



Lecturing from home

Almpanis, T., & Joseph-Richard, P. (2022). Lecturing from home: Exploring academics' experiences of remote teaching during a pandemic . *International Journal of Educational Research Open* , 3, 1-40. Article 100133. <https://doi.org/10.1016/j.ijedro.2022.100133>

[Link to publication record in Ulster University Research Portal](#)

Published in:
International Journal of Educational Research Open

Publication Status:
Published (in print/issue): 08/02/2022

DOI:
[10.1016/j.ijedro.2022.100133](https://doi.org/10.1016/j.ijedro.2022.100133)

Document Version
Publisher's PDF, also known as Version of record

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Lecturing from home: Exploring academics' experiences of remote teaching during a pandemic



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ARTICLE INFO

Keywords:

Blended learning
Academic practice
Emergency remote teaching
UKPSF

ABSTRACT

This study aims to explore home-working academics' experiences of remote teaching during the COVID-19 pandemic. The disruptions caused by the pandemic have posed several challenges to academics. These challenges included familiarising themselves with the use of digital technologies and their related pedagogies within a short period of time, so that classes can be moved online. In this study, we use the UK Professional Standards Framework (UKPSF, 2011) as a lens through which to bring to light ten academics' experiences of adapting their teaching and learning strategies to address the challenges they faced during the pandemic. We reveal how they made surface-level adaptations in lesson plans and teaching delivery, intensified institutional focus on assessments, increased efforts to support 'connected, but disengaged' students, and emerged as 'learning' practitioners. This research will inform pedagogical approaches to technology-enhanced learning and teaching, as well as staff development for blended and online learning in higher education.

Introduction

This study aims to explore home-working academics' experiences of remote teaching during the COVID-19 pandemic. In March 2020 UK universities were forced to respond swiftly, following the clear imperative in the UK government's advice to avoid all non-essential contact with others and unnecessary travel. Higher education (HE) institutions in the UK, along with other educational establishments, suspended all face-to-face teaching and social activities on campus. Universities were forced to deliver teaching and learning support remotely, through digital channels. Lecture materials had to be made available online as quickly as possible and academic teams had to quickly determine how teaching and assessment could be adapted to an online environment.

In addition, following the government's advice that people should work from home where possible, academics were obliged to adapt their living spaces to work requirements. Although remote working is already part of the working lives of many academics, this period of extensive social distancing has nevertheless posed several challenges to them. These include familiarising themselves with and, in some cases, mastering within a short period of time the use of institutionally supported digital-learning technologies such as Blackboard, Moodle, Canvas, Adobe Connect, Zoom, MS Teams and Panopto, so that classes could be moved online as quickly and seamlessly as possible. Teaching and learning activities, such as live streaming a lecture, working on a virtual white-

board, supporting an online discussion, providing real-time feedback to students, recording a lecture, adding voiceover commentary to a PowerPoint presentation or organising live Q&A sessions, are challenging tasks for many academics. With the wide range of web-conferencing tools, live-chat forums and mobile applications available to keep academics and students connected in virtual classrooms, academics, as 'critically reflective practitioners' (Thompson & Thompson, 2018), were forced to learn, adapt and change practices to maintain teaching and learning schedules.

These changes have had an immediate and profound effect on the working lives of academics, necessitating new ways of learning and teaching. This qualitative study aims to bring to light academics' experiences of how they have addressed the teaching and learning challenges they have faced during the pandemic. It has also revealed the potential of educational technology to facilitate teaching and learning in times of national lockdown. We acknowledge, however, that Emergency Remote Teaching (ERT), as practised during lockdown, is distinct from carefully designed Online Distance Learning (ODL); the rapid adoption of ERT, alongside the disruption caused to lecturers' and students' lives, may well have had a negative impact, diminishing the quality of courses delivered. Our approach, therefore, is highly contextual, aiming to examine the different ways in which each informant has responded to these unprecedented challenges. A purposive sample was taken, consisting of ten academics from five UK universities who were forced to work from

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home during the COVID-19 pandemic; these are the informants of this study. Their lived experiences are of primary importance in showcasing the range of approaches implemented by academics working in different UK universities, across various disciplines.

Following a review of the current literature on the topic of remote teaching, we outline the methodology used before discussing the research findings arising from analysis of the participants' narratives. We will align issues, threats and opportunities with the five areas of academic practice, as outlined in the UK Professional Standards Framework (UKPSF, 2011) and discuss them thematically. We will then conclude the study with recommendations drawn in relation to ongoing remote teaching. This study is of relevance to academics, academic leaders and managers and educational developers, as well as Technology Enhanced Learning (TEL) and Information Technology (IT) support staff.

Theoretical background

Online Distance Learning (ODL) is not a new initiative. ODL was developed in parallel with the world wide web in the 1990's taking advantage of applicable technological developments (Almpanis, 2015). Initially, information delivery was coupled with asynchronous discussion forums; following the 'dot-com boom' of the early 2000s and the subsequent use of broadband connections (which became mainstream soon after), web 2.0 tools and synchronous conferencing tools were explored and exploited to facilitate fully online programmes. However, for ODL courses to be delivered effectively, all participating tutors were required to understand the relevant technologies and the way in which they could be adapted for use with their subject matter and to their individual pedagogical styles. The Technological Pedagogical Content Knowledge (TPACK) model which was developed by Mishra and Koehler (2006) emphasises these intersections between technology, pedagogy and subject matter:

Quality teaching requires developing a nuanced understanding of the complex relationships between technology, content and pedagogy, and using this understanding to develop appropriate context-specific strategies and representations. (Mishra & Koehler, 2006, p. 1029)

Staff development is, therefore, critical to the implementation of ODL (Almpanis, 2015; Garrison & Vaughan, 2008; Laurillard, 2012; MacDonald, 2008; Palloff & Pratt, 2007; Salmon, 2011) as "lecturers need to be digitally literate, have a conceptual understanding of the tools they are using and make the conceptual shift from content creation to interactive online facilitation" (Almpanis, 2015, p. 386).

Furthermore, student induction into online learning is paramount. Salmon's five-stage model (2011) offers a step-by-step guide to how to run online activities. Her model is focused on facilitation of group participation; participants undertake online structured activities with the aim of becoming independent learners and eventually themselves developing the qualities of an online facilitator. Initially, participants access and are introduced to the e-learning platform. During stage two, participants exchange messages with the group. In stage three, as they become more familiar with the platform, participants begin to exchange information and interact with the content, the moderator and one another. In stage four, participants come to fully appreciate the potential of online interactions to support their learning and develop new techniques for assimilating knowledge through the online platform. Finally, at stage five, participants become committed and creative in the ways they use the platform to support their learning, applying the newly acquired knowledge of online participation to their individual contexts.

ODL requires a significant amount of investment in the planning phase and should be recognised as completely distinct from rapid online learning courses (Hodges, Moore, Lockee, Trust, & Bond, 2020). A new term intended to emphasise this distinction between purposefully designed online courses and rapid online learning used as an ad-hoc response to an exogenous crisis has recently been established: Emergency Remote Teaching (ERT) (Hodges et al., 2020).

Although there are benefits to be attained in working from home, such as reducing time lost to commuting, these are applicable to working from home out of choice, rather than as a necessity. In fact, working conditions are perceived as having deteriorated for many employees as a result of conditions imposed around the COVID-19 pandemic and the related campus closures. In light of such strains, COVID-19 has contributed to increased risk of employees facing exhaustion, including permanent feelings of disengagement (Walker, Fontinha, Haak-Saheem, & Brewster, 2020) and increased stress and anxiety (Peacock, 2021).

Furthermore, when it comes to assessment, lecturers must ensure that assessments are carefully designed in order to be valid, reliable, fair, accessible and inclusive (Gordon, Hughes, & McKenna, 2015 and 2017). A recent study (Jopp, 2020) identified various challenges and opportunities related to the use of technology to support authentic assessments. However, when assessments that were originally designed for the classroom are adapted to be taken remotely, additional challenges are presented. Depending on the type of assessment, it may be conducted online, provided that universities can meet the technical requirements and make reasonable accommodations to the particular circumstances of their students (Baume, 2020). In other cases, such as conventional, invigilated, 'closed-book' examinations, the challenges are even greater and, although there are various proctoring services available, these are not always practicable and raise important ethical questions related to invasion of privacy and erosion of trust at universities (Stewart, 2020).

The challenges of remote teaching both now and in the future are discussed in the timely JISC report, *Learning and teaching reimagined* (JISC 2020; p. 4):

The experiences of the past several months have highlighted the challenges that lie ahead: changing university cultures, upskilling staff (including senior leaders), upgrading technology infrastructures, re-designing programmes of study and dealing with equity issues arising from the new ways of learning.

According to the JISC report, the main barrier to effective online teaching is cultural, rather than technological. It is suggested that digital platforms should be at the heart of the institution and that universities should invest in blended learning in terms of technology and infrastructure, but also curriculum design and upskilling staff. Strategic direction, however, may be even more important than technology in the digital transformation of learning and teaching. Furthermore, a recent, large-scale pre-COVID study (Henderson, Selwyn, & Aston, 2017) showed that, while digital technologies were central to students' university experiences, the use of technology failed to transform teaching and learning, and educators were urged to "temper enthusiasm on what might be achieved through technology-enabled learning and develop better understandings of the realities of students' encounters with digital technologies" (p. 1567).

This empirical research study took place against this backdrop and aims to highlight the opportunities and challenges presented by remote teaching, as experienced by the participating academics. The following section outlines the methodology followed.

Methodology

To explore academics' experience of ERT, we used a descriptive qualitative design (Sandelowski, 2010). We collected data through video-based Skype interviews, as per the guidelines provided by Hamilton (2014), Lo Iacono, Symonds, and Brown (2016) and Seitz (2016). On obtaining approval from the University Faculty Research Ethics Committee, we purposively sampled ten academics working at five different UK universities, between June and September 2020. To ensure variation in our sample, we included academics of different genders, years of teaching experience and subject specialism (see Table 1, below).

Table 1
Interview schedule.

Exploring higher education academics' experiences of Emergency Remote Teaching during a pandemic – An Interpretative study				
Interview Schedule				
A1	Design and plan learning activities and/or programmes of study			
	<ol style="list-style-type: none"> Has your planning of teaching and learning activities been affected by campus closures? In what ways have you changed your planning processes? How have you modified your lesson plans? Have you re-designed your lectures/tutorials/workshops/demonstrations in any way? If so, could you give us an example? Have you re-designed learning materials, such as reading lists, handouts etc? Were your re-designing efforts informed by your School/department/professional body guidance? If so, please give us an example. During planning, what kinds of changes you had to make in communicating the changes to students? How have you ensured that your communication was accessible and inclusive? 			
A2	Delivery			
	<ol style="list-style-type: none"> How has your teaching delivery been affected by the campus closure? What teaching techniques are you using in ERT and which ones are more or less successful? Have you delivered your timetabled sessions synchronously (real-time) online? Have you made more use of asynchronous communications (e.g., discussion forums)? Have you focused on the delivery of content or have you put equal emphasis on interactions with students? (both synchronous and/or asynchronous) What adjustments have you done in your teaching online to accommodate students' diverse learning needs? How successful have you been in transferring your in-class pedagogical approach to ERT? 			
A3	Assessment & Feedback			
	<ol style="list-style-type: none"> Did you have to change your assessment method or mode as a result of the campus closure (alternative assessments? If so, in what ways?) If you did change your assessment, what quality assurance processes have you followed, if any? (eg. peer reviewing, external examiner approval) How have you ensured that students were not disadvantaged by any changes in assessment? (Equivalence – Equity – Access) Have you changed the way you provide feedback to students as a result of the campus closure? If yes, in what ways? 			
A4	Develop effective learning environments and approaches to student support and guidance			
	<ol style="list-style-type: none"> Has the way you provide student support and guidance changed by campus closures? If so, in what ways you have modified your approaches to student support and guidance? Please comment on how, during the pandemic, you support the following activities: One-to-one / Small group / Large group support and guidance Have you encountered a need to provide health and wellbeing (pastoral) support during campus closures? If so, how have you responded to that need? When engaging in ERT, what kinds of challenges you faced in creating a suitable learning context for your students? To foster a spirit of a learning community? To improve student engagement? What learner engagement strategies have you used in remote teaching? 			
A5	HE Teachers' continuous professional development			
	<ol style="list-style-type: none"> Have you engaged in additional training and development opportunities to further develop their practice, during campus closures? If so, what are they? What kinds of activities you undertook or planning to undertake (evaluation) to ensure that your designing, delivery, assessment, student support practices were effective in terms of: <table border="0" style="margin-left: 20px;"> <tr> <td>Achieving the intended learning outcomes?</td> <td>Meeting students' expectations?</td> <td>Enhancing students' experience of learning?</td> </tr> </table> 	Achieving the intended learning outcomes?	Meeting students' expectations?	Enhancing students' experience of learning?
Achieving the intended learning outcomes?	Meeting students' expectations?	Enhancing students' experience of learning?		
Is there anything else that you would like to add?				

Method: Conduct of the interviews

We used in-depth, semi-structured interviews to collect data to obtain a rich description of the context of each participant. In line with the UKPSF's areas of activity (2011), the focus of the interviews was on the academics' experiences of designing and planning sessions; teaching and supporting learning; assessing and providing feedback; developing an ef-

fective learning environment and supporting students; and participating in continuous professional development (CPD). Prior to the interviews, each participant was sent an information sheet, an online consent form, and a copy of the interview schedule (see table 1 below).

To ascertain their respective experiences of ERT, at the start of the interviews participants were asked briefly to describe the subject they were teaching at the time of entering lockdown; the common characteristics of their students; and their initial reactions to the disruptions they faced. We then followed the interview schedule to explore their empirical experiences of engaging in ERT. Pauses and probes were used to allow participants to add detail to their descriptions. The length of the interviews ranged from 30 to 90 minutes, with the average interview lasting approximately 45 minutes. One of the participants provided a self-evaluation, identifying the lessons she learnt during the ERT. Each interview was audio-recorded. The recorded interviews were transcribed verbatim.

Data analysis

Overall, the sample represented a range of disciplines: Business and Law (4), Social Science and Humanities (2), Health Sciences (2), and Engineering (2). There were eight male and two female respondents, with an average teaching experience of 8 years and 1 month, undertaking ERT across a range of undergraduate and postgraduate programmes. Our analysis was inspired by Ritchie and Spencer's (2002) description of framework analysis to set clear limits on the range of experiential dimensions of ERT during the pandemic.

We undertook a five-step iterative process, as recommended by Ritchie and Spencer (2002) and Srivastava and Thomson (2009). First, we familiarised ourselves with the data by reading and re-reading the transcripts. While managing and organising the data set, informed by *a priori* concerns, we were also cognisant of the many emergent themes identified through our familiarisation. Second, we used the UKPSF (2011) as an analytical framework through which to filter and classify the participants' accounts of how they undertook the five main areas of academic practice. Within the transcripts, we looked for evidence of the ways in which the participants experienced designing, delivering, assessing and giving feedback, providing student support and evaluating learning outcomes while undertaking continuous professional development, using technological tools. Concentrating on the five *a priori* areas – the five areas of activity specified in the UKPSF framework – allowed for a sharper focus on filtering data appropriate for consideration in framing and developing theoretical accounts (Parkinson, Eatough, Holmes, Stapley, & Midgley, 2016). The recurring categories were labelled and organised into themes. We indexed the themes and colour-coded the sentences that capture the essence of the ERT practices. Fourth, we charted the quotes lifted from their original textual contexts and placed them under thematic headings. Finally, we mapped and interpreted the interconnections between the informants' experiences. At this stage, we also identified the physiological, emotional and social aspects of their practices, an emergent category that did not align with the five areas of activity in the UKPSF. Owing to word-limit constraints, we present and discuss here the five themes aligned with the UKPSF's specified areas of activity. Anonymised quotes are presented to support each theme in the findings section that follows. To maintain the subjects' anonymity, all identifiable information has been removed and pseudonyms are used.

Findings

The framework analysis of the interview data resulted in the construction of five themes that captured the participants' ERT experiences; each of these themes correlates to an area of activity of the UKPSF (2011). The themes that emerged were as follows:

- 1 Swift, surface-level adaptation in designing and planning lessons.

Table 2
Characteristics of the research participants.

Characteristics of the research participants				
Code/Pseudonym	Gender	Teaching Experience	Subject Specialism	Teaching level: Undergraduate (UG) / Postgraduate (PG)
S1 (Peter)	M	5	Travel & Tourism	UG
S2 (Mario)	M	4	Engineering	UG
S3 (Viktor)	M	6	Engineering	UG/PG
S4 (Vincent)	M	7	Physiotherapy	UG
S5 (Adam)	M	5	Pharmacy	UG/PG
S6 (Anne)	F	4	Management	UG/PG
S7 (Fabian)	M	20	Human Resource Management	UG
S8 (Ian)	M	16	Project Management	UG
			Business Management	UG
			Project Management	PG
S9 (Paul)	M	8	Executive Education/Law	PG
S10 (Sarah)	F	6	Digital Marketing	PG
			Research Methods	UG

Table 3
Themes and subthemes capturing participants' ERT experiences.

Themes	Subthemes
Theme 1 <i>Swift, surface-level adaptation in designing and planning lessons.</i>	<i>Minimal changes due to lack of time</i> <i>Additional digitised resources and activities</i> <i>Challenges of online delivery of laboratory sessions</i>
Theme 2 <i>Synchronous/asynchronous delivery of past materials using institutional resources.</i>	<i>Synchronous delivery</i> <i>Combination of synchronous and asynchronous delivery</i> <i>Asynchronous owing to technical issues</i>
Theme 3 <i>Implementing alternative online assessments.</i>	<i>Cancelling exams and/or changing their format</i> <i>Simplifying the assessment</i> <i>Using real-world, personalised cases for problem-solving</i> <i>Using probing techniques for students taking video-based, practical assessments</i> <i>Modifying exam questions to focus on higher order cognitive skills</i> <i>Online feedback practices remained unchanged</i>
Theme 4 <i>Increased levels of support for the 'connected but disengaged' students.</i>	<i>Disengagement in synchronous mode</i> <i>Lack of understanding of engagement with asynchronous resources</i> <i>Differences between undergraduate and postgraduate students</i>
Theme 5 <i>The emergence of a 'learning' practitioner.</i>	<i>Lecturers' digital skills development - instrumentalist approach to technology</i> <i>Systematic continuing professional development in online teaching and learning</i>

- 2 Synchronous/asynchronous delivery of past materials using institutional resources.
- 3 An intense focus on exploiting new technological tools for implementing alternative online assessments.
- 4 Increased levels of support for the 'connected but disengaged' students.
- 5 The emergence of a 'learning' practitioner.

Table 3 below summarises the themes and subthemes that emerged from this research.

Theme 1: Swift, surface-level adaptation in designing and planning lessons

Minimal changes due to lack of time

As the move to remote online teaching was abrupt, changes in the design and planning of lectures and seminars were, in some cases, minimal and technology was used instrumentally:

During the lockdown, we didn't have enough time to change the lesson plans, we just had to cope with the situation. (S1, Peter)

The closure was not hugely challenging, other than the fact that we were doing it virtually, on Zoom. (S8, Ian)

Additional digitised resources and activities

In other cases, additional resources and activities were prepared:

I included an opening ice-breaker and a lot of whiteboard-based activities. I prepared a tutorial guidance sheet to give them additional support. (S7, Fabian)

Another participant (S6, Anne) found that they had to modify their lesson plans in terms of "order, length of breaks, recordings and increased asynchronous activities", which resulted in significantly extended working hours. The time it takes to prepare and implement activities online was commented on by most of the participants, who found that they were spending more time than previously in both preparing learning materials and activities, and also in supporting students. Common changes included the digitisation of resources in collaboration with the university library.

Challenges of online delivery of laboratory sessions

A reported challenge in a few cases was the redesign of a laboratory session for online delivery:

So, I had to plan how I give the students experimental data, because they would never enter the lab during this time, and to explain [to] them how the experiments were conducted. So, there were some changes in the planning. I had to kind of [...] I changed it, I had basically to explain it on PowerPoint slides, basically how the experiments are run, with pictures from the experiments and what they had to do and things like this. (S3, Viktor)

[...] we had a couple of sessions, for example, labs, that were supposed to be on campus, so we had to reschedule them. What we've done [...] we went online, we explained everything, the experiment, etc., and we gave them our data. (S5, Adam)

Theme 2: Synchronous/asynchronous delivery of past materials using institutional resources

Some participating lecturers used a combination of synchronous and asynchronous online teaching approaches, while others opted for mostly synchronous delivery of their timetabled sessions. There was one lecturer who opted for asynchronous delivery, as he was facing technical issues that prevented him from delivering synchronously.

Synchronous delivery

Nine out of the ten research informants used synchronous delivery for parts of their timetabled teaching, while some of them delivered the majority of their teaching in this mode. For example, Adam (5) commented:

We had everything synchronously. The students know, for example, [if] they have a lecture at 10am with Dr X, they expect me to be there. I will create a conference; I will be there waiting for the students to join and then we will do it.

Another participant (S2, Mario) also opted for synchronous remote teaching:

All my teaching was [as timetabled], synchronously; at the same time, I had students connecting and then [...] either I gave the lecture or talked through their work, formative feedback and all of that.

Paul (S9), who also opted for synchronous delivery, discussed the action-based and problem-based learning approaches:

In terms of delivery, I do not want to talk to my slides. Some of my students liked that type of slide-focused teaching because it gave them a structure and some content to read while listening. So, I partly used the slides in those two hours but, wherever possible, I used the breakout groups. The breakout groups worked really well in block teaching. They do some pre-reading, or watch a video, and that is followed by content transmission and then some exercise for application: what the theory means in practice, using action-based learning and problem-based learning.

The choice of synchronous over asynchronous delivery was justified by one lecturer based on their students' preference for live sessions and because she thought that synchronous sessions provided greater "value for money":

Yes, all synchronous sessions, but with recordings. Interestingly enough, they are not using the asynchronous versions. They much prefer to be there online. It offers a completely different attraction to them than a recording. I, too, think if we do not offer live sessions, they may not get the value for their money, since they are not coming into our campuses. (S6, Anne)

Combination of synchronous and asynchronous delivery

Other research participants combined synchronous and asynchronous approaches in their teaching:

What I am doing is a combination of effective strategies. I put up lecture slides: pre-recorded lecture slides with audio. I put up a lot of materials, such as academic papers, interesting articles, multiple exercises to examine the knowledge [of the participant] or to determine that the learning actually took place. Then, on the day of the lecture, I do [a] live lecture, too. (S10, Sarah)

Asynchronous recordings for content delivery, coupled with seminar-type synchronous discussions, were also used in another case:

[...] the delivery that usually happens in physiotherapy or at least in our programme, is that you've got lectures, you have problem-based learning, which is small-group tutorials, and then you've got practicals, as well. So, all the lectures were pre-recorded, fixed resources and this is something that we go ahead [with] for the next year's planning, as well. All the small-group tutorials, also known as problem-based learning [PBL], were kept live, via Zoom. (S4, Vincent)

Asynchronous owing to technical issues

One lecturer opted for asynchronous learning owing to technical issues: "I could only pre-record it [the session] because my laptop was so slow and also because I kind of changed things a bit." (S3, Viktor)

Theme 3: An intense focus on exploiting technological tools in implementing alternative online assessments

Cancelling exams and/or changing their format

All participants confirmed that their exams, scheduled to take place in late spring/summer of 2020, were either cancelled or had been replaced by alternative online assessments, including 'open-book' exams, using the educational technology tools available in their universities:

There was a long discussion behind this, maybe two to three weeks and, in the end, we decided, OK, let's get rid of it [the exam], because we have already assessed the learning outcomes [with coursework] and it doesn't bring much more benefit. (S3, Viktor)

My exam is changed to a 'seen exam', conducted online. In line with the departmental guidelines, the two-hour exam was given an additional one hour for uploading the document. Instead of hand-writing [their answers], students were asked to type up their answers, and upload [them in] a Word document. That is why there was an additional hour, to manage the possible technical difficulties some might encounter. (S7, Fabian)

We had an examination the very next day [after] the campus closure. We had a paper examination, with multiple choice questions [MCQ] [...] We converted the questions to go online – simply copy and paste, although, because of the weak systems, we took a lot of time to upload the questions – and they did it the following week. (S8, Ian)

Some participants mentioned that they had received university-level guidelines on assessment, while others had decided to make these changes on a course-level basis.

Simplifying the assessment

Interestingly, research participants used various techniques to modify their assessments:

Rather than making it complex, I simplified it by asking, "show me that you understand this". In fact, I have become less innovative in my assessments. That is deliberate. Innovative assessments may seem like a good idea, but it can add additional pressure on to the students. (S9, Paul)

In the Pharmacy department ... for the MCQs, we displayed one question at a time... For example: [...] 'this patient comes to your pharmacy with these symptoms, what do you think is the condition?' They will need to answer in a few words and then it [the electronic quiz] goes to the next question. So, rather than having three types of question (MCQ, short-answer, long-answer), I have just used the MCQ and the short-answer types of question. (S5, Adam)

Using real-world, personalised cases for problem-solving

I have to personalise it and to localise it. Nobody could Google an answer. I took the example of a local organisation taken over by another company, ten months ago. There was nothing published anywhere on that issue. They had to think and answer. (S6, Anne)

Using probing techniques for students taking video-based, practical assessments

If my student said, "I will be assessing the knee meniscus by holding a leg and then sort of rotating the tibia [...]," perhaps, I [a physiotherapy teacher] would say: "What would you be doing with the other hand?" Therefore, it was much more guided, not just to describe, it was much more based on the practical and clinical application. (S4, Vincent)

Modifying exam questions to focus on higher order cognitive skills

The exam questions were modified to assess students' comprehension of the contents. I modified them in such a way that they cannot find the answers directly from the internet or from the books. Bloom's higher-order tasks such as analysis, evaluation and synthesis, were incorporated into the question paper. (S7, Fabian)

In terms of providing feedback to students, no significant changes were reported. Participants told us that they were able to continue the online feedback practices:

We continued to provide feedback the way we always do. (S1, Peter)

It remained the same [...] I normally give three types of feedback for Turnitin submissions: in-text comments within the text; online rubrics; and a narrative summary feedback. They were sufficient for my students. (S7, Fabian)

Online feedback practices remained unchanged

Overall, although no significant changes happened in feedback practices, participating lecturers used several strategies to make assessments meaningful, accessible and relevant. However, under the circumstances and the urgency to adapt their assessments, technology tools were used primarily as a means to an end, or as 'quick fixes' to the disrupted assessment practices.

Theme 4: Increased levels of support for the 'connected but disengaged' students

As already discussed in Theme 1, all participating lecturers agreed that preparation for remote teaching is far more time-consuming than for on-campus, face-to-face teaching. Furthermore, many participating lecturers mentioned that their pastoral and support responsibilities had also increased as a result of the pandemic. Despite the fact that participating academics used technology to stay connected with their students, there was a feeling of disengagement, as all participating lecturers reported that they found remote teaching challenging in terms of student engagement in either synchronous or asynchronous teaching mode.

Disengagement in synchronous mode

Peter (S1), for instance, stated that the lack of interaction with his students was the biggest challenge he faced and resulted in him delivering "dry" lectures:

The biggest challenge I faced during this period was the limited or non-existent interaction with the students. The majority of them did not engage in the lectures, so all this information that we have been taught in the professional-development courses about being interactive and engaging the students and having Q&A social knowledge and things simply did not work. On a personal note, this lack of interaction frustrated me a lot. So, I stuck with... allow me to use the phrase "bland lecture", and that was it.

Another participant also noted the lack of attendance and engagement during the transition to remote teaching:

I used to have a class full of students but, after the lockdown...there was a sudden impact after that, I lost much of the attendance, but I was still managing to run the units. [...] It was that, either they didn't have the equipment to come or whatever the reason was. So, then, I had to email and try to chase and then try to kind of find the answer for the lack of engagement. I think it was because it happened overnight, a very sudden thing and everybody was shocked. (S2, Mario)

Talking 'into the void' was also arguably the biggest challenge for Paul (S9):

For me, it is exhausting. You just see grey icons in front of you. No emotional responses at all. The undergrads, two or three of them

might engage in the chat briefly, something like: "That's fine," "Got it," "Move on," "Good Job" [...].

Lack of understanding of engagement with asynchronous resources

In the case of the lecturer who opted for asynchronous teaching (S3, Viktor), the biggest challenge was not knowing whether students were using the learning resources or not:

The biggest challenge was that I had not much idea of what is going on with the students. I kind of produced my PowerPoint slides and I sent it to the students just before the session and I said: "In this session, you need to do this and that," and there was just silence. You don't know [...] I mean, maybe there is nobody there at all! So, I think the biggest challenge was for me the lack of understanding [of whether] there was engagement there or not.

Differences between undergraduate and postgraduate students

While every participating lecturer mentioned similar challenges in their attempts to engage students in active online learning, some participants reported that these challenges were greater in relation to undergraduate students:

Interacting with students was the difficult part. All I could see on the virtual classroom was their initials. No-one shows their face. I tend to call them by their names, randomly picking out students to answer questions. Particularly when the undergraduates are sent into breakout rooms, many of them do not speak with each other. Some tend to leave the room, without meeting anyone; some prefer to text and use the chat function, rather than showing their faces and engaging in a meaningful discussion. It is slightly frustrating. (S7, Fabian)

Anne (S6) also found it difficult to engage undergraduate students in group discussions using breakout rooms, although her experience with postgraduates was more positive: "I randomise them when I put them into breakout groups. My approach changes with the kinds of students I teach. Undergraduates find it difficult to speak. Postgraduates are okay."

Theme 5: The emergence of a 'learning' practitioner

Lecturers' digital skills development - instrumentalist approach to technology

All but one participant reported that they had attended a range of in-house training sessions, webinars and external sessions to develop their skills for remote teaching. The one participant who said that he did not attend any sessions (S2, Mario) suggested that such Continuing Professional Development (CPD) opportunities were not available to him. All other participants reported that they had upskilled themselves during the pandemic. However, the instrumentalist approach to educational technology and learning what is required for a quick fix were sometimes evident:

Our faculty runs these sessions several times a week. I listened to a couple of those about Echo360 and how to record things on PowerPoint. I listened to those; they were something like an hour each. So, I did that and then I settled down with Power-Point and it was working as well, it was kind of working, so I was happy with that. I just needed to have something which works. Not much else, really. (S3, Viktor)

Systematic continuing professional development in online teaching and learning

In contrast, other participants have become online learners and emerged as 'learning' practitioners, as illustrated in the quote below:

Personally, I attend a webinar almost every day. I subscribe to *The Economist*. I attend all the training opportunities provided by the university. I use a lot of case studies and I attended Harvard webinars on "how to teach case studies online". I also attended the Online Festival of Learning, Teaching and Student Experience 2020. I have a weekly

online coffee with colleagues to sort out practical difficulties. It is an informal chat to help each other. I met the faculty technician for software updates. I also befriended the Associate Dean of Education, who answers my questions directly and quickly [...] I chat to the class reps and learn from them. I am now studying for a Master's in Education. I get a sense of being an online student [...] The best way of up-skilling myself is to become an online student myself. (S6, Sarah)

It was evident in the study that ERT has accelerated participants' learning about the instrumental use of educational technology and there was variation in the ways in which participating academics developed their methods during this period.

Discussion

The present study has broadened our understanding of academics' lived experiences of engaging in ERT during the COVID-19 pandemic. This research has highlighted the fact that preparing to teach remotely online can be far more time-consuming than preparing for face-to-face teaching. This finding is in agreement with the literature (Cavanaugh, 2005; De Vries et al., 2005; Redpath, 2012; Walker et al., 2020) in indicating that online teaching requires more time for identifying and creating learning resources, structuring sessions and supporting students than does face-to-face teaching.

Considerations regarding online teaching in synchronous and/or asynchronous modes

The findings of this research have also highlighted that one of the main questions related to remote teaching is whether it should be conducted synchronously or asynchronously. The main advantage of synchronous remote learning is that participants can interact in real time. Through real-time discussion, synchronous interactions can facilitate the development of a sense of community and stronger connections between tutors, peers and the course material (Yamagata-Lynch, 2014). However, synchronous online learning via web-conferencing platforms requires a stable internet connection and availability at a scheduled time, imposing some level of inflexibility. This means that, when the potential of real-time conferencing for interactivity and community creation is not adequately harnessed, then this approach can become more taxing. This might be the case where synchronous online delivery approaches are adopted not because of their pedagogic benefits but because they might be closer to face-to-face delivery, or simply because of managerial and administrative pressures to provide the students with more contact time. This seemed to be the case amongst some research participants, who thought that all their timetabled sessions should be delivered synchronously, as that would offer greater "value for money" to their students.

Asynchronous online learning, in contrast, is truly flexible (Yang & Huang, 2021) and less technically demanding, as there is more freedom regarding the lesson time and more time for any connectivity issues to be resolved. Furthermore, asynchronous learning offers the potential for reflective learning through asynchronous discussion (Gibson, 2013); students can go over the content at their own pace and review it as necessary, prior to participating in the discussion. If learning activities are scaffolded purposefully according to learning design principles (Laurillard, 2012) then asynchronous approaches can provide a "low-tech, high-flex" solution to remote learning. The main limitation of this approach, if used on its own, might be the lack of a feeling on the parts of the students of belonging to a learning community.

The changing nature of assessments

The research findings indicate that there was an intensified focus on adapting assessment for online delivery. All participants spent a relatively large portion of their interview time discussing the many rapid

changes they had made in their assessments. A possible reason for this is the timing with which the move to ERT happened in the UK. In March 2020 most lecturers were in the middle of their second semester of the 2020–21 academic year and it was critical for them to finish their teaching and run end-of-year assessments to protect students' progress or completion of their studies. Universities made targeted efforts to enable students to complete their courses as expected. This temporal point, in addition to the usual pressures of conducting a range of assessments, marking and moderating them, and giving feedback to students before the exam board, explain the excessive focus on assessment changes.

Some assessments were converted to an online format, when universities could meet the technical requirements; however, even when exams were delivered remotely, proctoring systems were not used by any research participant. Reasonable adjustments and accommodations to the particular circumstances of the students were reported. In some cases, the format of the exam changed to a seen exam and, in one case, the exam was cancelled and students were graded based on the coursework they had already submitted for that module. What is important to note here is that the wholesale adoption of technology was sudden and immediate. Institutions were guided both by an interest in finding a quick fix, and by a rational desire to exploit whichever tools were available to them. While this is understandable under the circumstances, moving forwards there is a need for institutions and academic teams to rethink assessment-design and academic-integrity issues (Baume, 2020; Hatzipanagos, Tait, & Amrane-Cooper, 2020).

Instrumental use of technology due to time constraints

Most study participants perceived the technological tools to be universally available and neutral, and that, as long as they can deliver lessons and other services to the same level that teachers did in traditional, pre-pandemic classrooms, these tools must be exploited. There is evidence to suggest that participating lecturers adopted a naïve view that technological tools are passive, a-contextual and blunt instruments, and that individual actors have complete control over the effects of the technological tools and artefacts used, disregarding the effects of broader social structures and the effects that the technological artefacts have on learning outcomes. A sudden increase in the provision and uptake of training for synchronous and asynchronous teaching across most universities was testament to this instrumentalist approach to educational technology. In fact, there was limited evidence in the data to suggest that the decisions were based on a careful strategy of harnessing the potentially transformative power of educational technology, during this pandemic. We suspect that the dominance of an instrumentalist approach to technology is an inevitable, and less desirable, outcome of this crisis.

The findings from this study clearly show that teaching remotely online is very time-consuming for academics, which is in agreement with the literature (Cavanaugh, 2005; De Vries et al., 2005; Walker et al., 2020). Demand for 'process-related' support rises significantly when teaching takes place using online environments (De Vries et al., 2005). The amount of time spent teaching online was over twice the amount of time teaching in the classroom, according to a study by Cavanaugh (2005), where the additional time was spent on increased student contact and individualised instruction, rather than the use of technology *per se*.

Learner engagement and support in online environments: an on-going challenge

It became evident in this study that maintaining student engagement is a significant challenge in both synchronous and asynchronous online teaching modes. While confirming the findings of others (e.g., Affouneh, Salha, & Khlaif, 2020; Ferri, Grifoni, & Guzzo, 2020) who record students' disengagement during ERT sessions, our data strongly advocate addressing that challenge by combining the two approaches to

reduce barriers, as students can be offered a range of opportunities to interact with content, tutors and their peers, in different modes. The concept of the 'flipped classroom' reverses the activities taking place in the classroom and those undertaken at home by learning initial course concepts outside the classroom, while class time is used for active problem-based learning and practice activities. This approach can still be applied in the fully online environment, with pre-readings and videos assigned to students asynchronously, before and after the session, while the more interactive parts of the session (discussion, feedback on progress, initiating group work) can take place synchronously, online. A recent study showed that "in times of disruption and relying on online teaching, this can be empowered by integrating flipped learning, which showed a positive effect on students' learning, attention, and evaluation of learning" (Tao Tang, Abuhmaid, Oudat, Aldhaeabi, & Bamanger, 2020, p. 10).

The role of feedback and tutorial support becomes even more important in the online environment, as students require closer guidance while learning remotely. As lecturers had to adapt their teaching to fit the 'new abnormal', new guidance on how this can be achieved emerged. Hibbert (2020), for instance, has published a paper on using reflective frameworks for delivery of teaching in multiple modes, in which he has included guidance on how face-to-face lectures and seminars can be adapted for either synchronous or asynchronous online delivery. Building opportunities for discussion and for confirming students' understanding is critical in either delivery mode. Furthermore, the need for providing socio-emotional support should not be overlooked (Shin and Hickey, 2021).

The disruptions caused by the pandemic and the need for an emergent online migration have presented several challenges to academics (Watermeyer, Crick, Knight, & Goodall, 2021). These challenges need to be addressed with appropriate continuing professional development for staff, but the disruption has wider implications, including access to technology for all staff and students and the need for a consistent plan for the implementation of online learning, including good practices, methodologies and a common goal (Vlachopoulos, 2020). Furthermore, the fact that the amount of work involved in preparing for an online environment is greater than that required for face-to-face delivery (Walker et al., 2020) presents additional challenges for academics. Our study reaffirms VanLeeuwen, Veletsianos, Johnson, and Belikov (2021) findings about the Canadian academics being overwhelmed and exhausted, and being "stuck in a cycle of never ending repetitiveness, sadness and loss, of managing life, teaching, and other professional responsibilities with little sense of direction" (p. 1306) during this pandemic and we join their call for more meaningful support for academics.

Conclusion

Although this research was focused on remote teaching under emergency conditions, the situation proved to be far from temporary and academic year 2020–21 was also delivered largely online, owing to the persistence of the COVID-19 pandemic, meaning that lecturers faced ongoing challenges. Even when restrictions can be lifted, it could be argued that a full return to pre-COVID conditions is no longer desirable, as teaching, learning, assessment and feedback, student support and staff development will require extensive restructuring in terms of pedagogy and the role of technology in supporting these activities. Indeed, blended learning may emerge as the default teaching mode in HE.

Many participants in our study adopted a simplistic, 'uses determinism' philosophy of technology that naturally leads to instrumentalism. Uses determinism is an approach that perceives technology as offering neutral tools that extend our capacities (Kanuka, 2008). Instead, we argue, a more insightful and reflective approach to the use of educational technology, based on educational research (McKenney & Schunn, 2018) and learning design (Laurillard, 2012) is required to avoid technology being used in an instrumental way (Henderson et al., 2017) that "manifests itself in wariness, in stilted teaching encounters and in a silenced

discourse" (Joseph-Richard, Jessop, Okafor, Almpanis, & Price, 2018, p. 389).

The study has certain limitations. Given the fact that COVID-19 is a global phenomenon and that the scale of disruptions caused by this pandemic is universal, this UK-based study, with a small sample size, does not enable generalisation of the findings. However, with its comprehensive scope, encompassing all aspects of academic practice, this study illuminates our understanding of how lecturers have struggled to adapt their practices during the initial phases of the pandemic. More extended studies, in international contexts, with larger sample sizes, are required to help us understand the full impact of the pandemic on lecturers' academic practices. More empirical, longitudinal data will shed light on whether lecturers have learned to use technological tools more creatively during the prolonged period of teaching from home. It is possible that some academics have moved away from the means-ends way of thinking about technology; they may have begun to view educational technology not as neutral, unbiased, passive tools of convenience, appropriated for the purpose of delivering content online, but rather as levers of transformation, shaped and used in social, political, economic, cultural, historical and local contexts of learners and institutions, beyond learning (Selwyn, 2010). To this end, context-rich longitudinal studies are required, as they could reveal the effect of time on remote teaching.

In this study, we caution that the instrumental approach to educational technology adopted in the initial months of the pandemic is insufficient to transform learning and teaching in universities. A crisis can be turned into an opportunity if it catalyses an investment in infrastructure but, more importantly, it requires an emphasis on staff development for blended and online learning, so that academics can embrace and integrate online teaching approaches and technologies into their educational philosophy and practice.

Declaration of Competing Interest

None

Disclosure statement

This research did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors.

Data availability statement

The data that support the findings of this study are available from the authors upon reasonable request.

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