A peer-observation initiative to enhance student engagement in the synchronous virtual classroom: A case study of a COVID-19 mandated move to online learning

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Abstract

The global COVID-19 pandemic has necessitated a rapid shift to online delivery in higher education. This learning and teaching environment is associated with reduced student engagement, a crucial prerequisite of student satisfaction, retention and success. This paper presents a case study that explored student engagement in the synchronous virtual learning environment, during the mandatory move to exclusive online learning in Australian higher education in April to June 2020. Three university instructors used the Teaching and Learning Circles Model to observe a series of their peers' synchronous virtual classrooms, from which they reflected on ways to enhance their own practice. The findings demonstrate how student engagement in these classrooms can be strengthened across the four constructs of Kahu and Nelson's (2018) engagement conceptual framework: belonging; emotional response; wellbeing and self-efficacy. The case study also reveals limitations of the synchronous virtual environment as a means of supporting student engagement in the online learning and teaching environment, and proposes ways to address them. Against emerging reports of increased mental health issues among isolated university students during the current pandemic, the case study's recommendations to improve student wellbeing and belonging are particularly salient. This article also highlights the usefulness of the Teaching and Learning Circles Model of peer observation as a way to guide its participants' reflections on their own practice, support their collegiality with academic peers and build their confidence and competence in the synchronous virtual learning environment.

Introduction

The public health response to the global COVID-19 pandemic has demanded a rapid and unexpected shift to exclusive online teaching across Australian higher education. While online teaching is used widely at Australian universities, this unprecedented move can pose difficulties at institutions where instructors and students are new to, or lack proficiency in, certain aspects of the online learning environment. Student engagement, in particular, a predictor of student satisfaction, retention and success (Thomas, 2012), can be compromised by inadequate online learning processes (Bawa, 2016; Watts, 2016).

This paper presents a case study in which instructors explored ways to support student engagement in synchronous (real-time) virtual classrooms (SVCs) during the COVID-19 associated move to exclusive online learning and teaching in a Western Australian University, between April and June 2020. The peer-observation Teaching and Learning Circles (TLC) model (Rogers et al., 2019) was used to structure instructor observations and reflections on student engagement in the SVC. Three instructors (lecturer/tutors) took part in the TLC initiative. This was employed in two undergraduate and one postgraduate public health units, all of which had experienced a mandatory move to exclusive online delivery from weeks three and four of Semester One, 2020. Each instructor had extensive experience in asynchronous online teaching but limited experience of SVCs.

The objective of this case study was to identify ways to better support student engagement in the synchronous virtual environment. It aimed to do this through instructor peer observation of activities and interactions of colleagues and students. In particular the initiative aimed to help the participating instructors to develop confidence and competence in ways to better engage newly commencing students, including international students, whose opportunities to develop social and academic support networks and acculturate into the university had been curtailed by the sudden and unexpected move to online learning in the early weeks of the semester. A secondary objective of the case study was to trial the TLC model as a framework for peer observation in the synchronous virtual environment.

Background

Australian higher education has experienced an ongoing expansion in online learning in recent decades (Greenland & Moore, 2014). Globally, the prediction that online learning would become mainstream by 2025 (Palvia et al., 2018) has been strengthened by the recent COVID-19 pandemic, which has necessitated the urgent move to digital learning (Marinoni, Van't Land & Jensen, 2020; Sankey 2021). While the flexibility of traditional (asynchronous) online learning provides greater accessibility to tertiary education to an increasingly diverse university population (Gering et al., 2018) it also has limitations. Compared to the face-to-face environment, the opportunity for student interaction and engagement is minimal, often restricted to discussion board postings or email, with the time lag between correspondence reducing its utility. This situation can limit the student's development of a sense of belonging, satisfaction, and attainment (Bawa, 2016; Ali, 2020; Martin, 2019). This case study took place during a period of COVID-19 lockdown, in which student engagement was curtailed both within the university and more broadly in the community.

The synchronous virtual environment

Switching from the traditional mode of online (asynchronous) to real-time (synchronous) delivery can support academic and social interaction and engagement between students, their peers, and tutors in the online learning environment (Andrew et al., 2015; Hrastinski, 2008; Watts, 2016). This engagement in turn supports student motivation, actual and perceived learning, satisfaction, and retention (Joksimovic et al., 2015; Lin & Gao, 2020; Richardson,

Maeda, & Caskurlu, 2017). The range of technology available within the SVC provides numerous opportunities for academic and social engagement in real time, including audio and video interaction, text chat and interactive group work activities (Berry, 2019; Brierton et al., 2016). A further strength of synchronous over asynchronous online learning is the ability to identify the extent of a student's participation in class, which offers the instructor the opportunity to focus on ways to address those who are minimally engaged (Joksimovic et al., 2015). The realisation of these and other benefits of the synchronous virtual environment is dependent on the instructor's confidence and competence in online learning and teaching approaches and the use of interactive technology (Bawa, 2016; Berry, 2019; TEQSA,2020).

Teaching and learning circles

Peer observation is a valuable tool that promotes collegial efforts to improve teaching and learning experiences in higher education. Traditional peer observation approaches typically involve a more senior instructor observing a colleague's teaching and sharing constructive feedback (Hendry & Oliver, 2012). Peer observation is however underutilised by academics, partly because of a fear of judgement (Drew et al., 2017).

The TLC model offered an alternative, non-threatening approach to the traditional peer-observation approach. Adapted from the 'teaching squares' peer observation process (Grooters, 2008) by a team of instructors at the University of Otago, New Zealand, the TLC model uses the idea of conversation circles to foster collegial discussion (Rogers et al., 2019). Described as a "voluntary, non-evaluative, reciprocal peer-observation of teaching with an emphasis on collegial dialogue and self-reflection" (Rogers et al., 2019, p. 3), the purpose of the TLC model is to support and enhance individual teaching quality and the teaching culture within an organisation's academic team.

In this model, the participants reflect on their own learning before, during and after observing their colleagues' classes, discuss these reflections together, and from this plan ways to improve their own teaching practice. This offers instructors a less threatening way to identify personal teaching goals and an opportunity to develop and improve andragogical approaches - skills and techniques that promote adult learning (Knowles et al., 2005).

Conceptual framework

Student engagement in the synchronous virtual environment

In this study, the instructors observed their peers' synchronous virtual classrooms to identify ways to improve student engagement in their own practice. To do this, the instructors observed and reflected on student-student and student-instructor interactions through the theoretical lens of student engagement developed by Kuh et al. (2008) and by Kahu and Nelson (2018).

Defined as "both the time and energy students invest in educationally purposeful practices" (Kuh et al., 2008, p. 542), academic engagement is a complex multi-faceted concept that plays a critical role in student satisfaction, learning and success at university (Kahu, 2014; Kahu & Nelson, 2018). Social engagement incorporates the constructs of social integration, feelings of belonging and identity, further important influences on student progression (Wilson et al., 2016).

Kahu and Nelson (2018) define student engagement as the psychosocial state of 'being a student' that includes their behavioural, emotional, and cognitive connection to learning. Their conceptual framework of engagement considers four psychosocial student constructs: self-efficacy, emotional engagement, belonging and wellbeing, as key influences on student

engagement within the educational interface. In this initiative, the educational interface was the SVC.

This conceptual understanding offers a way to interpret student engagement in the SVC. The construct *self-efficacy* describes the individual's belief they can achieve a task or goal as intrinsically linked to their success (Bandura, 1977). In the educational setting, self-efficacy influences motivation to learn and succeed, and through this motivation engagement is supported. Self-efficacy tends to be lower in individuals who lack prior personal or vicarious experience of success in a given situation (Bandura, 1977). For students new to online learning, including the synchronous virtual learning environment, self-efficacy may therefore be initially low.

The student's *emotional response* to the online teaching environment is also an important predictor of engagement. Students who move to online learning unwillingly may feel an associated reluctance, disillusionment, and anger, which may block emotional connections to learning experiences. Kahu and Nelson (2018) argue that emotional connectivity can be enhanced through empathy, sharing, and being listened to. It may be that the SVC can support the expression of all these factors with students and thereby reduce these and other negative emotions that act as barriers to engagement.

Belonging is closely linked to emotions, including social networks and feelings of connection to the university and the course under study and is a recognised factor that supports positive and successful student experiences (Krause & Armitage, 2014). Issues external to the university can influence this, such as living off campus and identifying with a different culture to that dominant within the university. The students in this initiative may have had an underdeveloped sense of belonging because of the move to a physically isolated way of learning early in the semester. For new students, including commencing international students who are new to Australia, a sense of belonging may be particularly low.

The student's *wellbeing* is a further essential prerequisite to academic and social engagement (Kahu & Nelson, 2018). At the time of this initiative, the financial, social isolation and health implications of COVID-19 were ongoing sources of stress and triggers for mental health issues for many students (Elmer et al., 2020). For international students, the impact on casual work opportunities and concerns for the situation of loved ones at home presented further sources of distress (TEQSA, 2020). The importance of understanding ways to better support student wellbeing in the online environment was therefore especially pertinent in this case study. In this initiative, the process of peer-observation and reflection supported the examination of these four constructs of student engagement in the synchronous virtual environment and facilitated opportunities to enhance them.

Methods

Setting

The TLC initiative took place in a large university in Western Australia. Typical of other Australian universities, the undergraduate degree courses in the university is three years in length and the postgraduate degree two years. Each academic year consists of two semesters. In each semester, students take a number of 'units' or 'modules' of study. For full-time students, this equates to four units a semester in the undergraduate degree and three units a semester in the postgraduate degree. For most units, students can choose to enrol in the online or on campus delivery mode.

Case study design

A case study is defined by Wiersma (1991, p. 422) as "a study characterised by an investigation of a single individual, group, event or culture". Case studies provide an intensive analysis and deep understanding of a specific situation or case (Denzin & Lincoln, 2018). In the context of this study, it refers to the interpretation of andragogical practice through the analysis of qualitative data, derived from individual observations and group reflection discussions.

Recruitment and participants

The study began with a call for expressions of interest among instructors. Although interest was initially high, the additional strategic and operational demands of the early period of the COVID-19 pandemic reduced the capacity of many instructors to invest in this process at this time.

A team of three instructors proceeded in Semester One, 2020. The sample of three instructors in this case study reflected the recommendations from the TLC model guidelines, which stipulates 'ideally three' participants in a peer observation circle (Rogers et al., 2019). All three participants were university teaching and research scholars with a collective average of 10 years' experience. Instructor 1 applied the TLC in a postgraduate first semester (transition) public health unit, with 37 students enrolled, including a high percentage of commencing international students. Instructor 2 applied the TLC in an undergraduate third year health promotion unit within the Health Science degree, with 60 students enrolled, mostly domestic and mature age. Instructor 3 applied the TLC process to an undergraduate first year, first semester nutrition unit in the Health Science degree, with 45 students enrolled, most of whom were new to the university.

Procedure

Before commencement, the initiative received approval from the University Human Research Ethics Committee (no. 2020-01502). The TLC resource booklet produced by the Victoria University of Wellington Centre for Instructor Development guided the peer-observation process. This resource was adapted from the original peer-observation model developed at the University of Otago (Rogers et al., 2019). Although the guide was designed primarily for face-to-face classroom delivery, aspects of this resource were adapted to be implemented in the SVC - see findings [adaptation].

Stage one-pre-observation meeting

A pre-observation meeting was held three weeks before peer-observations of the SVCs began. The three instructors used the nine questions from the TLC publication to identify and share their teaching and learning style, teaching philosophy and expectations of the initiative. These questions also explored the instructors' level of confidence in the SVC and how they would like to enhance their practice in this teaching and learning medium. They also explored apprehensions of being observed by colleagues and their goals for the observation process.

Stage two-peer-observations of SVC sessions

The second step of the process was the observation of a series of colleagues' SVCs. The observing instructors entered the virtual classroom via the university Learning Management System (LMS). The instructor leading the classroom introduced the observing instructors and explained why they were present in the tutorial – as observers to reflect on their own practice. To gain a student 'view' of synchronous e-learning, the instructor observers took part in all the learning activities offered in the SVC, including breakout group work, polls, quizzes, and

whiteboard discussions. Each instructor observed both of their colleagues SVCs. The observing instructors made written notes throughout using the TLC model's 10 observation criteria: 1) how the class was introduced 2) the pitch, tone and framing of voice 3) use of technology 4) instructor visibility and movement 5) use of explanations and examples 6) frequency of questions asked by instructor and students 7) student engagement signs and activities 8) timing, pace and pausing 9) overall organisation of session and 10) conclusion and winddown (Rogers et al., 2019). A further theme was created during analysis to express data that did not 'fit' into these themes. This was 'managing challenging situations in the SVC'. As every SVC was recorded, the instructors also revisited some of the classes to add to their observations where necessary.

Stage three-individual and group reflection

Following each observation session, the instructors reflected individually on their experiences, guided by their observation notes. These observations and reflections were then discussed by the three instructors in a post-observation meeting one week after the final peer-observation session. Here the three instructors discussed their personal experiences of being an instructor in the SVC, their observations of student engagement, what new learning has occurred from the process and how this would be applied to future teaching. These oral discussions were recorded and transcribed.

Data analysis

Typical of a multistage qualitative study, the case study generated a large amount of rich data, in the form of individual written notes and oral reflective team discussions from a total of 20 observed teaching hours in the SVCs. The stage one (pre-observation meeting) text responses to the nine pre-observation questions from all three instructors were summarised into the topics of shared and individual teaching goals, aspirations, confidence, and apprehensions.

The data sets from the stage two SVC peer-observation written comments and the stage three transcribed post observation reflective discussions were analysed together. These data were coded manually and organised under the ten criteria provided by the TLC model and the eleventh added by the researchers in this case study. The resultant 11 TLC themes informed by this hybrid deductive-inductive data analysis method ensured no data were ignored the rigour of the approach was strengthened (Fereday & Muir-Cochrane, 2006). These themes were further interpreted through the lens of student engagement provided by Nelson and Kahu (2018). Instructor 1 led the analysis process, with Instructors 2 and 3 contributing. Consensus was reached through ongoing discussion of findings between the instructors.

Findings

The findings from this initial process revealed a shared teaching philosophy and shared apprehension about the peer observation process among participating instructors. Learning from post-observation group reflection led to a deeper understanding of the ways the SVC could be used to support student engagement, including adaptations to content, structure, and approach. Most notably, the instructors realised the value to student wellbeing of sharing their own experiences during the COVID-19 pandemic and creating a dedicated opportunity for students to do the same, and to share supportive communication. The devotion of more time than usual to non-content materials, including student support information, was also perceived to be beneficial.

The positives of SVC technology were also highlighted by the process, including applications that allowed reticent or uncertain students to participate anonymously to class discussions and

group work activities – the opportunity to fail and succeed in a safe environment providing a way to support their confidence and competence in a new learning environment. The process also identified ways to organise the session effectively so that students remained engaged throughout, the most important being to shorten and simplify the tutorial. Several limitations of the SVC were also identified, including not 'seeing' student face-to-face interactions and responses within class, and instances of unacceptable and unhelpful online communication between students. A particular concern was that ongoing participation in class was less prevalent among international students. Instructor discussions on ways to address these issues are included in the findings section.

Summary of pre-observation findings (stage one)

The pre-observation exercise revealed that instructors' goals of the peer-observation process were mostly concerned with improving their andragogy in the SVC. The mutual goals revealed by this process were: 1) to improve student academic and social engagement in the synchronous virtual environment with a particular focus on newly commencing students, including international students and 2) to enhance instructor confidence and competence in the SVC. The exercise also highlighted a shared instructor philosophy of offering students an accessible, equitable and effective learning experience, outcomes that are intrinsically linked to student engagement. All three instructors expressed apprehension about the peer-observation process but felt the emphasis on 'self' reflection reduced this. Instructor 2 commented that she would not have taken part in this initiative if it had been a peer-evaluation of her own teaching by her colleagues.

Observation and reflection of SVC findings (stage two)

The findings are organised across the 11 TLC criteria. Interestingly, while one of these 11 criteria was specifically titled 'engagement', most of the other criteria also prompted discussions on student engagement among the three instructors. In this section, the terms I1, I2 and I3 are used when using direct quotes.

Introduction to the tutorial

This criterion elicited discussions on welcoming the student, managing latecomers, orientating students to the week's session and encouraging participation from the start. Instructor 3 noted how Instructor 1 and Instructor 2 welcomed each student by name as they entered the SVC and their names appeared on the screen. Instructor 3, with larger class sizes, reflected on the usefulness of this simple approach as a way of supporting students' sense of belonging and decided she would apply it in situations when she taught smaller class groups.

All instructors dedicated the first few minutes of the classroom to non-learning content discussions. Each felt this was important, especially during the COVID-19 situation where students were isolated from others and may have had health and financial concerns. Instructor 2 spent 10 minutes of her one-hour tutorial, sharing experiences of working and learning in 'COVID-19' environment. Instructor 3 reflected on this practice, considering its importance and how to extend the benefits across the class:

> *I2 spent extended time engaging with students in the introduction. I can see how this would build a relationship, sense of belonging. I am wondering if this could be applied after this initial discussion, asking personalised questions about 'how did this make you feel?' rather than asking questions that only relate to the activity* (I3).

Instructor 1 used anonymous polls relating to non-learning content issues at the start of class to judge the mood of the group and gauge their perspectives on moving to online learning. Instructor 2 commented on using this approach as a good way to get students actively involved from the outset and incorporated this in her subsequent classes.

In one class, the instructor's sharing of her difficult week prompted a student to talk about her child's distress during lockdown, providing an opportunity express her experiences and receive support from her student colleagues through oral and text 'chat' exchanges. The topic of how to manage latecomers in the SVC was discussed. Although they tended to delay on-campus class content delivery, each instructor felt that in the SVC it was reasonable to wait for a few minutes to ensure all students were fully connected:

> *I2 began formal teaching a few minutes after the official start of class. I also usually start a few minutes late too, especially if numbers are low. Sometimes students have trouble with connections etc – my group are used to on-campus study and many are mature-age* (I3).

Orientating to the session was another area of discussion. All felt that an explicit outline of the session was necessary to set student expectations at the start of class.

Tutor [and student] voice

Each instructor asked students to confirm they could hear them at intervals throughout the session. Each felt this was particularly important in the online environment where students may have intermittent connection. The participants also found the idea of the student voice was important and added it to the criterion of 'tutor voice'. Although all instructors encouraged students to participate vocally, few did. Many instead used the text 'chat' option and some did not share their 'voice' at all. Instructors reflected on SVC facilities that could encourage student voice:

> *Perhaps making better use of some of the other tools such as the poll, would be a way to get those 'quiet' students to have a voice* (I1).

Instructors 1 and 2 commented on Instructor 3's persistent method of encouraging student voice. This instructor asked all students to use their microphone at the start of the class. During group work she asked questions about their progress and request feedback on tasks. In situations where students declined to speak, Instructor 3 offered the option of using written text in the 'chat' box. In circumstances where this also elicited no response, she offered the student extra time, moving to a new task and returning to them later in the session. This method seemed to work every time, eliciting a spoken or written response. Instructor 1 and 3 admired Instructor 2's efforts to supply positive feedback to each student response, acknowledging the amount of effort and organisation needed to offer consistent and meaningful feedback in the dynamic SVC environment.

Technology

Technology was a particularly relevant criterion in this initiative, as its effectiveness was crucial to the learning experience. From ongoing observations, instructors became congruent and confident with the range of technologies available. Instructor 2 reflected on her peer's use of the whiteboard, which allowed anonymous contributions, helpful with less confident students:

> *I1 used the whiteboard to good effect – it encouraged students to write their thoughts without necessarily being able to identify who it was – this might encourage students who are shy. I will endeavour to think of an activity where*

> *students can share their ideas on the whiteboard as I think they would enjoy this* (I2).

The full range of available technological tools were not always used in a session. Instructor 1 for example did not use the 'breakout' technology which organised students into smaller virtual rooms to work together. Instructor 3 reflected on this:

> *I1 had a smaller group which meant that it was conducive to work in the main room, however this did mean that the students were dependent on her driving the conversation. I felt that observing this confirmed the importance of letting students engage independently in discussion with their peers and let them explore concepts away from the potentially perceived 'judgemental eye' or the fear of 'getting it wrong' in front of the lecturer in the breakout groups in the virtual setting to replicate group activities face-to-face* (I3).

Further discussions on this theme in the joint reflections helped to reinforce the value of the breakout technology as a method to encourage peer and student-led group learning in teaching units with large enrolment numbers.

Tutor visibility and movement

While the movement of the tutor was not relevant in the SVC context, visibility was. Here the instructor's approaches differed. Two did not turn on their cameras. The process of reflecting on this decision individually and in the group discussion, prompted the instructors to ruminate on this decision:

> *I tend not to use the video function as I don't like looking at myself but wonder if this is something I would do next semester. I wouldn't start this semester as students are used to not seeing me* (I2).

All the instructors were concerned however that their inability to see the students in the SVC:

> *It appeared challenging to engage with students when their cameras weren't turned on as you could not gauge their interest* (I1).

The issue of 'ghosting' was discussed, a term used by the students to describe the student who signs into the class but does not participate. Not considered during individual observations but arising in group reflection discussions was the possibility that the student may not have access to video or audio in their home and the decision was made to investigate this with non-participating students in future.

Tutor explanations and examples

All instructors regularly used examples in class to illustrate concepts. However, the opportunity to use examples in the SVC was felt to be more difficult:

> *I regularly use examples to explain. There seems to be less opportunity to do this in the virtual room as each activity takes longer compared to on campus delivery* (I1).

The instructors also felt pressured to think up impromptu examples to complement their teaching in the limited time available to them.

Timing

Instructors 1 and 2 ran synchronous virtual classes for one hour, two hours shorter than their usual face-to-face classes. These instructors used a flipped classroom model, where students worked individually online prior to the class, the one-hour SVC used to revisit and build on this learning. These instructors reflected on the appropriateness of this shorter time allocation for the SVC:

> *I believe that online tutorials should be shorter and more concentrated in nature. It is difficult for students and teachers alike to maintain concentration for long periods of time online, especially as we are doing so much online at the moment* (I1).

Instructor 3 took a different approach, running a 2-hour session, eager to cover all the week's learning outcomes in this time. In joint reflection discussions, this instructor reflected on her struggle to deliver meaningful complex learning scenarios in the SVC and decided that the flipped-class and shorter SVC would be more effective and achievable.

Questions (student and tutor)

The instructors asked questions throughout classes, with mixed success. They noted younger and international students answered fewer questions. They also noted students were most responsive when the questions were related to a personal experience rather than learning content, and discussed ways to take advantage of this approach:

> *I have noted that it is important to scaffold questions that is, ask questions relating to student personal experiences early in the teaching session as an 'ice breaker' and progressing to more content heavy questions after ideas have been explored in breakout groups* (I2).

While this detracted from 'content-time' the instructors felt this also allowed a way to normalise the practice of student questioning behaviour to the class.

Organisation

All instructors realised that because of its shorter timeframe and the tendency of students to lose interest and connectivity when the SVC 'flow' was interrupted, high levels of session organisation were required. The importance of linking prior individual student activities with SVC activities was reinforced as was the need for a straightforward format:

> *The format for this session was simple and effective - I wonder if my sessions are too detailed?* (I3).

It was evident that even for shorter sessions, a teaching plan and explicit student instructions were required to garner optimal participation in the SVC.

Student engagement

This criterion overlaps significantly with the others in the peer-observation process and hence ideas are drawn from these criteria where relevant. Supporting student academic engagement was a main goal of all three instructors. Each was acutely aware of the difficulties the compulsory move to online learning imposed on student participation:

> *Student engagement is key, and seemingly more so in this online environment into which many students have been 'forced'* (I2).

Instructors noted how difficult it was to ascertain if students remained engaged in the SVC:

> *In virtual classrooms it is challenging to determine interest as you cannot see the student and they can disengage more easily. In my class today other students made the comment that students were online but were ghosting, meaning that were there for attendance but not participating. This has made group work challenging, as you place students in breakout groups and some students are not present* (I2).

Instructor 3 reflected on some of her attempts to resolve these issues:

> *I have had to modify my breakout groups to a larger size to ensure enough opportunity for interaction for those students that are participating. At the end of class I also ask each student for a take home message to determine who is still participating – perhaps I can do this before the breakout sessions start in the future* (I3).

The difference in participation between student 'cohorts' was clear to the instructors:

> *My cohort this semester is used to being on-campus so are perhaps chattier than a typical online group. They are older students and there are no international students* (I2).

International students' lack of participation in classroom discussions, group work and question and answer sessions were concerning. Instructors discussed a range of possible reasons for this. It was felt that for these students, a lack of prior experience in such a learning environment and a general lower level of competency in spoken and written English may have dissuaded participation in the relatively fast-paced interactive situation, as may a lack of familiarity with the technology used in the SVC.

Social engagement was a particular concern for instructors teaching international students who were new to Australia and the university. These students had no previous opportunity to develop close networks in on-campus classes before the forced move to online delivery. Social chat during the SVC was therefore not discouraged unless it distracted from learning. The instructor with a high international student cohort regularly signposted students to university online social groups. She also promoted university support services within class time and invited students to share their experiences of these services. Discussions with her colleagues raised her awareness of the usefulness of keeping the virtual class environment open throughout the week as a space students could collaborate and socialise outside class times. During the group reflective discussions, all three instructors came to the decision to follow up non-participating students in future semesters, to 'check-in' on their wellbeing.

Conclusion/wind down

In observing each other's classes, instructors found new ways to maintain student engagement in the latter stages of an SVC session, while preparing them for the next:

> *I1 highlighted the points that were covered in the session, asked for other comments and then explained what was to be covered next week. This summary I think works well, the [teaching and learning] circles teaching highlighted how important this was* (I2).

By observing the SVCs in their entirety, each instructor became acutely aware of how important it was to continually orientate the student through explicit instruction.

The 'other' criterion – [managing challenging situations in the SVC]

All three instructors were surprised by examples of unacceptable language used by a minority of individuals in their classes. Examples of derogatory comments included the term 'glutton' to describe obese people and 'feminazi' in a discussion on gender equality. Instructor 3 reflected the way one such situation was managed by her colleague:

> *Not until today (in the virtual online tutorial) did I encounter a student have an opinion that was not reflective of the culture expected in the classroom environment. I1 kept her voice measured and professional. In the instance of a student presenting a challenging opinion she acknowledged that there are "differences in cultural belief systems but that these terms are not helpful in this context" - and directed the discussion offline* (I3).

Although the instructors had previously encountered unhelpful and unacceptable student remarks in face-to-face classrooms, the SVC seemed to offer a level of anonymity that increased a willingness to express such comments. Instructors considered that the on-campus classroom curtailed such behaviour through the visual and body language cues of other students and tutors. These situations prompted discussions about the use of ground rules and ways to detract unhelpful conversations without demotivating or humiliating the student in front of their peers, such as the use of the private messaging function.

Discussion

The discussion of findings begins with an interpretation of the student engagement in the SVC through the lens of Kahu and Nelson's conceptual framework of engagement (2018). The usefulness and adaptability of the TLC model underpinning the peer observation processes in the SVC is then discussed.

Student engagement in the synchronous virtual environment – good practice and ongoing issues

Belonging

According to Thomas (2012) belonging is a leading factor influencing student retention and is engendered by supportive peer relationships, meaningful tutor-student interaction, and the student's own confidence as a learner. Thomas argues "the academic sphere is the most important site for nurturing participation of the type which engenders a sense of belonging" (p.6). Although a sense of belonging is comparatively more difficult to achieve in the traditional online environment (Hrastinski, 2008), this case study found the SVC offered several opportunities to redress this to some extent. Instructors of smaller classes can acknowledge each student by name and welcome them individually. Real-time sharing of tutor and student conversations can support meaningful and inclusive environments and encourage the student voice (Martin, 2019). The importance of these opportunities to the student experience during COVID-19 have been verified in the recently published Australian Tertiary Education Quality and Standards Agency (TEQSA) 'Experience of Online Learning Quality Project' report. This national student survey has revealed that, during the 2020 lockdown, students found the opportunity to participate and interact in the synchronous virtual environment (such as Zoom) greatly beneficial (TEQSA, 2020).

The instructors' perceptions that their SVC sessions may sometimes need to be shortened, simplified and more carefully structured to 'fit' the dynamic and fast paced real-time online environment concur with the findings from a previous study of e-learning both prior to the COVID-19 pandemic (Berry, 2019; Hrastinski, 2008; Lin & Gao, 2020; McBrien, Jones &

Cheng, 2021) and during it (TEQSA, 2020). In both contexts, students reported participation in the SVC could be stymied by long, detailed, and intensive delivery, somewhat verifying the decision by the instructors in this case study to design shorter and simpler sessions. The acknowledgement by two of the instructors that it would be beneficial to start sharing their video with students is supported by research evidence of a positive association between the instructor's 'social presence' and student satisfaction with online learning (Kang & Im, 2012; Richardson et al., 2017) and with social engagement and student achievement in the online environment (Joksimovic et al., 2015).

Despite determined instructor efforts, some students in this case study remained reluctant to actively contribute in the SVC. As the instructors were keen to promote an equitable learning environment, the lack of participation among international students was especially worrying. Kent et al. (2019) found students with a pre-existing relationship established on campus were more likely to interact online. In this initiative, the move to online learning in the early weeks of semester meant some students had not benefitted from these face-to-face interactions and the early development of a sense of belonging this may enable. Although impossible to achieve in the present study context, it may be prudent to discourage online learning in the early stage of a degree where possible in future situations, especially with international students. An alternative option would be to offer a mix of initial face-to-face activities, followed by online learning across a single semester.

The finding that Australian first semester, first year students who studied online were more likely to drop-out than students who studied online later in their course (Greenland & Moore, 2014) further suggests that online study in the early stages of a degree requires careful planning if it is to be successful.

It is also important here to acknowledge that although some students do not want to actively participate in real-time online classes, they may still be learning. As noted by Martin and Bolliger (2018) some choose to study online because they prefer that this medium traditionally does not offer such interaction. The recording of the SVCs can support students who wish to participate in a more passive way, at a time more suited to them. The recording also allows students who are unable to take part in the synchronous class to vicariously access student interactions, and to experience question and answer and problem-solving situations, not afforded by asynchronous methods.

Emotional response

Kahu and Nelson (2018) argue that a positive emotional response to, and within, the learning environment is conducive to student success. Australian research suggests international students are not convinced that online education alone provides value in their degree, and these students tend to regard this approach as an 'add-on' to traditional teaching methods (Hobsons APAC, 2015). For this reason, and the comparatively high fees they pay, the instructors in this case study felt the international students they taught may have held a more negative emotional response to a mandatory move to online learning than their domestic peers. This perception has been somewhat verified by two Australian studies, which found students with English as an additional language and those on an international student visa were less likely to choose online learning (Johnson, 2015; TEQSA, 2020), the latter group reporting significant discontent with their experience of the mandatory move to online teaching during the COVID-19 pandemic in 2020. Of particular relevance to the present study was the finding that both international and domestic students described their dissatisfaction with the mandatory move to online learning as primarily around lack of social and academic interactions afforded by this move (TEQSA, 2020).

The social isolation of lockdown has been associated with reduced student emotional engagement, a situation perceived to be an impediment to learning (Wilson et al., 2020). In the present study, the creation of an empathetic, sharing and listening environment in the SVC, which according to Kahu and Nelson (2018) promotes emotional connectivity, was an attempt to reduce student disillusion with the mandatory move to online learning. The instructors in this case study however, found the SVG was a poor substitute for the face-to-face classroom as a way of gauging student emotions. The reliance on typed or oral student contributions in the SVG was felt instead to mute emotions, especially where the student was unable or unwilling to use their spoken voice in class. The instructors in this case study considered the future use of emoticons to as a way to support student expression in class; with this approach reported to have some success in enhancing student connectivity (Berry, 2019) and social connectivity (Joksimovic et al., 2015) in synchronous virtual classroom situations.

The inappropriate behaviour of a minority of students in these SVCs may have been a result of the lack of prior acculturation in face-to-face classes, where students could learn from the behaviours and conduct of their peers and their instructor. The behaviour described in the study was also reflected in the TEQSA findings on behaviour in Zoom tutorials across Australian universities (2020). In this report, student suggestions concurred with the instructors' discussions around the importance of clear protocols and ground rules in the synchronous virtual environment.

Wellbeing

Student wellbeing is logically and intrinsically linked to their sense of belonging and the support networks around them. The instructors in this initiative were aware that wellbeing was likely to be an issue during the peer review initiative because of the associated enforced isolation and loss of paid work, a supposition supported by the recent national TEQSA survey (2020), and by an Australian study of student perceptions of the move to online learning during COVID-19 lockdown, which reported "student reflections demonstrate a high baseline degree of psychological distress and anxiety within the remote teaching context" (Wilson et al., 2020).

The instructors found the synchronous virtual environment was ideal to introduce and normalise discussions around feelings of wellbeing and mental health and to draw students' attention to local student support services. The text 'chat' option in the SVC, which allowed students to share non-content related issues during class provided opportunities to describe experiences and concerns and to access peer support during periods of physical isolation. Reflecting the findings of two US studies (Berry, 2019; Mabrito, 2006) the instructors in this case study found non-content discussions could act as a valuable way of promoting student cohesion in the SVC. The loss of 'content time' was regarded as a worthwhile sacrifice during the stressful and isolating lockdown period. Again, the recent TEQSA publication has demonstrated the value of this approach, with students across Australia reporting the importance of social discussions in online classes to their sense of belonging and wellbeing during the COVID-19 lockdown (TEQSA, 2020).

It is noted that not all students participated in the SVCs in this case study. These students therefore missed out on these valuable experiences and their instructors lost an opportunity to identify and follow up concerns about incidences of student distress. As the impact of the COVID-19 pandemic on the mental health of domestic and international students becomes increasingly evident globally (Elmer et al., 2020; King, 2020) the need to make some form of alternative contact with non-participating students during this time is evident.

Self-efficacy

Personal success in learning activities is a dominant factor that supports self-efficacy (Bandura, 1977), and is key to academic achievement and wellbeing (Gibbons, 2010), student satisfaction (Aguilera-Hermida, 2020) and engagement overall (Linnenbrink & Pintrich, 2003). As students can only experience success if they take part, efforts made in the synchronous virtual learning environment to encourage participation in activities, however minimal, are likely to have a positive influence on self-efficacy. The instructors in this case study found the opportunity for students to contribute anonymously to learning tasks through technological applications such as polls and text chat was a valuable attribute of the SVC, as they offered the reticent or uncertain student the opportunity 'fail' in a safe environment. The opportunity for 'shy' students to feel more able to contribute in the virtual class than in face-to-face classrooms has been described as an advantage of virtual synchronous learning over face to face delivery (McBrien, Cheng & Jones, 2009; Michael, 2012). During the COVID-19 associated mandatory move to online learning, a study of affected students in Australia highlighted the relationship between the student's feeling of self-efficacy on the online environment with their levels of engagement within it (Wilson et al., 2020), a finding that further strengthens the importance of a safe-space in which students can contribute anonymously. This feature may be particularly valuable for newly commencing international students with little experience of the Australian academic environment, culture, and expectations.

The success of one of the instructors in encouraging some of the students to participate in group work and feedback through the offer of more 'thinking time' and alternative communication options (text instead of oral) demonstrates another way that the SVC class can be managed to encourage participatory learning of students across all stages of academic competence and confidence.

Student subject mastery and self-efficacy are integrated concepts (Bandura, 1977). Scaffolded tasks across a semester that increase the complexity of learning and teaching approaches can help achieve this mastery of subject matter (Linnenbrink & Pintrich 2003). The finding in this case study that shorter and more simplistic approaches to the SVC seemed more efficacious raises the question that the reliance on a synchronous approach alone may be insufficient to support student self-efficacy. For two of the instructors in this case study, a 'flipped-classroom' approach, the combination of the SVC with a longer asynchronous weekly online session was perceived necessary for optimal learning. This conclusion has been arrived at in other studies of online learning. Brierton et al. (2016) for example, found the shorter and fast paced synchronous classroom needed to be accompanied by asynchronous materials that could be accessed in the student's own time, to meet their pace of learning, and Palvia et al. (2018) argued the flipped classroom offered an "optimal balance" to maximise the virtues of synchronous and asynchronous online modes (p. 239).

An unknown in this case study was the number of students who did not access real-time classes because of a lack of information technology (IT) mastery. It may also be the case that some students lacked access to internet or computer equipment at home making participation impossible; those on low incomes and those who had not been prepared for online study from home being particularly vulnerable. In this case-study, the instructors had not considered this possibility until they engaged in group reflection at the end of semester. Evidence from TEQSA (2020) that some students were indeed disadvantaged by IT issues during the move to exclusive online learning in 2020 demonstrates IT accessibility requires careful consideration in future situations.

Using teaching and learning circles within the synchronous virtual learning environment

Studies that apply a peer observation framework to improve andragogy within the synchronous virtual environment are uncommon. The TLC model proved to be a useful tool in this learning environment. While some TLC reflection criteria were not as applicable in the online

environment, such as 'position and movement of the tutor', others such as 'technology' and 'voice' were highly relevant. The addition of 'managing difficult conversations in the SVC' enhanced the usefulness of the TLC model.

While recognised as valuable, traditional peer-observation of teaching is not well established in some educational environments because of the perceived threat it poses to an academic's self-esteem and reputation (Drew et al., 2017). While the instructors voiced initial anxiety about sharing their practice, the TLC's focus on self-evaluation, mitigated this. This finding, and the revelation of one instructor that she would not have taken part in peer-evaluation of her own teaching, suggests the TLC or similar models may have a better uptake among academics interested in improving their practice.

The TLC exercise was beneficial in several other ways. The process identified the shared goals of each instructor, a prerequisite strategy to ensure successful peer-observations (Drew et al., 2017). Maybe most importantly, the exercise helped the instructors to identify best practice and ways to further improve their teaching in the virtual environment, something TEQSA highlighted as a priority for higher education from its research into the COVID-19 mandated move to online teaching (2020).

Learning for the future

Although the COVID-19 pandemic will end, elements of its impact on higher education will persist – one being the increased dependency on online learning. The situation in Australian higher education can be ascertained from the findings of the Australasian Council on Open Distance and eLearning (ACODE) survey. This study of 36 Australian and seven New Zealand Universities (Sankey 2021) has reported 17 (39.5%) of the universities stated they would not return on campus lectures in semester one 2021. Of these 17, eight (18% of total respondent universities) stated this may also be the case in semester two 2021. Eighteen of the universities (42%) stated they would consider a reduced model of on campus lectured in the future and six (14%) would not be returning to on campus lectures at all.

Although at times a fraught and trying experience, the rapid move to online learning afforded by the pandemic has prompted research into new and better ways to learn and teach in the online environment (Carolan, 2020; Crawford et al., 2020). The permanent increased reliance on online delivery means the learning from this case study has relevance to the future in higher education, particularly for instructors who teach newly commencing and international students. As the COVID-19 pandemic situation continues for most of the world, perhaps the most important aspect of the case study's learning in the immediate future is the recommendation to support student wellbeing (Elmer et al., 2020; King, 2020).

Limitations

The rich data from this case study have provided important insights into the challenges and benefits of the SVC as a medium for engaging university students. There are however several limitations to acknowledge. The study presents findings from the instructor perspective - a fuller picture could be obtained by researching the student perspective. While the sample of three participants met the TLC guideline recommendations (Rogers et al., 2019) and reflected sample sizes of previous peer review case studies (Bennett & Santy, 2009), the evidence-base would be strengthened by additional case studies. Another potential limitation in this case study was the way the observing instructors were treated as honorary students in group discussions and activities, which may have influenced student engagement.

Conclusions and recommendations

The objective of this case study was to identify ways to better support student engagement in the synchronous virtual environment. The TLC initiative revealed practical ways instructors can do so, identified aspects of the SVC that may hinder this outcome and proposed ways to address them. With synchronous learning in higher education continuing to gain ground, these findings provide valuable insights with which academics can enhance their own online teaching practice. In the current climate of social isolation and uncertainty, the activities that protect student wellbeing and equity of opportunity in higher education are particularly important. Many of the recommendations arising from these findings require a shift in the way online learning is structured and delivered, and a more intensive and multifaceted approach to the support of students in this environment.

A secondary objective of the initiative was to trial the TLC model as a framework for peer observation in the synchronous virtual environment. The TLC model was found to be an adaptable peer-observation tool in the SVC environment, offering a non-threatening way to support academic staff encountering new learning and teaching situations. The process of peer-observation, group reflection and discussion benefitted staff collaboration, collegiality and self-efficacy and appears to be a useful model on which to base peer-observation initiatives in the SVC environment.

Recommendations to instructors to enhance student engagement in the synchronous virtual environment

The recommendations arising from this case study are arranged below (Table 1), against the four aspects of student engagement and corresponding evidence from the higher education literature. Reflecting real-life situations, some of these recommendations are relevant to more than one engagement construct, however, taken together they offer a practical and achievable guide to improving engagement in the synchronous virtual environment

Table 1.

Guide to support student engagement in the Synchronous Virtual Environment

Engagement construct	Recommendations to instructor	Evidence
Belonging	Structure the session well and plan for a shorter time period, with simpler activities than those used in asynchronous or face-to-face classes	Berry, 2019; Hrastinski, 2008; Lin & Gao, 2020; McBrien, Jones & Cheng, 2021; TEQSA, 2020.
	Welcome students to class by name where possible.	Martin, 2019; TEQSA; 2020
	Be 'present' in classes via video and consider the inclusion of student video for smaller groups.	Joksimovic et al., 2015; Kang & Im, 2012; Richardson et al., 2017.
	Record classes and share recordings with all students.	Martin & Bollinger, 2018.
	Avoid online class delivery to new students, or if essential, prime these units/modules with face-to-face 'getting to know you' sessions.	Kent et al., 2019; Greenland & Moore, 2014.
Emotional response	Acknowledge the frustrations of the mandatory move to online learning for some students (or other relevant shared issue). Share personal experiences and	Kahu & Nelson, 2020.

	relevant frustrations and encourage students to do the same.	
	Develop ground rules regarding discussions in class in collaboration with students and have a contingency plan for managing unacceptable conversations.	TEQSA, 2020
	Advocate for university policy to guide university staff to manage digital incivility.	TEQSA, 2020
	Encourage students to use emoticons to express feelings in text chat and text responses to classwork activities.	Berry, 2019; Joksimovic et al., 2015.
Wellbeing	Make time for, and prompt, 'non-content' discussions in class.	Berry, 2019; Mabrito, 2006; TEQSA, 2020.
	Discuss student support services and encourage students to share their experiences of these services within the class.	Elmer et al., 2020; King, 2020.
	Follow-up non-attenders and 'silent' participants to check on wellbeing and IT access – while also appreciating that some adult learners may prefer passive participation.	Elmer et al., 2020; King, 2020.
Self-efficacy	Complement synchronous virtual classes with asynchronous learning or face-to face learning - such as the flipped classroom model.	Brierton et al., 2016: Linnenbrink & Pintrich, 2003; Palvia et al., 2018.
	Use technology that allows anonymous participation in learning activities, such as polls and whiteboards.	McBrien, Cheng & Jones, 2009; Michael, 2012; Wilson et al., 2020.
	Consider internet and IT access and literacy of all students	TEQSA, 2020.

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