

The opportunities and challenges of emergency, remote learning for large class students during the Covid-19 pandemic

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Abstract

In April 2020, the Dublin City University (DCU) Educational Trust launched the Covid-19 Research and Innovation Hub, which was designed to address key challenges arising globally as a result of the Covid-19 pandemic. The research findings presented in this paper emerge from one of the Hub's technology projects, entitled 'Moving Large Classes Online' (Farrell et al., 2021). This research project was evaluative in nature with the aim of illuminating the innovation (Parlett & Hamilton, 1972) of promptly moving large, face-to-face classes online in the immediate response to the Covid-19 pandemic at DCU, Ireland. While the overall research illustrates both the staff and student perspective of emergency, remote large class teaching and learning from March - May, 2020, this paper specifically focuses on the opportunities and challenges faced by large class students during this unprecedented move online. Findings from the data are shared and implications for addressing the opportunities and challenges are addressed.

Keywords: *Large classes; COVID-19; remote teaching; online learning; isolation; accessibility*

1. Introduction

In April 2020, the Dublin City University (DCU) Educational Trust launched the [Covid-19 Research and Innovation Hub](#), which was designed to address key challenges arising globally as a result of the Covid-19 pandemic. The research findings presented in this paper emerge from one of the Hub's technology projects, entitled *Moving Large Classes Online* (Farrell et al., 2021). This research project was evaluative in nature with the aim of illuminating the innovation (Parlett & Hamilton, 1972) of promptly moving large, face-to-face classes online in the immediate response to the Covid-19 pandemic at DCU. The focus of this paper is on the student experience only.

2. Description of the Teaching/ Learning Context

On March 12th 2020, DCU, like many other higher education institutions globally, closed its physical campuses to curb the spread of Covid-19. This led to the remote, emergency delivery of all undergraduate and postgraduate programmes, including the 300+ large class modules across the University's five faculties.

For the purposes of this paper, the term 'large class(es)' refers to undergraduate and postgraduate modules with 100+ enrolled students. Staff and students were surveyed using a questionnaire comprising open and closed questions. Survey respondents were frequently reminded to comment only on their experience of large classes. This data was supplemented by a systematised scoping review of relevant literature.

3. Literature Review

This section explicates the opportunities and challenges of large class teaching and learning. It also presents findings from recently published literature that illustrates how the higher education community globally experienced the sudden pivot to remote teaching and learning during the first wave of the Covid-19 pandemic.

3.1. Opportunities and Challenges of Face-to-Face, Large Class Teaching and Learning

Much of the literature focuses on the opportunities of face-to-face, large class teaching and learning. One of the greatest opportunities is the increased diversity amongst students in large cohorts, which more accurately reflects life outside of the classroom (Auslander, 2000). The inherent energy of large cohorts is another great opportunity associated with large class teaching and learning (DeRogatis et al., 2014). This energy is a two-way process, where the class teacher first invests time and energy into preparation for the module. Then, once energised, the teacher receives and responds to feedback from their class, which energises and motivates students in their learning. The teacher is a key person in any class but arguably more so in the complex large class context (Farrell et al., 2021) wherein students are motivated by large class teachers who nurture a caring learning environment (Straits, 2007).

The challenges associated with large classes are also reported in the literature. In particular, the feelings of disconnect amongst the large class community, both from staff and student perspective, is evident (Mulryan-Kyne, 2010). It is more difficult for students to form

relationships with teachers (Auslander, 2000). The distance between teachers and their students is often increased (Cole & Kosc, 2010), which makes it increasingly difficult to maintain eye-contact with students and to encourage active involvement in the lecture (Nicol & Boyle, 2003). Mulryan-Kyne (2010) also indicates that student behaviour in the large, face-to-face classrooms, e.g. lateness and talking, can be much more difficult to manage.

3.2. Transitioning Face-to-Face Classes Online during the Covid-19 Pandemic

In March 2020, the majority of higher education institutions globally moved face-to-face programmes online. It should be noted, however, that this provision for online learning is not the same as planned online learning because the former brings teaching online in an emergency context (i.e. in response to the Covid-19 pandemic), while the latter plans for student learning in the virtual classroom from the outset of module preparation (Eaton, 2020; Hodges et al., 2020).

Undoubtedly, the emergency provision for online teaching and learning proved challenging for both staff and students as the virtual learning environment (VLE), which was previously seen as supplementary to the face-to-face one (Yusoff et al., 2020), was now the primary conduit for instruction (Anzovino et al., 2020). The main challenge experienced by staff was creating an online classroom environment that nurtured student-teacher collaboration (Roache et al., 2020) and the caring learning environment, which motivates students (Straits, 2007).

Nonetheless, the overnight pivot to online teaching and learning presented opportunities. In particular, literature emerging in the last year or so suggests that the sudden provision for asynchronous learning increased the accessibility of higher education. For instance, the availability of pre-recorded lectures and recordings of live sessions allowed for greater flexibility, providing students with the opportunity to review class material at a suitable pace, time, and in a suitable environment (Creechan, 2020; Gierdowsky & Galane, 2020). In addition, the pandemic context perhaps heightened the reciprocal empathy between students and teachers, allowing an ethic of care to be embedded (Hornsby, 2020) in the online environment. Moreover, the sudden move to the online environment created a situation wherein most higher education teachers had to think about every element of their pedagogy (Farrell et al., 2021), including those teaching large class cohorts. Having said that, most of the literature appearing over the period of the pandemic, did not specifically refer to large class cohorts with some exceptions e.g. Hornsby (2020).

4. Empirical Methodology / Data

Three sources of data were collected as part of this evaluative research: (a) surveys of students and staff enrolled/working on large class modules from March - May 2020; (b) a rapid, systematised literature review, which was used to collate and determine what was already known, understood, and experienced by others (Gough et al, 2017) in relation to large classes, and online teaching and learning; and (c) data relating to the teaching supports provided by the DCU Teaching Enhancement Unit to large class teaching staff, e.g. engagement with online support resources on Loop and attendance at professional learning

workshops. By analysing this data, the authors were able to ascertain the various experiences of large class staff and students during the emergency pivot to remote teaching and learning in March 2020. This analysis highlighted the main opportunities and challenges faced by large class students.

4.1. Increased Flexibility and Accessibility

As outlined in the literature review, the unprecedented move online increased the accessibility of module content. This is largely due to the increase in asynchronous teaching and learning activities, e.g. readings; videos; and recordings of presentation slides. Thirty-two per cent ($n = 108$) of students surveyed by the authors indicated that this was the most advantageous aspect of online learning. Open-ended responses from students also suggest that the availability of lectures on-demand made remote learning more accessible for students:

“Some lecturers, once finished, would put the recording of the lecture up onto Loop. I felt that this was extremely helpful as, due to being at home/being surrounded by distraction and the lack of the physicality of actually being present in the lecture hall, my attention tended to drift at some point and I sometimes missed some important pieces of information. [ST172]”

Staff views mirrored those of students in terms of their perception that the main advantages of online learning were the provision of additional online resources (36%, $n = 17$) and the opportunity for students to engage with materials asynchronously (21%, $n = 10$). Open-ended questions also elicited positive responses with regard to the accessibility of recorded lectures:

“Recorded lectures, so students could revisit. Students with accessibility or language issues have additional chances to engage with content [S36]”

4.2. Feelings of Disconnection in the Online Teaching Context

The sense of disconnect experienced in the large, face-to-face classroom (e.g. Cole & Kosc, 2010; Nicol & Boyle, 2003) was heightened during this unprecedented move online. In our survey of large class teaching staff, 85% ($n = 40$) of staff felt a strong feeling of disconnection with their students, with 56% ($n = 24$) reporting less personal interaction with students in the large class online teaching context. Some of the staff responses to open-ended questions further illustrate this feeling of disengagement with the student cohort:

“The biggest difference for me was the lack of teacher/student engagement ... in the big class, I speak to students as they enter the room; I walk all around the lecture “theatre” ... for me, teaching such a large group online was much “flatter” than F2F and, as a teacher, I found that difficult [S15]”

Students also reported feeling more isolated. In response to our survey, 65% ($n = 225$) of students either agreed or strongly agreed that they felt more isolated in the online large-class context than they did when learning face-to-face. This negatively impacted student learning, with one student reporting limited engagement with online lectures:

“I was easily distracted being in my own room. I missed my friends. I did not attend a lot of the lectures online and, unfortunately, I did not study half as much as I would have done in classes [ST104]”

5. Analysis of/ Reflection on / Implications for Practice

The issue of presence and connection is discussed across the literature on large class teaching and learning, with both staff (e.g. Auslander, 2000; Cole & Kosc, 2010; Mulryan-Kyne, 2010) and students (e.g. Suchman, Smith, Ahermae, McDowell, & Timpson, 2000; Arvanitakis, 2014) experiencing a sense of isolation. The data from our research indicates that this sense of isolation is emulated in the online space as a result of reduced synchronous teaching and limited peer-to-peer and student-teacher interactions.

Going forward, creating a strong teacher presence, which is a very important aspect of online pedagogy (Ní Shé et al., 2019), is an important consideration especially in the large class context whether online or face-to-face. A balance of synchronous and asynchronous engagement supports teacher presence. Synchronous learning activities, in particular, provide opportunities for students to communicate with their large class teacher in real-time, e.g. synchronous sessions can be a useful space for students to ask questions and debate module content. The provision of asynchronous learning activities, however, increases the accessibility of remote, emergency teaching. This is of benefit to all learners, as evidenced in our survey of large class staff and students.

In addition to these measures, the teacher may also choose to create a short, introductory video for their class. This video might outline module learning outcomes, lecture timetables, or whatever is deemed appropriate by the large class lecturer. The lecturer should also encourage discussion using discussion forums on the VLE. This will help to reduce the isolation felt by large class students working remotely in the online space.

In conclusion, this paper has explored the opportunities and challenges faced by large class students during the first wave of the Covid-19 pandemic in DCU. Going forward, the large class teacher should focus on striking a balance between asynchronous and synchronous learning activities to nurture social interaction and to ensure accessibility for all learners. This will align the emergency remote teaching of large classes with best practice outlined by a range of researchers (e.g. Ní Shé et al., 2019; Yusoff et al., 2020). The full suite of implications for practice may be found in the final report on this research (Farrell et al., 2021) and on the resource created for DCU large class teachers (Farrell et al., 2020).

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