STUDENTS' PERSPECTIVES ON THE IMPACT OF BLACKBOARD COLLABORATE ON OPEN UNIVERSITY AUSTRALIA (OUA) ONLINE LEARNING

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ABSTRACT

Blackboard Collaborate (BC), a synchronous, multimodal platform, has been incorporated into Open University Australia (OUA) students' online learning experiences. This study sought to investigate the perspectives of 134 interdisciplinary OUA students via an online survey and follow-up interviews. Findings revealed students' positive perceptions about BC as an engaging, real-time medium for feedback exchange, knowledge sharing, and virtual community building. Despite appreciating lecturers' telepresence, some students preferred not to show faces or use voice chat and queried the expediency of the BC technology and the timing of lecturer feedback, however. This investigation highlighted the pedagogical implications of synchronous teaching in distance education.

Keywords: virtual community building, open universities Australia, blackboard collaborate, distance learning, synchronous mode, telepresence and copresence

INTRODUCTION AND BACKGROUND

Online courses overcome distance and time limitations and allow students in rural and remote locations in Australia to receive a quality education from Australian universities that meets their needs. Online students can access lecture materials, view content, participate in online discussions, and receive the same qualification as their counterparts in traditional, face-to-face classes on university campuses. Many of the courses offered in face-to-face mode at our institution and at many others across Australia are also offered online through Open University Australia (OUA). OUA provides learning opportunities and flexibility for students who cannot attend classes regularly on campus (due to the constraints of distance and scheduling) and offers enrollment irrespective of previous levels of education. OUA students can enroll in single subjects or in a full degree, and they can also enroll in a four-subject pathway course in a chosen field before committing to a degree program (Open Universities Australia, 2018). For these online students, the delivery mode of course content can influence the way they learn and engage with tutors and peers.

There are three different delivery modes through which online courses are offered. First, the asynchronous mode allows students to access course materials at their convenience via a learning management system (LMS) like Blackboard or Moodle. Second, the synchronous mode offers live interaction through web conferencing with tutors and peers. Third, the hybrid or blended learning mode combines both asynchronous and synchronous delivery (Alexander, Lynch, Rabinovich, & Knutel, 2014). While lecture materials, content, and discussion in OUA courses can be accessed asynchronously anytime, students have suggested in unit eVALUate evaluations (a university tool to gather student feedback on their

learning experiences) that a synchronous element be added to OUA units to allow students to interact with their tutors and peers in real time. Blackboard Collaborate (BC), a web-delivered system within the Blackboard LMS, features text, voice chat, and an interactive whiteboard that allows for collaborative videoconferencing sessions.

The use of BC as a videoconferencing tool is not in its infancy and is the main platform widely used across OUA units, particularly in our institution, and therefore it warrants closer scrutiny in terms of its role in effective learning and teaching. However, at the moment, studies done on implementing BC in online units in the Australian context are relatively scarce. Of interest to this particular study is whether BC can mitigate virtual distance and also foster online students' learning experiences. The next two sections provide a brief review of asynchronous and synchronous online learning, the functionality of tools such as BC, and the findings of previous studies in the area in terms of students' views on using such tools to construct a real-time virtual classroom, before moving on to the findings of the study.

LITERATURE REVIEW

Asynchronous vs. synchronous learning

An asynchronous mode of learning involves the delivery of learning materials via an LMS, such as Moodle or Blackboard. Students access weekly course content, announcements, and learning materials, and they interact with tutors and peers through discussion boards or emails (Reese, 2014). This mode of learning offers several advantages to students and is marked by its convenience and flexibility, which allow students to balance studies with work or family responsibilities (Buxton, 2014; Hrastinski, 2008). Because students work through course materials at their own pace, higher-order thinking skills can be developed (Alexander et al., 2014; Hrastinski, 2008; Huang & Hsiao, 2012) since students have more time to engage with ideas and formulate responses (Skylar, 2009). Huang and Hsiao (2012) also found that asynchronous discussion allowed for equal participation and prevented talk from being dominated by a small group of students, which is a common scenario in real-time online sessions. However, Chou (2002) noted that student interaction on discussion boards is often limited to the posting of personal viewpoints rather than the critique of other students' opinions. Due to the time flexibility of this mode of learning, another disadvantage is that students may experience delays in receiving feedback or responses from tutors (Alexander et al., 2014; Branon & Essex, 2001). Moreover, communicating in an asynchronous online environment can cause students to feel that they are alone or lacking simultaneous connection with their tutors and peers (Branon & Essex, 2001; Huang & Hsiao, 2012; Tunceren, Kaur, Mullins, & Slimp, 2015).

The hallmark of the synchronous delivery mode is that it is live, real-time learning which aims to replicate face-to-face instruction (Rudd & Rudd, 2014; Yamagata-Lynch, 2014). Many LMS platforms offer a web-conferencing component. The key features of such tools include video and audio streaming, recording capabilities, text messaging, an interactive whiteboard, live polling and quizzes, sharing of files and applications, and breakout rooms for students to interact in small groups (Cornelius, 2014). The benefits of this delivery mode include reduced virtual isolation for online learners (Akarasriworn & Ku, 2013; Hrastinski, 2008), feelings of connection among users (Huang & Hsiao, 2012), as well as increased virtual presence (Yamagata-Lynch, 2014). As Jaggars (2014) pointed out, online learning lacks face-to-face contact with a lecturer, which can lead students to feel that they are "teaching themselves" (p. 31) the course content, but synchronous delivery can ameliorate this to some extent. Linked to this is the benefit of immediate feedback where students can ask questions in a live session and receive instant answers (Martin, Parker, & Deale, 2012; Skylar, 2009). A further benefit is the spontaneity of discussion similar to that experienced in a campus-based classroom (Yamagata-Lynch, 2014). Rudd and Rudd (2014) highlighted the benefit of being able to read nonverbal communication signals if tutors and students use their video cameras during synchronous sessions.

While interaction and communication are enriched through video conferencing, synchronous delivery could be considered antithetical to online education's main benefit of "anytime, anywhere learning" (Skylar, 2009, p. 71). Time zone differences (Tunceren et al., 2015) and conflicting schedules can prevent students

from attending synchronous sessions (Huang & Hsiao, 2012). Additionally, technical difficulties have been reported in multiple studies as being a disadvantage to video-conferencing. For example, audio problems often cause students to resort to the chat function rather than use a microphone (Cornelius, 2014). Poor audio and video quality can cause delays and interfere with communication (Akarasriworn and Ku, 2013) and the delivery of learning content (Huang & Hsiao, 2012). Having a weak internet connection is a further inhibitor of successful online experiences (Lavolette et al., 2010, Rudd & Rudd, 2014) and students accessing synchronous software from a workplace computer may encounter issues with network firewalls (Michael, 2012).

Overall, the benefits and challenges of both asynchronous and synchronous modes of online learning and teaching have been identified in a large body of work. It has been argued, however, that online learning design should incorporate the use of both platforms as "both formats play a part in keeping students connected, learning the content and providing satisfaction in the online classroom" (Watts, 2016, p. 30). The use of asynchronous platforms alone may fail to facilitate a sense of presence in a learning community or learning situations that require real-time sharing of audio-visual materials and live conversation (Bower et al., 2014). Furthermore, Reese (2014) argued that online learning is more than the delivery of content but rather a means to learning that involves tutor support and peer interaction. Indeed, "in order to replicate the instructional strategies and community development capabilities of traditional classrooms, online learning environments need to implement both synchronous and asynchronous platforms where students can engage" (Reese, 2014, p. 583).

Blackboard Collaborate and students' views about using it

When examining the use of BC in the literature, it is important to acknowledge its predecessors, Elluminate Inc. and Wimba Inc., two other widely used synchronous learning platforms. These two platforms were acquired by Blackboard Inc. in 2010 (PR Newswire, 2010) and subsequently reimagined as Blackboard Collaborate. Thus, the literature on students' experiences with Elluminate and Wimba may also be useful in the context of our study because they can provide an understanding of the way that synchronous tools are viewed by online learners.

The use of Elluminate for online course delivery has been shown to have multiple benefits for students, such as improved engagement and connection (Reushle & Loch, 2008), more social interaction (Akarasriworn & Ku, 2013; McBrien & Jones, 2009; Skylar, 2009), and the opportunity for involvement in classroom discussion and immediate responses to queries (Reushle & Loch, 2008). Online students are also afforded more opportunities for collaboration with peers in synchronous sessions that can assist with higher-order thinking for group problem solving (Akarasriworn & Ku, 2013). In addition, Elluminate sessions can encourage and empower students to participate in discussion and express their views, according to McBrien and Jones (2009). However, the literature also reveals challenges for students in using the Elluminate tool. Technical difficulties such as poor audio quality (Akarisriworn & Ku, 2013), microphone issues, and trouble logging into the session can impact student interaction and cause frustration (McBrien & Jones, 2009). Other issues also lead to students' negative perceptions about online learning, such as a lack of nonverbal communication signals (McBrien & Jones, 2009), difficulty attending scheduled sessions due to other commitments (Reushle & Loch, 2008), and overstimulation due to multiple communication feeds (McBrien & Jones, 2009).

Wimba Classroom, another popular videoconferencing tool, has similar benefits and drawbacks to those of Elluminate. Wimba has been shown to improve the learning experience for online students (Lonie & Andrews, 2009) and enhance the quality, convenience, and flexibility of interactions between tutors and online students (Carrington, Kim, & Strooper, 2010). Feelings of connectedness and collaboration between students and staff can be increased due to multiway audio and video feeds (Lavine, Greenberg, Chen, Kao, & Lin, 2012). Lonie and Andrews (2009) noted that miscommunications could occur when using Wimba, however, due to a lack of body language or misinterpretion of facial expressions. Their study required both students and the tutor to increase levels of feedback to address such issues. Similar to Elluminate, technical issues with Wimba's virtual

platform, such as slow internet speeds, blurry video feed, and being logged out of sessions, can result in frustration and time wasted for students (Lavine et al., 2012).

There are only a few studies on the use of BC in an Australian university setting. Wu, Pienaar, O'Brien, and Feng. (2013) found that by combining asynchronous activities with weekly BC sessions, student satisfaction rates in distance education construction programs were increased. Wdowik (2014) utilized BC for exam revision sessions and found that student learning was enhanced because students were actively engaged in the online community. There was also an increase in student-teacher and student-student interaction through the synchronous sessions. Sijia Guo (2013) used BC for campus-based students studying a Chinese language unit. The findings showed that students were engaged and found the real-time sessions helpful for several aspects of language learning. Some interesting comments about the features of BC indicated that students utilized the audio feed more than the video feed, and that students liked the hand raising feature for gaining the tutor's attention. They showed a preference for the main room, where they had access to the tutor's help, rather than the peer-led collaborative activities in breakout rooms.

Within an international context, American nursing students enjoyed weekly video-conferencing sessions as they were highly interactive and " . . . online learning using Collaborate made learning comparable or better than face-to-face methods" (Foronda & Lippincott, 2014, p. 5). Students also described BC sessions as a flexible and convenient learning experience as they could participate from home and watch recorded sessions if necessary. This differs from Skylar's (2009) view that a synchronous environment removes the anywhere, anytime nature of online study, which may suggest that students are willing to sacrifice the flexibility of time in order to participate in a live classroom setting from home. Tonsmann (2014) utilized BC for a discrete mathematics course at a large American university through twice weekly sessions over eight weeks. Students indicated that they would like to enroll in synchronous online courses in the future. One drawback for students was difficulty in drawing mathematical equations on the interactive whiteboard using a mouse. The author argued that those students who watched recorded sessions instead of attending a live session would likely be disadvantaged because of the complexity of the mathematical content and their diminished ability to participate with peers and the tutor.

RESEARCH DESIGN

The study described here was pedagogically motivated by the fact that BC has been introduced to the OUA units in our institution and that students often express a desire for synchronous interaction to be included alongside asynchronous discussion boards in their course of study. It was also driven by the current lack of investigation into the use of BC and its impact on the learning experiences of online students in an Australian context.

A convergent mixed-methods design was adopted because "the use of both quantitative and qualitative methods, in combination, provides a better understanding of the research problem and question than either method by itself" (Creswell, 2012, p. 535). Mixed-methods approaches have also long been seen as "legitimate inquiry" research designs (Brewer & Hunter, 1989, p. 28). Thus, the rationale for collecting both qualitative and quantitative data was that both sets of data could be collected simultaneously and employed to triangulate and verify data collected from the same participants (Creswell, 2012). In this instance, the first section of the survey instrument comprised of closed-ended questions to elicit responses quantitatively while the second section contained open-ended questions that qualitatively mirrored those in the one-on-one, semistructured interviews. The two components of data could be "merged," integrated, "linked," and embedded to make the findings richer and address the research aims more comprehensively (Creswell, 2012, p. 535). Two key research questions were raised in the study:

1. What are students' perceptions of the usefulness of Blackboard Collaborate in online units?
2. What is the extent to which Blackboard Collaborate enhances the learning experiences and engagement of online students?

METHODOLOGY

Setting and participants

OUA students in the Faculties of Arts and

Humanities were contacted via their OUA tutors with information about the study and an invitation to participate. Students were provided with an online survey link and in total 148 students (22 males and 126 females) completed the survey. The sample consisted of 89 Bachelor of Education (Primary) students, three Bachelor of Education (Secondary) students, 34 Bachelor of Education (Early Childhood) students, one Graduate Certificate in TESOL student, and 21 students from the School of Built Environment studying either Architecture, Interior Architecture or Construction Management. The entire cohort comprised of 92 first-year students, 42 second-year students, eight third-year students, four fourth-year students, and two postgraduates. When asked about their online learning experiences, the majority of the students (N = 131) had experienced BC in their OUA units (see Fig. 1). Only 17 students indicated that it was their first time using this platform in their online units.

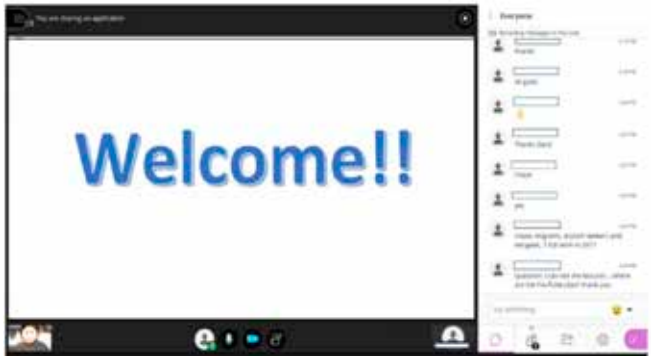

Figure 1. A screenshot of a real-time BC session (teacher/student identities removed)

Data Collection

Quantitative data were collected through an online survey consisting of demographic and closed-ended items. Student participants were asked to rate a list of close-ended statements designed to draw out their views of BC on a five-point Likert scale from Strongly Disagree to Strongly Agree. After initial data screening for item responses, 14 invalid user responses were discarded (respondents did not answer all survey items) whereas 134 participants provided valid responses that were gathered for data analysis for the sake of data validity. To measure the internal consistency of the survey items, a satisfactory level of Cronbach's alpha at .84 was also reached. The complete list of close-ended item statements is presented in Table 2 in the Quantitative Findings section.

Qualitative data were gathered via five open-ended survey questions asking about students' learning experiences with BC in online units. These items probed their use or lack of use of BC and the perceived benefits and drawbacks of BC. Students were also asked to compare their experiences of studying in an online unit with or without the use of BC. Additional qualitative data were obtained through semistructured, one-on-one, in-depth interviews where students were asked to elaborate on their responses to the open-ended items in the survey. In order to recruit the potential interviewees, survey participants were asked in the final item of the survey if they wished to take part in a follow-up interview and, if so, to provide their contact information. Twenty-eight students provided their contact details and were emailed to schedule a convenient interview time via BC since they were already familiar with this platform. Twelve students subsequently responded to the follow-up email and attended a BC-enabled interview session (see Table 1 for a complete list of interview questions).

The study was approved by the university's Human Research Ethics Committee. Completion of the survey was taken as student confirmation of consent to participate in the study. Those students who were interviewed also completed a signed consent form to indicate their willingness to be interviewed and were informed that data would be anonymized to protect their privacy.

Table 1 Semistructured Interview Questions for Online Students

1.	Do you ever make use of Blackboard Collaborate provided in your units of study?
2.	If so, which units? What do you use Blackboard Collaborate for?
3.	If not, why not?
4.	What are the benefits of using Blackboard Collaborate for an online unit do you think?
5.	What are the drawbacks to Blackboard Collaborate?
6.	How would you compare your learning experience in an online unit which incorporates Blackboard Collaborate to your experiences in an online unit without a Blackboard Collaborate component?
7.	How engaged do you feel when you are in a Collaborate session?
8.	How accessible do you feel the content is in a Collaborate session?

Data Analysis

Thematic analysis was employed to analyze the qualitative data gathered from students' responses to the open-ended survey and interview questions. This allowed insiders' experiences and understandings of BC-enabled learning to be interpreted in depth and a holistic picture of the investigated phenomenon to be captured (Miles, Huberman, & Saldana, 2014). The process began with each researcher closely analyzing the interview transcripts and open-ended survey item responses in order to make sense of the data as a whole. While analyzing the data, each researcher also attached codes to identified patterns recursively arising from the transcripts and open-ended survey item responses. Next, they shared and compared their initial coding while discussing and resolving discrepancies in pattern interpretations before higher-order conceptual themes were finalized (Merriam, 2009). To ensure interpretive validity, the allocation of responses to the different thematic categories by the Chief Investigator was cross-checked by both the coresearcher and the research assistant employed for the study. Quantitative data in the form of students' closed-ended survey item responses were measured using descriptive statistical procedures. Table 2 below presents a complete list of closed-ended survey items and related statistical results.

Quantitative Findings

The survey data revealed that online students generally perceived the inclusion of BC in their online units to be "enjoyable" with a high 84.96% agreement (M = 4.34, SD = .83). The "user-friendliness" of BC in facilitating synchronous videoconferencing also led to positive attitudes towards this tool (70.43% agreement; M = 3.94, SD = 1.06). In particular, students preferred having real-time BC sessions to support their online learning as opposed to only relying on generic, asynchronous discussion boards (75.94% agreement; M = 4.13, SD = .99). The synchronous learning component enhanced their online learning experience more than other modes (87.32% agreement; M = 4.39, SD = .91). This finding also correlates with the results drawn from the other two survey items (14, 15) probing into student views about online learning delivered asynchronously (discussion

Table 2 Online Students' Responses to the Closed-ended Survey Items

Closed-ended Survey Items (5 Strongly Agree ~ 1 Strongly Disagree)	Mean	Std. Deviation (SD)	Agree*S.A.
1. I think using BC enhances my online learning experience.	4.39	.91	87.32%
2. I find BC user-friendly.	3.94	1.06	70.43%
3. I feel more engaged when BC is used in an online unit.	4.23	.97	81.2%
4. I feel a sense of belonging to the online class in a BC session.	4.13	.99	75.94%
5. I prefer having BC in an online unit than a totally offline unit.	4.14	.98	74.43%
6. When I am in a BC session, I tend to express my opinions more than on discussion board.	3.34	1.06	38.35%
7. I like to use the microphone to speak in a BC session.	2.93	1.06	24.82%
8. I like to use text chat to communicate with the class in a BC session.	3.90	.91	70.68%
9. I like to show my face via video in a BC session.	2.48	.84	7.52%
10. I like to see my tutor's/lecturer's face in a BC session.	3.81	.97	61.65%
11. I think the interactive whiteboard in BC is helpful.	3.96	.83	67.67%
12. I feel a virtual BC session is similar to a face-to-face class.	3.78	1.12	68.42%
13. I can understand the material better when the lecturer/tutor explains it in a BC session.	4.36	.90	87.97%
14. I prefer an online unit that is delivered in an offline mode because it is easier.	2.65	.98	14.28%
15. I think an online unit that is delivered in an offline mode saves time.	2.82	1.01	21.81%
16. Overall, I enjoy an online unit when BC is included	4.34	.83	84.96%

Note:
1. N=134
2. Cronbach's = .84
3. Agree*S. A. = "Agree" and "Strongly agree" percentage combined

board) and synchronously (BC). That is, students did not favor taking an online unit that was fully asynchronous or consider this mode to be "easier" (M = 2.65, SD = .98) or more time-saving (M = 2.82, SD = 1.01) for online learning—as both item responses were at the lower range of agreement (14.28% and 21.81% respectively).

Also worth noting is students' sense of engagement and belonging in their online units supported by BC. Findings indicated that students felt more engaged (M = 4.23, SD = .97) and accepted as part of the virtual community when BC sessions were conducted (M = 4.13, SD = .99) with 81.2% and 75.94% agreement respectively. They could understand the materials more easily when teachers walked them through the lectures using an interactive whiteboard (67.67% agreement; M = 3.96, SD = .83) and addressed their questions simultaneously, rather than waiting for delayed replies asynchronously (87.97% agreement; M = 4.36, SD = .90). Additionally, more than half of the students responded that attending synchronous BC sessions made them feel as if they were in face-to-face classes (M = 3.78, SD = 1.12) despite the item responses falling slightly below the upper range of agreement (68.42%).

Interestingly, however, online students expressed views about the sense of tele/copresence afforded by BC, which ran contrary to those of their lecturers. Even though more than half of the students preferred seeing lecturers' faces and listening to them talk through lectures (61.65% agreement; M = 3.81, SD = .97), they themselves did not particularly like to be seen or heard. In other words, they disliked speaking through built-in microphones (M = 2.93; SD = 1.06) or turning on cameras to show their faces (M = 2.48; SD = .84), and there was limited agreement with this item, 24.82% and 7.52% respectively. One explanation for this phenomenon could be that the BC "public" space mirrors a physical class where shy students still felt reluctant to expose their faces or speak in public, regardless of the setting. The fact that students tended to "hide behind the scenes" also corresponds to their preference for using text chat rather than voice-based communication in BC sessions (70.86% agreement; M = 3.90; SD = .91). Students were not more vocal in real-time BC sessions (if compared with participating in discussion boards) but favored "taking a back seat" instead (38.35% agreement; M = 3.34; SD = 1.06). This finding is picked up again in the section on qualitative findings and revisited in the discussion.

Qualitative Findings

Open-ended survey items and responses from semistructured interviews revealed three main themes related to students' experiences with using BC as part of their online learning: teaching and learning, virtual community building and expediency of the technology.

In the area of teaching and learning, students talked about BC in terms of its ability to engage and motivate. A couple of students said they were "100% more engaged" with the use of BC while others claimed they enjoyed the sessions and that they sensed everyone in the session was really engaged. On the more negative side, however, this engagement seemed to depend upon the skill of the lecturer, with one student stating, "If they are just going to read the slides, I feel I may have more benefit just reading through myself." Another impediment to total engagement in the BC sessions was student attendance. If numbers are poor then engagement suffers, according to one respondent.

Another positive to incorporating BC sessions into online units was knowledge sharing. Students felt they could "bounce things off each other . . . get clarification on things." This sharing helped students to understand better and get the "bigger picture," they said. The downside to this seemed to be the idea of time being wasted waiting for everyone, particularly if one student dominated the chat and kept asking the same questions repeatedly or new students asked questions that had already been asked in previous sessions. Another point raised was the fact that the "chit chat" can get "a bit crowded" and make it difficult for those who can only access the recording to find information that they need. Linked to knowledge sharing was the notion of feedback. Students felt that the use of BC sessions allowed them to "get clarification on the spot without having to wait for an email" and that learning could be enhanced by being able to ask the questions that they had. The timing of the feedback was important, however. Some students felt that feedback given too late in the semester or study period when assignments were already at the editing stage was more detrimental than useful.

Students also described BC as being beneficial as a multimodal learning tool. Sessions are not

limited to paper resources and can offer deeper exemplification.. The use of many different kinds of resources can actively involve the student and one student commented that this was better value for money. This multimodality can also cater to all learning preferences. One student commented, "I'm a visual learner so I like to see what the lecturer has to offer so I find the visuals very good with the lecturer explaining the visuals at the same time."

Students talked about the usefulness of BC sessions in promoting virtual community building by providing opportunities for growing networks, making friends, and creating connections. This could mean enhancing relationships with the tutor and helping "to provide a more personal experience" or creating a context where friendships between online students could become more personal and a closer classroom community developed. As one student commented, "It was good to talk to others . . . to see we are in the same boat . . . The camaraderie was a nice feeling." This sense of community extended to students feeling that they had the support of their peers in preparing for assessments. One student mentioned that groups of online students who wanted to discuss certain issues went as far as running their own unrecorded BC sessions. She said, "We all got there and hashed it out and bounced off each other."

A lot of the comments made by interviewees related to the expediency of the BC technology. Respondents felt that BC recreated the face-to-face classroom experience or "the closest thing to it" very effectively. It replicated real-time contact well, especially when the camera was used "close up." It was also very accessible. Students could put it on a mobile phone and put on head phones and even cook dinner while they were participating. If they missed the live BC sessions, they could always turn to the recorded version. The downside to BC sessions was the difficulty of finding common times that were convenient for all students. Sessions could become "too long" or move at a "slow pace." Content could be irrelevant and students could feel somewhat passive during lecture style input. Some students also felt that it is "a bit daunting to speak publicly about ideas or issues." This was exacerbated by the recorded nature of the sessions. Overall, more students mentioned they had problems using the technology than those who maintained that BC technology was easy to use.

DISCUSSION

Any discussion about the findings above needs to take into account the context of the study. The profile of students taking the OUA courses is diverse. Students can be located nationally in Australia or internationally, rurally, remotely, or in cities. They can span many different age groups, nationalities, and first languages. They have many reasons for choosing to study online (work commitments, family commitments, lack of places to study where they are located, social anxiety, attraction to the technology). It makes sense, therefore, that participants in the project described varying experiences with Blackboard Collaborate. To some extent their backgrounds and learning preferences would have dictated the experience they had with this learning tool. However, one point of commonality was that they had all chosen to enroll in an online course knowing the pluses and minuses of such courses. It was, therefore, not surprising that, similar to findings reported in prior research at Park University in the USA (Tonsmann, 2014) and closer to home at Central Queensland University, Rockhampton (Wu et al., 2013), students in our study reported positive attitudes towards the inclusion of BC sessions in their fully online units. It seems the synchronous component afforded by BC is conducive to a greater sense of engagement (Reese, 2014) as opposed to the isolation often reported in asynchronous learning (Branon & Essex, 2001; Huang & Hsiao, 2012; Tunceren et al., 2015). Simultaneous real-time interaction can play a crucial role in online units as it emulates face-to-face interaction. Students are able to have their questions instantly addressed (Martin et al., 2012; Skylar, 2009) and receive timely feedback (Alexander et al., 2014; Branon & Essex, 2001). Students in our study underscored the usefulness of the real-time videoconferencing feature of BC in enabling an approximation of live learning activities, a finding in line with some studies in the United States (Rudd & Rudd, 2014; Yamagata-Lynch, 2014). It is possible for the virtual distance (i.e., "teaching themselves"; Jaggars, 2014, p. 31) encountered in online units that only utilize asynchronous discussion boards to be minimized using a synchronous tool such as BC, thus fostering virtual community building and peer bonding (Lavine et al., 2012).

Not all OUA students in our study were

comfortable with all aspects of the BC tool, however. The sense of tele/copresence afforded by activated cameras and microphones was not always embraced by the students. This observation was also recorded in a study conducted in Tasmania, Australia, by Kemp and Grieve (2014), who concluded that online and face-to-face tasks led to similar levels of academic performance, but that students preferred to do written tasks online and discussion in person. The low agreement (24.82% and 7.52%, respectively) in the quantitative data collected in our study indicated that some students felt uncomfortable becoming "the centre of attention" and favored instead hiding their telepresence (i.e., turning off cameras/ microphones). They could still be copresent by using text chat to interact with peers and lecturers. This somewhat unexpected finding runs contrary to Yamagata-Lynch's (2014) observation that real-time sessions increased virtual presence. It also counters Sijia Guo's (2013) claim that students used voice chat more to show their participation in BC sessions. Students' reluctance to foreground their telepresence in our study is also the antithesis of other studies (Lavine et al., 2012; Wdowik, 2014), which claim that BC heightens virtual connectedness via the synergy of audio/video modes. Students in our study indicated a sense of engagement and belonging by attending BC sessions and using only the text chat function. They did not feel compelled to openly express their opinions more in real-time videoconferencing sessions as reported in prior studies (McBrien & Jones, 2009). The "crowdedness" of the chat could have been one reason for the hesitancy of some students to be tele-present. Huang and Hsiao (2012) found that asynchronous discussion allowed for more equal participation and prevented talk from being dominated by a small group of students, which can often be the case in real-time online sessions. The teacher's lack of proficiency in managing 'talk' on BC might also have been a contributing factor. Multitasking while on BC is common for OUA students, and they have been known to look after their children or pets in the same room, cook meals, or even travel on public transportation while in the online chat room. Keeping the microphone turned off screens out noise from barking dogs, children, and fellow passengers. Protecting the privacy of bystanders in these situations may also be important as is safe guarding the privacy of one's own home. Busy students in our OUA programs have been known to attend two BC sessions at the same time, skipping from portal to portal on different computers. This does not lend itself to contributing to ongoing conversations in both rooms.

Students in our study sometimes questioned the expediency of BC as an online learning tool. The inability to get microphones to work or the fact that students did not have access to a microphone sometimes hindered online live chat and forced students to use text chat instead. Instantaneous feedback, another benefit of BC, was only valued if the timing of this feedback was carefully planned by the lecturer and relied on the lecturer's expertise in planning and managing learning. Similarly, a lot of comments related to practical, house-keeping issues, such as the convenience of the times that sessions were held. This indicates that students can be preoccupied with the smallest of pedagogic decisions, and that learning and teaching in a global online environment operating across several time zones, may need considerably more thought than face-to-face mode.

CONCLUSIONS AND IMPLICATIONS

The overall findings of this study were not startling or unexpected in that the OUA students at our Australian tertiary institution responded in similar ways to many other studies conducted in Australia and around the world (Buxton, 2014; Hrastinski, 2008). Students valued BC as a tool for lecturer and student feedback, knowledge sharing with both lecturers and other students, and community building with lecturers and other students. Overall, they preferred OUA units that utilized the BC online learning tool to those that did not. They saw it as an engaging medium that mitigates the virtual distance commonly found in an online unit, and they liked to see and hear their lecturers. However, what was curious, and not previously well documented, was that some students found the voice chat, and the public presence it necessitated, quite daunting, especially as BC sessions were recorded and available for all enrolled students to view and hear. It would seem that protocols for when and how students should speak in this medium need to be developed and agreed upon by students and lecturers before

conducting BC sessions. Some sessions could also remain unrecorded as negotiated with students. This may alleviate some of the tensions and anxieties described in this study. More research focusing on the tele-/copresence aspect of synchronous tools could be conducted to further examine whether the sense of "online presence" and "being there together" augmented by audio and video features is perceived in a similar way by both online lecturers and students.

Similarly, because of the fallibility of technology, time needs to be dedicated either during orientation sessions or at the beginning of each unit of study to making sure students (and lecturers) are well versed in how to operate the BC tool effectively. BC can be an important feedback tool but, as students explained, the timing of feedback and feed forward is critical. Too much too late can only have an unsettling effect and be counterproductive. The lecturer, therefore, needs to plan feed forward and feedback sessions carefully in order to ensure that students gain maximum benefit from these sessions.

The scheduling of sessions will continue to be a contentious issue with students so long as units are offered in a global community that has many different time zones. However, some flexibility on the part of the lecturer to offer BC sessions at different times and days each week could go some way towards remedying this problem. Using the online poll programs (e.g., Doodle), for example, to gather the majority vote on students' preferred times/dates for BC sessions could also facilitate the scheduling process.

Finally, findings from one single study at one institution in Australia cannot be taken to be typical or representative of students in other institutions. The profile of the students taking the course in which BC is embedded is an important factor in determining its success as a learning and teaching tool. Moreover, because students receive a learning tool positively overall does not mean that questions raised about some very important issues by just a few others should be ignored. What can be agreed upon is that BC sessions can impact online learning and teaching, and it is necessary for both lecturers and students to pay explicit attention to achieving the best pedagogic outcomes using this synchronous tool. This includes lecturers compiling BC protocols for learners to use and innovating online activities to promote effective interaction between students and lecturers while giving careful attention to the usual considerations in teaching such as learner confidence and willingness to take the stage along with more banal considerations such as scheduling.

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