

Developing Cultural Intelligence (CQ) through Experiential Learning: Considering relevance and rationale in Blended Environments

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The evolution of learning technologies remains a central concern for instructional designers. Practitioners continue to rely on existing learning theories, such as experience-based learning (EBL), to explore the utilization of new technologies, applications and tools. Research suggests that an integrated pedagogy for the development of intercultural competence remains underdeveloped. As part of a larger project that applies instructional design (ID) theory to the development of cultural intelligence (CQ), this paper explores the rationale for, and utilization of EBL in a blended environment at a Japanese university. Results from a self-assessed learning reflection analysis indicate an EBL impact on participants' perceived identity, cognitive development, values and belief systems, as well as behaviors toward others. Preliminary findings indicate impactful CQ learning gains and support for the blended approach; however, the exact role of EBL in these gains is difficult to trace and will continue to require further investigation.

Keywords: blended learning; cultural intelligence; experiential learning; instructional design; Japanese higher education

Introduction

Advancing learning technologies are impacting educational systems everywhere. Although many developments have been hailed as “saviors” of the education system, their impact on learning design remains contentious and need ongoing scrutiny (Alonso, López, Manrique & Viñes, 2008). There are indications, for instance, that traditional pedagogies are not always adapting well to new learning technologies (Alonso, López, Manrique & Viñes, 2005; 2008). Some researchers have even pointed to a relative loss of focus on the learning process itself (Pazos, Azpiazu, Silva & Rodriguez-Paton, 2002; Alonso et al., 2008). From an instructional design (ID) perspective, it therefore seems necessary to carefully (re)consider how traditional approaches are blended with new educational technologies to ensure that learning remains effective.

Educational institutions everywhere are challenged to adapt in response to globalization (Sit, Mak & Neill, 2017). Higher education (HE) institutions increasingly compete for talented graduates in the global arena and are keen to attract an international student population (Suharti, Handoko & Haruta, 2019). These trends are also visible in Japan, where the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) has promulgated a comprehensive, partially incentivized HE reform program. Among many goals, it aims to “... help students develop the ability to act globally and accelerating other globalization initiatives” (Top Global University, MEXT, 2020).

Underlying these expectations is an assumption that universities play a crucial role in cultivating students with a global mindset. Studies of cultural competence concur that a global mindset – underpinned by the notion of intercultural competence (ICC) (Roux, 2018) – must be intentionally developed through guided training and effective learning experiences (Berardo & Deardorff, 2012; Sit et al., 2017). Research typically suggest a broad variety of learning and training interventions to cultivate a global mindset. These include lectures, short courses, skills-training workshops, foreign immersions and/or fieldwork, among others (Kedia & Mukherji, 1999; Fischer, 2011; Berardo & Deardorff, 2012; Leung, Ang & Tan, 2014). Over time, guided training and the learning experiences forthcoming from exposure to diverse stimuli provided by unknown environments, languages, traditions and values help to instill a flexible mind and a way of being that reflects ICC and signifies a global mindset (Roux, 2018).

ICC research has broad interdisciplinary roots that has been criticized for lacking a single comprehensive approach, but a recent construct – cultural intelligence (CQ) (Ang, Van Dyne & Tan, 2011; Ang, Van Dyne & Rockstuhl, 2012) – has shown particular promise in helping to integrate disparate sets of theories, training and tools (Ang et al., 2011; Leung et al., 2014). CQ applications in HE (Fischer, 2011; Suharti, 2019), points to its strong theoretical overlap with notions of a global mindset and ICC (Kedia & Mukherji, 1999; Roux, 2018). Critically, studies in ICC have highlighted that the training and/or instructional guidance (pedagogy) which should underpin the development of this complex set of skills are not always clear, may be haphazard or sometimes non-existent (Fischer, 2011; Berardo & Deardorff, 2012; Ang et al., 2012; McNab, 2012; Roux, 2018).

The present paper continues a project that centralizes ID issues in CQ education for HE, and in the current instance focuses explicitly on EBL, which is commonly employed in ICC or CQ training (Berardo & Deardorff, 2012; Leung et al., 2014). We consider a broad research question in view of our project’s larger goal and its application in a blended environment: whether EBL needs to be reevaluated and/or adjusted in view of the impact of educational technologies on the learning process. Earlier research linking CQ development through applications of ID theory (Roux & Suzuki, 2017) identified a neglect of cultural influences in the design of instruction and e-learning (Thomas, Mitchell & Joseph, 2002; Clem, 2004; Henderson, 2007; Rogers, Graham & Mayes, 2007, Parrish & Linder-VanBerschot, 2010). Our project created a framework to investigate CQ development using the EBL approach in conjunction with ID theory (Roux & Suzuki, 2017), which was expanded in later iterations to a blended university course focused on developing CQ (Roux et al., 2018, 2019a, 2019b). Results showed CQ increases for participants, but also indicated that EBL for CQ development in a blended setting needs further refinement and explication.

For the current purpose, we therefore focus mostly on theoretical aspects of an EBL approach that centralizes CQ *learning*. Because studies utilizing EBL in CQ development remain sparse (McNab, 2012; Sit et al., 2017), we aim to explore some theoretical links, and present a few preliminary findings to invite future development. To this end, we briefly review and discuss (1) CQ and its current relevance; (2) the features of, and rationale for EBL, and how it links with CQ theory, and (3) how a blended approach was utilized in our project. Limited survey data are presented to explicate our line of enquiry with regard to the role of EBL in a blended HE environment, while findings consider the instructional implications for CQ learning.

Cultural Intelligence (CQ)

Globalization is increasing cultural diversity, necessitating a comprehensive understanding of what it means to be interculturally competent. Developments in the ICC field has recently suggested the notion of CQ, which is broadly defined as... “an individual’s capability to function effectively in culturally diverse settings” (Ang et al., 2011). CQ helps people develop an overall perspective and manner of interacting with culturally unfamiliar situations, rather than expecting individuals to master all the values, norms and practices of only certain cultures (Ang et al., 2012). In culturally unfamiliar situations, where the perspectives and behaviors of others may seem bizarre or random, having a high CQ means taking in the confusing situation, carefully reflecting about what is happening – or not happening – and making appropriate adjustments to understand, relate and/or react to what is happening. This complex skillset, which anyone can acquire, comes about with guided learning and experience over time (Livermore, 2011).

The Cultural Intelligence Center¹ identify four CQ capabilities to characterize intercultural capacity: (1) *CQ drive* – a person’s motivation, interest and confidence in settings with cultural diversity; (2) *CQ knowledge* – how cultures are similar or different; (3) *CQ strategy* – how we make sense of culturally diverse experiences and social situations; and, (4) *CQ action* – the capability to adapt one’s verbal and non-verbal cultural behavior to suit a particular context. CQ is therefore distinctive from IQ (general mental ability) and EQ (emotional intelligence) in that it identifies a set of

¹ The Cultural Intelligence Center <https://culturalq.com/>

capabilities necessary for personal and professional success in multicultural contexts. CQ is thus set of malleable capabilities that enables effective functioning in culturally diverse settings (Ang & Van Dyne, 2008; Ang et al., 2012).

CQ is an encapsulating construct for ICC, retains predictive validity across contexts, and is practically useful since it explicates the capacities required for success in diverse situations, whether these are domestic or international (Ang et al., 2012; Leung et al., 2014). CQ studies demonstrate a positive impact on graduates (Fischer, 2011; Sit, et al., 2017; Roux & Suzuki, 2017), while EBL for CQ development has also shown effectiveness (Ng, Van Dyne & Ang, 2009; MacNab, Brislin & Worthley, 2012; Leung et al., 2014). Since the CQ model is still relatively new, instructional models for its application remain scarce (MacNab et al., 2012; Roux et al., 2018), while ID studies have highlighted the necessity for acknowledging cultural influences in learning design (Parrish & Linder-Vanberschot, 2010; Clem, 2004; Thomas, Mitchell & Joseph, 2002). These issues remain fundamental to our project and the aim here is to consider whether an EBL approach in CQ education retains utility in blended environments.

Experiential learning

To develop ICC and/or CQ, EBL approaches have often been cited as more effective than traditional didactic or cognitive educational methods (MacNab, et al., 2012; Eisenberg, Lee, Brück, Brenner, Claes, Mironski & Bell, 2013; Sit et al., 2017; Ng, Van Dyne & Ang, 2009). Furthermore, EBL's continued popularity seems linked to its broad application: formal and informal types of learning, as well as incidental, lifelong and workplace learning (Andresen, Boud & Cohen, 1995). At its most succinct, learning was defined by Kolb (1984, p. 38) as: "... the process whereby knowledge is created through the transformation of experience". Learning is therefore not simply reducible to a single set of methods, strategies or formulas. Instead, Andresen et al. (1995) typifies EBL as uniquely able to integrate learning material in a personally meaningful way. Learning designs that follow this approach thus aim for: (i) learners' personal engagement; (ii) debriefing and reflection as required stages; (iii) learning that involves the whole person (affect, cognition, senses, etc.); (iv) a recognition of what the learner brings to the learning process; (v) a basic ethical stance toward the learner that includes values of respect, validation, trust, etc. (Andresen et al., 1995).

Although research in the area of CQ development through EBL methods remain scarce, MacNab (2012) suggests that it remains the most promising approach given its value in addressing all of the dimensions identified in the CQ model (meta-cognition/strategy, cognition/thought, motivation/interest, and behavior/action). For instance, CQ training that utilized EBL (MacNab, 2012; Eisenberg et al., 2013) involved a processual approach and delivered rich results, with participants reporting a meaningful experience. Similar findings indicated that "learning through doing" (Sit et al., 2017, pg. 3) was more effective in improving cross-cultural adjustment. A framework for learning and investigation that specifically integrated corresponding components of EBL and CQ (Roux & Suzuki, 2017) further demonstrated a positive effect on learners' CQ development. The strength of EBL therefore seems to lie in its ability to activate and further an intrapersonal process that leads to personal growth in the areas of ICC/CQ.

Despite its many benefits, a critical review of more than 80 studies that utilized EBL in a variety of learning environments (Gosen & Washbush, 2004) points to an inconclusive finding in terms of its effectiveness. The key issue is that a single means for assessing and capturing the individual reflective learning experience remains elusive due to the unique and complex nature of the learning experience (Gosen & Washbush, 2004). Nevertheless, we suggest that the widespread and well-documented use of EBL in education, across disciplines in HE, as well as in CQ training (MacNab, 2012; Eisenberg et al., 2013; Sit et al., 2017; Roux et al., 2018) demonstrate a sufficient credibility for continued exploration of its validity in CQ education and training within the HE context.

Blended Learning

Computer-assisted learning and the Internet has radically changed the teaching paradigm (Alonso et al., 2005), challenging HE to adopt appropriate pedagogies. Blended learning offers useful possibilities to enhance the traditional ways of learning and is well suited to accommodate the variable influences brought about through the continuous introduction of new technologies (Dziuban, Hartman & Moskal, 2004). This model 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; Watson, 2008). Defined as "... a pedagogical approach that combines the effectiveness and socialization opportunities of the classroom with the technologically advanced possibilities of the online environment..." (Dziuban et al. 2004, p. 3), it has potential for maximizing advantages of both worlds, as learners and instructors assume new roles in the learning process.

Practically speaking, blended learning can occur in a range of situations that sees technologies combined with traditional approaches. Typically, this occurs along a continuum that ranges from fully traditional, face-to-face (F2F)

situations at the one end, to completely online, at a distance and with no F2F interactions involved at the other end (Watson, 2004). This type of learning is thus a fundamental redesign of the instructional model and has particular relevance here since a significant portion of our learning intervention were achieved utilizing online support, despite occurring in a traditional F2F environment. Reports from earlier stages in this project (Roux et al., 2018; 2019a; 2019b), indicated that this model is well-suited to both EBL and CQ education, thus supporting our current line of enquiry.

CQ learning, EBL & Blended learning: Theoretical alignments and research considerations

CQ theorists adopt the position that individuals can be educated and trained to develop their ICC over time, and that this growth is a mental process encompassing knowledge, personal competencies and actionable behaviors (Leung et al., 2014). Earlier discussion pointed to sufficient rationale for EBL to be employed as an instructional method for CQ education. Both EBL and CQ theory favor a holistic approach with the learner at the centre, encouraging active learning and aiming for an integrative and transformative experience. These parallels inform the foundations of our framework (Roux & Suzuki, 2017) that investigates CQ education. This approach grew out of the research contention that ICC lacks a pedagogy to further CQ education (Fischer, 2011; MacNab, 2012; Eisenberg et al., 2013; Roux & Suzuki, 2017; Sit et al., 2017; Roux et al., 2018). Our framework integrated ID, EBL and CQ theory, aimed for effective learning, tracked and evaluated the ICC learning process and delivered rich data for a learning analysis. Later iterations (Roux et al., 2018; 2019a & 2019b) utilized this framework in a blended environment with Japanese undergraduates enrolled in a 15-week ICC course. Findings indicated that the blended format was conducive to CQ learning since it allowed for a facilitated, variable and alternately focused manner of instruction in a F2F classroom context, while simultaneously allowing for the use of online technologies as learning tools. Figure 1 below (Roux et al., 2018) depicts this blended approach with all its components.

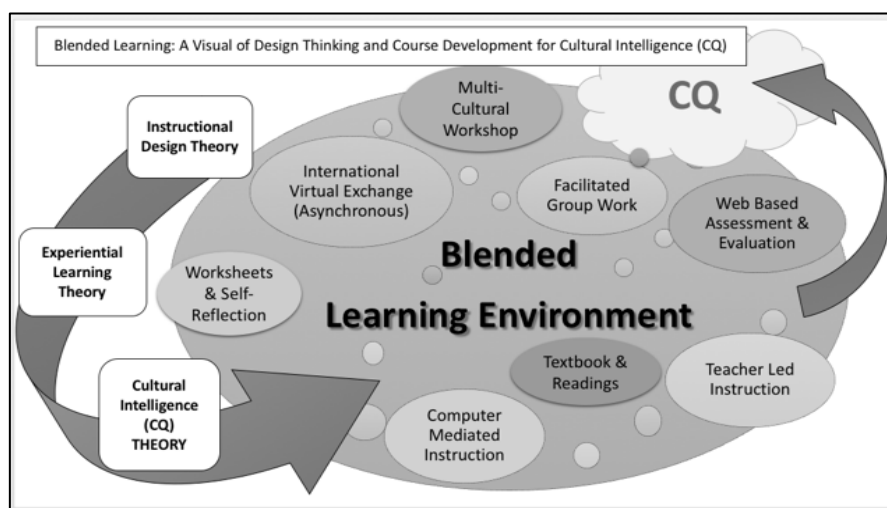


Figure 1. A blended learning model for CQ (Roux et al., 2018)

For the current purpose, we draw attention to the EBL approach that informed the design for the classroom learning activities in the abovementioned course. In alignment with our project's goal and in consideration of the blended situation, we consider a broad research question: whether EBL needs to be reevaluated and/or adjusted in view of the impact of educational technologies on the learning process.

Research Design, Methods and Procedures

Course designs for CQ

Expanding on our framework for CQ learning (Roux & Suzuki, 2017), we designed and implemented a 15-week ICC course. Learning content (figure 1) included the following: (a) textbook studies; (b) classroom worksheets; (c) a series of mini-lectures; (d) experience-based classroom activities (in groups/pairs); (e) online media (videos, audio, readings, public lectures); (f) one multi-cultural workshop; (g) a Moodle-based international virtual exchange with students in a foreign setting; and (h) homework, based on a flipped model of instruction (Roux et al., 2018).

Procedures and context

Classes were conducted weekly in a F2F blended environment and instructional methods included variations of facilitated group- and/or pair work, online media (on PCs or smart devices) and lectures. Students met weekly for a 90-minute, F2F class in a PC lab with Wi-Fi and audio-visual equipment. The course included a Moodle-based, asynchronous exchange with a group of Colombian college students. Thirty undergraduates (2nd & 3rd years) participated and the gender balance was 63% female and 37% male. The majority of the group (64%) reported limited to moderate prior intercultural experience.

Measurement and analysis

Short, weekly learning reflections to track course engagement were recorded online through Google forms. Self-assessments are typical of an EBL approach and were analyzed to provide insights into learner progress and to guide instructional procedures. In addition, more extensive summative and formative evaluations took place at 4 intervals to get a sense of learner participation and performance. These learning reflections and evaluations included both structured feedback and unstructured ('free comments') sections to gather learner feedback, on the premise that it would invite both targeted and unsolicited learning self-reflections that could link to the goals of our investigation. In terms of the EBL approach, Lewis & Williams (1994) observe that methods which combine learners' previous experiences, link conceptual foundations with practice and encourage reflection are pivotal for personal learning. Earlier research (Roux et al., 2018; Roux et al., 2019a; 2019b) suggested that EBL is well-suited for CQ training but needed further exploration to determine exactly how these EBL methods (such as classroom-based, online interactions, and guided interactive activities) can be linked to CQ growth.

Results

Assessing learning impact

In terms of EBL's impact, four self-assessed structured learning reflections were analysed to gain insights into participant learning and knowledge retention, combined into a self-assessed overall learning impact for each learning reflection/review (Figure 2). The reviews were directly related to the course's learning and was summarized along four content-based themes: (*Review 1*) What is culture? Hidden culture and differences; (*Review 2*) Conflict & identifying conflict; (*Review 3*) Values and belief systems – role in conflict; (*Review 4*) Perception & stereotypes.

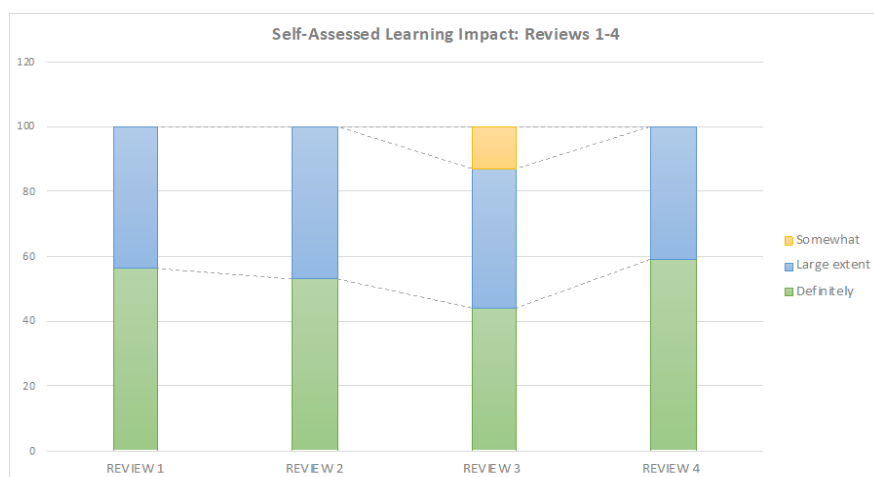


Figure 2. Self-assessed overall learning impact as indicated by course reviews

Analysis attempted to gain a sense of the broad impact of learning based on the rating participants gave in answer to a single question: *How successful did you learn about (contents of this module) and culture?* – during each learning reflection. It was assessed on a 3-point Likert scale: *definitely* – *large extent* – *somewhat*. Analysis shows the variable self-assessed impact that cultural learning had on students and indicate (in %) a self-ascribed value that, for the majority of students, shows a learning impact in the *definitely* – *large extent* range. This depiction also makes it possible to see the comparative variable impact of each module in relation to the others, thus providing guidance for instructional adjustments.

A further breakdown of the learning impact, as reflected through each separate learning review is presented below in figures 3, 4, 5 and 6. Students reflected on, and gave a self-assessed indication of their engagement with each course module. These learning statements were designed as attempts to capture student understandings regarding the knowledge and content of the course, to gain insights about thinking and behaviours, and to obtain a self-estimated impact of the learning on future behaviours. Choices to measure the impact were arranged as follows: *a little – somewhat – large extent – definitely*. The structured reflection statements were: (1) *I got new insights and it made me think deeply* (2) *I will change my actions and behaviour towards other people*; (3) *I will change my thinking and behaviour in the future*; and (4) *It made me question my identity*. No instances of ‘a little’ were recorded on the scale and this category was therefore eliminated in the analysis.

Results for review 1 (figure 3 – *What is culture?*) indicate impactful learning that links to knowledge building, critical thinking and assessment of consequent future behaviour. This is perhaps to be expected given the theoretical nature of the module contents. The majority of participants reported an impactful learning experience (*large extent – definitely*), but less pronounced on assessing the impact on their identity. Results for review 2 (figure 4 – *conflict & identifying conflict*) points to an emphasis on student knowledge gains and a potential impact on personal future behaviors, and to a lesser extent, gaining new personal insights and potential actions toward others in the future. Again, the majority of participants indicated an impactful learning experience (*large extent – definitely*), but less pronounced on assessing the impact on their identity. The results for review 3 (figure 5 – *values & belief systems*), shows a comparatively less pronounced effect overall for the majority of participants; and although less, still impacted cognition in the areas under study. Review 4 (figure 6 – *perception & stereotypes*) shows a pronounced impact on students’ thinking, an impact on how they viewed their own behavior, including actions toward others and a consideration of their identity, with a potential impact on thoughts and behaviors in the future.

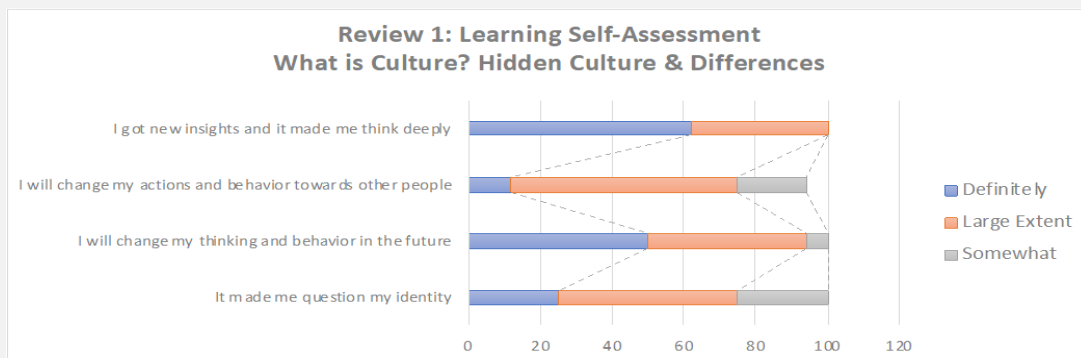


Figure 3. Learning self-assessment – Review 1

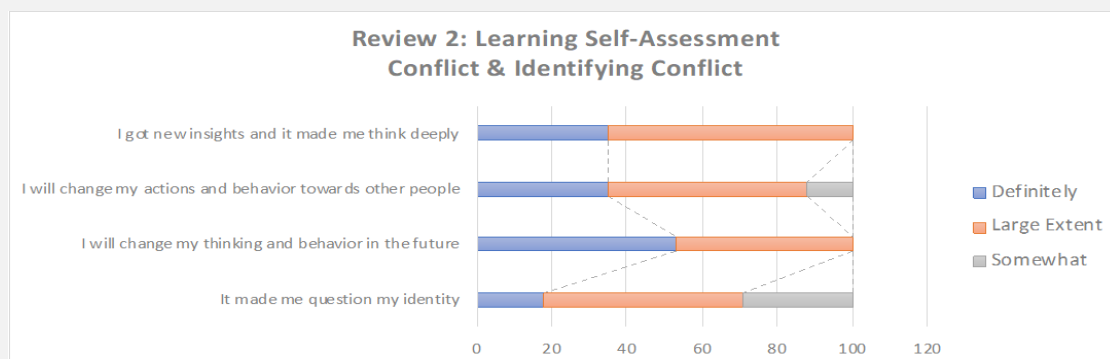


Figure 4. Learning self-assessment – Review 2

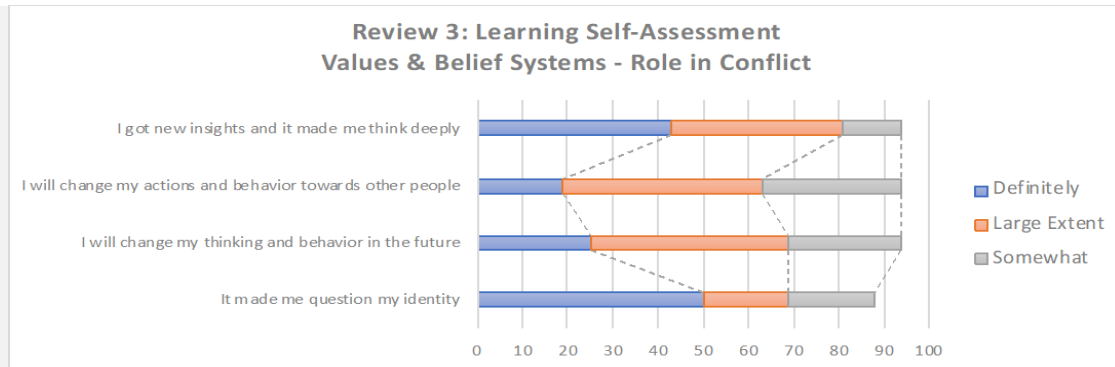


Figure 5. Learning self-assessment – Review 3

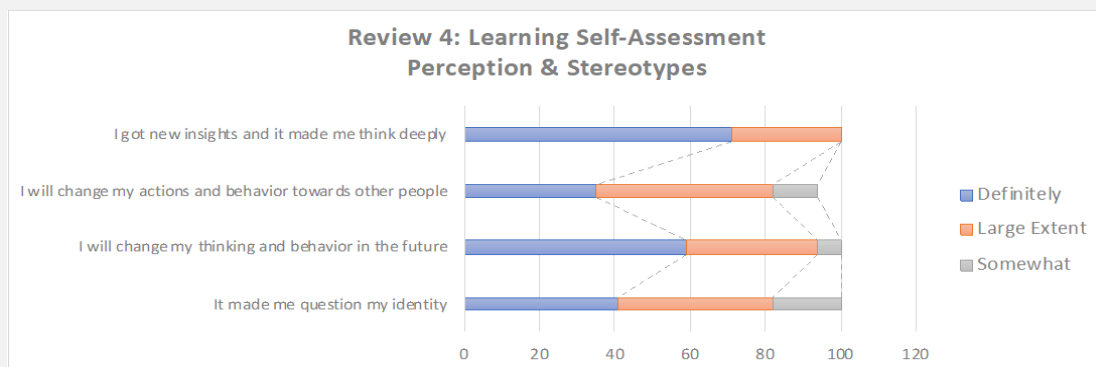


Figure 6. Learning self-assessment – Review 4

Summary of Findings

The current paper explored the value of an EBL approach to support CQ education in a blended undergraduate course. To support the investigation, it further presented limited data from participants' self-assessed learning reflections to help evaluate the potential impact of intercultural learning that could be tied to CQ development. A brief review of the relevant literature indicated strong theoretical support for an EBL approach to CQ education, whereas earlier results from our larger project concerned with developing a CQ pedagogy further extended support for the current line of inquiry (Roux & Suzuki, 2017; Roux et al., 2018, 2019a, 2019b). The current set of preliminary results indicate an impactful learning experience, in terms of cultural learning, as self-assessed by our participants. To slightly extend this finding, it is relevant to note that the summative results from this course (used for grading), reflected high average scores on tests/quizzes, suggesting cognitive gains in the evaluated areas of learning. These were associated and interpreted as general support for CQ knowledge advances: the CQ growth gains were independently assessed and reported elsewhere (Roux et al., 2018; 2019a).

In terms of the potential value of EBL as a learning approach in CQ education, we were able to discern some effect along four main themes gleaned from participants' reflective feedback: (1) insightful understanding and integration of new cultural knowledge; (2) a perceived potential impact on actions and behaviours toward other people as a result of the classroom learning experiences; (3) a forecasted impact on future thinking (strategies) and action with regard to new experiences; and (4) a clear, if limited, engagement with the classroom experience to the extent that participants felt they could relate it to their (personal/cultural) identity. Connecting these themes with CQ gains seems tenable at this stage, despite the fact that it is a relatively superficial level of analysis. It is however far less clear *how* EBL specifically has contributed to these findings, and the investigation therefore points to the likelihood that EBL performs a very complex role during CQ education. While the learning reflection surveys and reviews provided insights into different elements of the blended CQ course, they gave virtually no information in terms of the specific impact of EBL, nor the use of certain adjacent tools as such. If these reflections are taken as indications that CQ learning advanced, it is imperative that the means for evaluating the impact of EBL are better understood. Furthermore, the exact features of the educative technologies that helped to achieve this result need to be more carefully specified. Current indications are encouraging in terms of the larger project goal, but a more sophisticated approach for assessing the role of EBL will be required if a more comprehensive understanding of a blended pedagogy for CQ is desired.

Conclusion

As part of a larger project that applies ID theory to the development of CQ, this paper explored the rationale for, and utilization of EBL in a blended environment. The current effort further considered results from an analysis of the CQ learning impact reported by undergraduates. A brief literature review shows sufficient theoretical support for using an EBL approach in CQ education, while the self-assessed learning reflection analyses indicate an impactful learning result. Although these findings could be linked to CQ learning, it was not possible (beyond the reported theoretical rationale) to evaluate the role and exact contribution of the EBL approach that presumably helped to deliver this result. Beyond tracing learner reflections and theoretical support, it therefore remains to be determined how an EBL approach to CQ education should be assessed and evaluated. We aim to continue with a more exacting investigation of the EBL approach – utilizing ID methodology – to build a comprehensive CQ pedagogy.

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