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How Instructors Initially Viewed Teaching Online in Higher Education in the UK During the COVID-19 Pandemic

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Abstract. Learning and teaching in higher education institutions around the world have been heavily affected by the outbreak of COVID-19 since the fall of 2019. Teachers were suddenly told to convert their classes online and to be prepared to teach virtually. An online focus group (n=9) was conducted during the initial period of lockdown in the UK at the end of March 2020 to find out about their teaching experiences of transition into online education. A number of challenges were identified in both synchronous and asynchronous teaching processes, including unfamiliarity with the learning management system, privacy concerns, student engagement, preparation time and technological issues. A set of best practices was developed for instructors teaching online during the COVID-19 pandemic.

Keywords: Online teaching, COVID-19 pandemic, educational technology.

1 Introduction

1.1 COVID-19 and Higher Education

The COVID-19 pandemic has disrupted the personal and professional lives of virtually everyone on the planet. Massive disruptions have occurred everywhere from everyday businesses to educational institutions. Schools have been shut down and converted to virtual classes, forcing both the instructors and students to quickly adapt to a new digital norm [1-2]. According to UNESCO, over 60% of the world's student population is estimated to be impacted by these nationwide closures [3]. According to Inside Higher Ed [4], the COVID-19 pandemic forced higher education institutions into four phases, namely, 1) rapidly transitioning to distance learning; 2) adding basics into emergency courses; 3) extending the transition; and 4) the emerging new normal. Challenges were

most prominent for HEIs in phase one due to the unprecedented nature of the virus and urgency for taking immediate actions.

When the pandemic was first declared by the World Health Organization, Higher Educational Institutes (HEIs) from around the world immediately scrambled to find a way to guarantee the safety of their faculty, staff, and students. The rapid transition into remote teaching and learning proved to be problematic in many areas including learning and teaching, assessment, student services, university finance, and so on. In particular, HEIs were struggling with quickly moving learning and teaching from the traditional face-to-face model to an unfamiliar distance learning model. Research suggests that teachers and students were unprepared for the sudden transition into a new learning mode, and universities often lacked the technical capacity and infrastructure to handle the move [5-6].

1.2 Distance Learning and Traditional Face-to-Face Teaching

Distance learning and traditional face-to-face teaching are two very different modes and require a different set of delivery methods, pedagogical considerations and educational technologies. Research suggests that although distance learning has advantages over traditional learning in terms of accessibility, convenience and flexibility, challenges remain for distance learning in the areas of quality of teaching, teacher-student communication, and ICT challenges [7]. Due to the rapid transition into a distance learning model, these issues become even more prominent for teachers and students. An expert face-to-face lecturer could easily have trouble teaching online; for instance, there is less direct feedback from students in an online course, there is difficulty sharing presentations, there can be technical issues and lag times, the conversation with students seems unnatural, and so on. When teaching in an synchronous session, the instructor may treat the class as if it were a traditional face-to-face lecture, although in actuality, they are quite different. If the faculty is unaccustomed to teaching online, they might just lecture by themselves for an hour without inserting appropriate breaks and waiting for student feedback.

Similarly, students also need to be prepared to take an online course, and previous students have shown that students with certain traits tend to perform better in an online course. To succeed in an online course, students are expected to be independent, responsible, self-motivated, adaptive, able to learn with minimal instructor guidance, and able to establish an online community group [8]. Students lacking these skills can struggle with an online course, and suddenly being forced to take an online course mid-way through a semester can add unnecessary stress to the student.

1.3 Synchronous and Asynchronous Teaching

Online classes can be synchronous (when everyone is logged in together at the same time) or asynchronous (when students can work at their own pace). Synchronous classes allow for direct interaction and immediate feedback from the instructor, while asynchronous classes allow students to access learning resources at their own time and speed [9].

Although research suggests that students welcome the synchronous sessions as they feel part of a learning community, Park and Bonk [10] pointed out the negative impact of students' internet connection and language barriers on their synchronous learning experiences, highlighting a lack of peer interactions. In the same vein, Romero-Hall and Rocha Vicentini [11] suggested that these challenges remain in the hybrid learning settings where face-to-face communication cannot be easily replaced by online interaction.

1.4 Classroom Interactions

Higher educational institutions around the world have long been developing and utilising interactive educational technology to promote active student engagement [12-13]. Evidence from several cohort studies have already indicated the benefits of blended learning or flipped classrooms on students' academic performance [14]. Online discussion forums and social media apps have been used to promote student interaction outside traditional classrooms [15-16]. However, several studies have shown that there is a significant decrease in student engagement in distance learning courses, ranging from students remaining silent during synchronising discussion activities to not logging into the virtual learning environments for months [17]. Interactivity, whether between the faculty and students or students to students are a key part to creating an online community. It is very easy for an online student to feel demotivated and fall behind in an online course, and having an interactive component gives the student a chance to engage with the online community and stay focused.

1.5 Educational Technology

With more and more universities including online classes, the use of educational technology becomes more and more relevant, and Higher Education Institutions have been a strong advocate for the use of interactive teaching methods to promote student learning. Traditional approaches such as teacher-fronted instructions and in-class group discussions were typically well-received by both teachers and learners [18-19]. The emerging educational technology has brought new possibilities for addressing the different learning styles and needs of an increasingly diverse student body [20], although it is important to remember that pedagogy should always come before technology integration. Research suggests that learning technologies can enhance students' academic performance and engagement on STEM subjects [21]. For example, visual tools, such as mind mapping software, have been found to encourage student classroom participation [22]. Although scholars have frequently endorsed educational technology in empowering learning, much of the current literature has emphasised on how these technologies are deployed in face-to-face teaching contexts or in a blended learning context. With the increasing number of universities transitioning from traditional teaching to distance learning during the COVID-19 period, teachers and students have become more reliant on educational technology. However, lack of training for staff and/or insufficient IT resources remain problematic for HEIs.

2 Methodology

This paper adds to this emergent literature by using an exploratory study to investigate the university teacher' experiences of moving towards online teaching due to the COVID-19 outbreak. The researchers both work at large universities and experienced a swift move to distance learning. They employed a semi-structured focus group that allowed them to gain insight into the experiences of the participants. This method was best suited for the available study population since it allowed the researchers and participants to exchange viewpoints and confirm insights in order to achieve a robust discussion while addressing a complex topic and observing the group perception [23].

The focus group interview was held online in late March 2020 at the beginning of the lockdown in the UK in order to qualitatively explore the views of a group of university teachers (N=9; 4F,5M) on their transition into online teaching. The focus group consisted of a mixture of junior (n=6) and senior teachers (n=3) of social science disciplines. The interview was recorded, transcribed and analysed using the six phases of thematic analysis proposed by Braun and Clarke [24] including data familiarization, coding, searching of themes, reviewing of themes, defining themes, and producing the final report. The participants were anonymised using pseudonyms.

Specifically, there were three research questions that emerged from the preceding literature review:

1. What are the challenges in synchronous and asynchronous teaching sessions?

2. What are the impacts of these sessions on student engagement?

3. What recommendations can we provide for teachers in higher education during the outbreak of COVID-19?

3 Results

Although an asynchronous video recording can provide quality teaching content, students tend to be less engaged in those sessions, whereas synchronous live sessions can provide more opportunities for interaction [9]. Our participants offered both synchronous and asynchronous sessions for their students, and they witnessed a significant drop in student engagement in both sessions compared to the pre-lockdown campus-based face-to-face learning. They identified a number of challenges and proposed some potential solutions in the following three areas: synchronous sessions, asynchronous sessions and overall student engagement.

3.1 Challenges in synchronous sessions

According to our participants, they faced a number of issues with synchronous sessions at the beginning of the transition. These included unfamiliarity of the Blackboard Learning Management System (LMS), silence in student-centred activities, privacy

concerns of the recording of live sessions, and so on. A number of technologies were proposed as solutions to help teachers engage the student in live sessions in Blackboard such as the polls feature, the interactive whiteboard feature and breakout rooms for group activities. However, challenges still remained with synchronous teaching. One participant described the challenges she faced while interacting with students in synchronous lectures:

'Students were reluctant to use their microphones during group discussions. We did ask students to mute their microphones during the lecture presentation part. That might have caused the issue. Some of them preferred to type in the comment sections, which again caused problems. We have to wait for students to type in their questions, it was awkward.' [T2, Female]

Low student participation is a common issue in online sessions, and the comment described by the teacher was not unusual. Some ways to help address this could be to provide the students with an instructional video about how to use the LMS system before the start of a session. The students need to be familiar with the tools and should participate in a dry run before attending classes. Additionally, some LMS systems have a raise hand feature that will allow the teacher to call on students in an orderly fashion. Teachers can encourage students to use this function more rather than relying on text comments to ask questions.

Privacy concerns of being recorded. Another instructor reported that some students seemed to be concerned about being recorded while participating:

'I taught the first half of the session and used the second half for student-led discussions. But when I started recording, the student started to drop off of the course. There were fewer questions from students as a result.' [T1, Male]

After the first session was completed, the instructor informed the students that they would be recorded during the live discussion session. Students dropped from the session quickly after. While this could also be attributed to students not wanting to participate, it was also possible students did not want to be recorded. Students tend to be more shy when they know they are being recorded and may not feel comfortable truly speaking their minds if they know they will be on the record. As a result, some of the students chose to just leave when they knew their comments would be recorded.

One way to help prevent this is to inform the students earlier that they would be recorded and also provide a set of guidelines of what will be done with the recordings. By letting students know that the recording will only be seen by classmates and not publicly shared or that they will be deleted after a semester, they might feel more comfortable speaking. Another alternative is to stop recording during the live discussion. Many times, the lecture is what students really want to see recorded (so they can go back to it in the future) and not the live discussions. They could ease some of the students' fears about privacy as well. Lecturers can take notes about the common questions and provide a summary of answers to the frequently asked questions to students through email.

Facilitation of live sessions. A final concern that instructors had about synchronous teaching had to deal with the facilitation of the live sessions.

'I found that students were engaged with lecture presentations in the main delivery room. But as soon as we divided students into breakout rooms, their engagement dropped. It could be that there were no slides available to students in individual breakout rooms so they can't remember the tasks. It could also be that some students were not prepared to speak or didn't have a microphone. But once we moved between breakout rooms to clarify what they needed to do, they started to engage with tasks again. However, at this point, we've lost half of them.' [T2, Female]

In this comment, the instructor was concerned that students did not know how to properly engage in a breakout room. The instructor included possibilities as to why this happened. One possible solution is that the instructor can use teaching assistants or assign discussion leaders beforehand and let the discussion leader carry on the conversation in each breakout room.

3.2 Challenges in asynchronous sessions

Although according to our participants, while synchronous sessions offer more opportunities for student interaction, asynchronous teaching offers more flexibility to students, particularly in terms of video quality and accessibility when students are located in different time zones. Some teachers prefer asynchronous teaching as it can result in better video quality and allows teaching to be recorded all at one session.

'Having recorded all the sessions for asynchronous consumption, I found it easier. All I need to worry about is how to make them interactive.' [T4, Male]

'Recording quality is way higher than the live recording where there are lots of sound such as ums, ah, you know' [T6, Male]

However, instructors still reported some challenges when using asynchronous teaching. Traditional concerns with asynchronous teaching include lack of interactivity and instant feedback, as well as a higher demand for student responsibility. Our participants also specifically mentioned time concerns necessary for producing a quality asynchronous video.

Time concerns. Some of our participants pointed out the extra preparation time needed for teachers compared to live sessions:

'But recording asynchronous sessions actually take up more time than synchronous sessions, and we are not given that much time for preparation.' [T5, Female]

While creating a quality online lecture does take more initial preparation, an instructor may find it worthwhile to invest the time at the start to create a good lecture. A

quality lecture can be reused multiple times before needing to be updated and can provide a better learning experience for the student.

Recording software. In order to create a lecture, some participants used PowerPoint to record lectures with audio narration. The advantage of this is that each slide has a separate audio recording, which can be re-recorded if necessary, without having to re-record the entire lecture. This allows for flexibility in terms of making changes per slide. Other presentation recording software such as Blackboard Kaltura, Google Meet, TechSmith Camtasia, and Blackboard Collaborate allow video to be recorded with a webcam, which provides a more personal touch and supports students with additional learning needs who may rely on lips reading and subtitles. Preparing scripts for recorded sessions is another way to improve the quality of teaching. Synchronous sessions tend to be more forgiving for umms and digressions than recorded lectures. Recorded sessions, however, require a smoother speech to create professional content, although instructors should also be careful not to be entirely flat or they risk sounding monotonous and losing the audience's attention.

3.3 Student Engagement

Participants noted that some students were not actively engaging with the school's LMS. The main concern was that it was difficult to get an overview of individual student engagement across modules to spot a struggling student who might need extra support. The overall student interactivity significantly dropped since the move to the distance learning model:

'Interactivity in a live session is quite reduced...but interaction in asynchronous in discussion boards is even worse' [T8, Female]

This could be potentially due to the length of the video, quality of the recording, features of the Learning Support System (or lack thereof) and lack of support for the student's transition into a distance learning model.

The length of video lectures. One of our participants pointed out that long videos were not effective for maintaining student engagement:

'Student attention span is rather short. We might lose student engagement if the lecture lasts for an hour or two. It is more challenging for students to watch the recording that lasts that long' [T1, Male]

Although some research suggests that the optimal length of videos should be around 6 minutes [25], in order to maintain a student's attention, it is sometimes not practical to keep all videos within that length, particularly when delivering complex content. Strategies such as inserting interactive quizzes and labelling content by topic could potentially help to break up the monotony of longer content. The interactive quizzes could serve as short breaks, and labelling content could produce an index system, making it easier for students to navigate to a section of interest.

Lack of support for student transition. Since the move to online teaching, more resources have been put in place to support teachers in terms of teaching design and delivery. Most students, however, were left with an overload of email announcements rather than practical training sessions supporting them to move to this new mode of learning. Our participants reported a lack of induction for students when the university transitioned into online teaching.

'We actually have no issues with our distance learners since locked down. I guess this is due to all the induction and support we offered for them at the beginning of their programmes. However, for our campus-based students, there was not much support for them during this transition. We kind of rely on teachers to instruct them within individual lectures' [T2, Female]

'Sometimes what I've done is a short welcome video of two or three videos about myself or the module. I may even consider doing that as a weekly introduction to the main lecture. To give students a bit of structure as well as a bit of personal touch' [T5, Female]

The confusion creates further challenges for students who have to navigate the learning system and lecture content themselves. A potential solution is to create short instructional videos to help students to navigate the unstructured learning resources that have been dramatically increased during the COVID-19 period.

4 Conclusion and Recommendations

The study provided further evidence of the challenges teachers faced when universities moved to online teaching at the beginning of the national lockdown in the UK due to COVID-19, ranging from technological barriers, privacy concerns, and teaching (facilitating) group activities in synchronous sessions to student interactivity, video length, extra preparation time for teachers in asynchronous sessions. A combination of these factors made it much harder for students to engage in online learning. Another barrier was that students were often neglected in the process of transitioning to online LMS, resulting in a further reduction of student engagement. Our recommendations include providing short instructional or walkthrough videos for students to navigate the LMS and often unstructured learning resources; assign group leaders or use teaching assistants to facilitate online group activities; choose appropriate recording software and record shorter videos; not to record student discussions for privacy concerns and student engagement rather providing a summary based on student discussions, and so on.

It is important to note that data for this research were collected at the start of the lockdown when universities were scrambling to get their courses online. Some of the concerns addressed in this research were significant for teachers during that period. Our sample size was limited due to difficulty to recruit participants during the lockdown period and is not generalizable for the general teaching population, particularly since our participants were all from social science disciplines. Future research should build on the results of this study by qualitatively and quantitatively exploring the teaching

and learning experiences of various disciplines. To gain a better sense of the situation, a larger sample size is needed. Additionally, the perspective of university professional services teams should be investigated.

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