural instruction: Addressing the challenges of multicultural instruction. *International Review of Research in Open and Distance learning*, *11*(2), 1 – 19.

Rogers, P. C., Graham, C. R., & Mayes, C. T. (2007). Cultural competence and instructional design: Exploration research into the delivery of online instruction cross-culturally. *Educational Technology Research and Development*, *55*(2), 197 – 217.

Roux, P. W., & Suzuki, K. (2016). Designing instruction for developing Cultural Intelligence (CQ) Online: Preliminary explorations into experiential, intercultural classroom learning. *Proceedings of the 14th International Conference on Media in Education (ICoME) 2016.* Japan Association for Educational Media Study, 422 – 427.

Roux, P.W., & Suzuki, K. (2017) (in press). Designing Online Instruction for Developing Cultural Intelligence (CQ): A Report from a Classroom-Based Workshop. *International Journal for Educational Media and Technology, 11*.

Thomas, M., Mitchell, M., & Joseph, R. (2002). The third dimension of ADDIE: A cultural embrace. *TechTrends, 46*(2), 40 – 45.