Covid-19 and rapid adoption and improvisation of online teaching: curating resources for extensive versus intensive online learning experiences

John R. Bryson & Lauren Andres

Published online: 17 Aug 2020.

Submit your article to this journal

Article views: 127

View related articles

View Crossmark data

Routledge
Taylor & Francis Group

ARTICLE

Covid-19 and rapid adoption and improvisation of online teaching: curating resources for extensive versus intensive online learning experiences

John R. Bryson [ID][a] and Lauren Andres [ID][b]

[a]Birmingham Business School, University of Birmingham, Birmingham, UK; [b]The Bartlett School of Planning, University College London, London, UK

ABSTRACT

The COVID-19 pandemic closed university campuses forcing rapid improvisation and adoption of online teaching. This paper explores the experience of converting three modules from proximate to online learning delivery in March and May 2020. This process was facilitated by reflective practice to support a process of improvisation as a buffering response to the pandemic. This paper distinguishes between the development of Distance Learning programmes compared to rapid adoption of online learning. Shifting to complete online teaching involves a process by which the lecturer's role transitions towards the curation of online and offline student experiences. This includes facilitating and blending extensive and intensive online learning experiences. Extensive involves the selection and curation of online learning support bundles. This requires the creation of learning roadmaps to facilitate student learning. Intensive revolves around online engagement between academics and students and takes two forms: shallow as involving a limited dialogue with students and deep which involves a co-creation process between students and lecturers. Online learning provides opportunities to adapt learning experiences in real-time. The paper evaluates the shift to online practice from the students' and academics' perspectives.

The COVID-19 pandemic undermined existing practices and changed the rules in unpredictable ways (Bryson et al., 2020; Horton, 2020; Žižek, 2020). It led to responsive improvisation providing a "buffering effect" in response to exogenous shock intended to preserve and attain intended outcomes (Villar & Miralles, 2020). For universities and schools forced to close, buffering included the rapid substitution of classroom-based teaching by online teaching. As the duration of the COVID-19 pandemic is unknown, the ways we teach and engage with students during this academic year and the next will be impacted. New approaches to teaching will emerge; all academics will have to alter the ways in which they facilitate learning outcomes. For some, this is an exciting opportunity to alter existing practices, but for many this is challenging.

COVID-19 has seen a recent surge in the publication of blogs, guidance, briefing notes, and media reports on universities and the transition to online teaching. This

includes the OECD producing an annotated set of resources to support online learning (Reimers et al., 2020) and also what was perhaps the first peer-reviewed academic study of the shift to online teaching in higher education in response to COVID-19 (Bao, 2020). The Bao study is based on a case study of Peking University and was published on 20 March 2020. This study identifies five principles to support effective online teaching including focusing on the voice as body language and other non-verbal signals are less effective, strengthening students' active learning outside class on the understanding that students are more likely to "skip the [online] class" and "faculty should consider two phases of teaching, the offline self-learning phase and the online teaching phase" (ibid: 115). These are important points. In this paper we develop an approach to configuring the relationships between these offline and online learning phases.

The shift to online teaching requires adaptation in teaching practices and in the ways in which modules are designed and assembled (Boling et al., 2012; Desai et al., 2009; Koehler & Mishra, 2009). The primary challenge is then with changing established routines, practices and expectations that have developed amongst teachers and students. An additional complication is the terminology that has developed to support online education. One approach has been based on differentiating between synchronous and asynchronous learning (Murphy et al., 2011). On the one hand, synchronous learning is online, or distance learning, that is based on real-time interactions between students and learning facilitators or instructors. Here it is important to appreciate that real-time may involve students and instructors being online together, but there will be different levels of engagement with the online experience across the student body. This is also the case with classroom-based teaching. On the other hand, asynchronous learning occurs through online platforms without real-time interactions. It is often assumed that synchronous online teaching relies on the instructor whilst asynchronous reflects a more student-centred approach (Murphy et al., 2011). This is misleading as both synchronous and asynchronous are facilitated by instructors and should be student-centred. Most online higher educational experiences for the 2020–21 academic year will be based on a hybrid learning model that blends synchronous with asynchronous online learning.

The synchronous/asynchronous dichotomy emphasizes differences between the presence or absence of real-time interactions rather than on the design of different types of learning experiences to support learning pathways. This is unfortunate as the emphasis should not be on the presence or absence of real-time encounters but on approaches designed to facilitate learning outcomes. The word "facilitate" is critical here as this highlights that teaching online reflects a shift "from a teaching to a learning paradigm" and that this requires "online instructors to take on roles such as mentors, coordinators, and facilitators of learning rather than conveyors of information" (Boling et al., 2012, p. 118). This shift from teaching to learning, or from transferring content to designing learning experiences or encounters, appears to be the primary challenge facing academics as they transition from classroom to on-line centred teaching. The challenge is less about the synchronous/asynchronous dichotomy and more about a fundamental shift in approaches to providing students with experiences that enhance higher-order cognitive skill development.

Rapid conversion from classroom-based, or proximate learning, to complete online or distance learning (DL) provision is problematic (Moore et al., 2011). The design of an

effective DL programme is complex, resource intensive and time consuming. Thus, rapid adoption of an online approach cannot involve the design of DL programmes but requires rapid improvisation. This paper comes from the experience of two UK academics based in different universities (University of Birmingham and University College London) as they improvised solutions to online delivery of large and group-based sessions. This was a rapid learning curve as higher education institutions in the UK closed their campuses towards the end of March 2020 with online replacing classroom-based teaching. The timing of this closure coincided with the end of the spring term. In the UK, the summer term is set aside for revision and assessment with limited classroom-based teaching. The implication being that most UK academic staff will experience the shift to online teaching from the start of the Autumn term (end of September 2020). This paper comes from our experiences of having to rapidly convert three postgraduate taught (PGT) modules. Two of these (77 and 43 students) were taught and delivered to students during March 2020; both involved significant group project-based work. The third PGT module was delivered to 42 students located across Asia in May 2020. The latter module was meant to be delivered in Singapore using a flying faculty classroom-based approach (10 interactive classroom-based teaching sessions over five days).

Both modules had to be rapidly converted from proximate to online learning. This was unexpected. We had to improvise at a time when British universities were still developing COVID-19 related teaching strategies which predominantly focused on developing solutions to assessing students and awarding degrees. Training in online teaching began to be provided after both modules had been delivered. While providing an account of some of the approaches we developed, this paper aims to share our experiences to assist colleagues as they adjust to online teaching. It also provides a record of this temporary, but intense period of uncertainty involving responsive adaptation and improvisation of approaches to online learning.

Reflective practice and the curation of online student experiences

Both of us have extensive experience of teaching undergraduate and postgraduate taught modules. Our teaching has evolved as we have adopted and developed new approaches to facilitating learning outcomes; this has included using online teaching platforms, specifically open-source Learning Management Systems (LMS). For the Singapore module this was based around the Canvas Learning Management Platform which supports blended and online learning programmes as part of a learning ecosystem. For the other two modules, it involved using both university licensed LMS Moodle and Microsoft Teams and alternatively the free version of Zoom, due to initial technical issues experienced with Teams. Such initial technological juggling highlights the urgency of delivering sessions in a different format with less than a week to adapt. Priority was given to workability, ease and the quality of the platforms that would accommodate students located across the globe (from South America to China). At this time, there were security concerns with Zoom and this platform was discouraged under institutional guidelines. Zoom was used as no confidential data exchanges were involved, but with permission of senior colleagues.

The adoption of LMS by higher-education institutions (HEIs) to support student learning can be traced back to the late 1990s with the establishment of companies

like BlackBoard in 1997. Competing LMS systems were introduced in the first decade of this century with the introduction of Moodle in 2002 and the establishment of Instructure in 2008 (Canvas). LMS platforms are developed around three interrelated functions: a) provision and organization of content; b) course management including attendance, assessment, grade management and announcements, and c) communication tools. LMS have become sophisticated platforms to support synchronous and asynchronous interactions, but "in practice the most prominent use of these systems is for transferring information and increasing accessibility of learning materials, and instructors consider the course website to be a platform for storing and sharing content" (Hershkovitz et al., 2011, p. 107). A recent literature review of web portals, or LMS, in HEIs highlighted that there were a "limited number of studies" which explored and assessed "the impact of this technology in HEIs, compared to other sectors" and that this omission needs to be remedied (Pinho et al., 2018, p. 80). Moreover, this review highlighted that e-learning had been widely debated in the literature, but that there was "still a shortage of theory in the planning, design and implementation of these systems in HEIs" and that the literature focused more "on technological advances than on the learning process itself" (Pinho et al., 2018, p. 88).

Before COVID-19 these modules had been taught in a classroom setting with LMSs replacing the need to provide printed handouts and to communicate information with students. Canvas and Moodle had been used as a repository of PowerPoint slides and related material and as a tool to communicate with students. The approach developed to delivering these modules without classroom based or face-to-face interaction was based around three principles.

First, was to engage in a process of reflective practice intended to emphasise change and improvement with a focus on "learning through and from experience towards gaining new insights of self and practice" (Finlay, 2008). This emphasis on reflection has become embedded within British universities as module leaders must complete annual module reviews but has tended to become more procedural rather than truly reflective. The emphasis must be on formative reflection intended to inform teaching practice. Reflective practice challenges existing practices, but with a focus on enhancement (Moon, 2004, 2013). It is an approach that encourages proactive improvisation. With COVID-19, change was required as part of a reactive strategy that must be embedded within a longer-term approach to reflective practice. This is the start of an era of disturbance that will reshape the high education sector globally including a shift towards more intensive and diversified forms of online delivery. Facilitating excellent online learning experiences must become part of professional practice across higher education.

Second, reflective practice led to the appreciation that converting to online learning required a new approach (Simpson, 2002). Thus, any attempt to replicate the classroom experience would be impossible and could undermine learning outcomes. We did not have the time or the resources to adopt an intensive DL approach. We recognized that the online teaching experience would be different. It is important to reflect on how these differences will impact on the delivery of each module. The key here is to focus on the module's learning outcomes and the relationship with the assessment mode(s), skills co-created with students and the quality of the student learning delivery experience.

Third, initially we were distracted by the technology and by a concern with identifying the most appropriate technological solution, or blend of online platforms. Thus, would

the modules be presented using, for example, Zoom, Skype, Microsoft Teams, Google Meet, or Canvas Conference (BigBlueButton), or some combination? Would lectures be pre-recorded and, if so, how? Would group seminars involve sharing screens and material? What should the relationship between the time spent working in real-time and online with students compared to the provision of resources provided to support self-study, coupled with additional support over forums or email? Rapidly, we appreciated that the initial focus must be on delivering the modules' learning outcomes and ensuring students were receiving the right support and time to engage with the content. The content and the learning outcomes should take priority over decisions regarding the technology; different learning outcomes will need to be supported by different combinations of technologies. In practice this meant that, on average, every hour of online delivery required at least an hour of preparation time. This is not to underestimate the amount of preparation time required to support classroom-based learning. Nevertheless, it is worth noting that online teaching requires three types of interrelated preparation. First, there is the selection, presentation and grouping of resources. This process is even more critical for the design of a module that is taught online. This includes the narrative that is created that underpins modules, including the learning outcomes, and the ability for students to easily locate and understand the various learning elements that have been developed to support the module's learning framework. Second, there is the planning required for each hour of online delivery and, third our experience was that teaching online in real-time is much more tiring compared to classroom-based encounters. This requires further research, but recovery time should also be included in any time-based analysis of online compared to classroom-based teaching. Perhaps using LMS systems in new ways required more concentration and that eventually their use will become routine. It may be that online is more tiring as it involves managing multiple cues from students including engaging in voice-based discussions whilst observing and managing the private and public chatrooms.

Proximate learning requires balancing the provision of reading and related resources with lecturer-student encounters. Each module develops a blend that meets the learning outcomes, but also the approach preferred by the lecturers. The key word here is "blend". Blended learning describes an approach to education in which students learn via engaging with online media combined with face-to-face classroom-based teaching. The adoption by universities of LMSs had already encouraged a shifte in HEI teaching practices towards blended learning. Thus, academics have been engaging in configuring and managing blended learning experiences for some time. Nevertheless, with proximate learning the assumption is that the teaching experience was centred on lecture theatres or seminar rooms. This provides opportunities for planned and unplanned social interactions as core elements of the learning experience. Copresence, especially opportunities for serendipitous exchanges, is difficult to replicate online given the dematerialized nature of the learning experience. This is the case for lecturers working from home, and students engaging with recorded lectures or participating in online activities. Online extends physical but not social distance between those engaged with a module. It introduced new forms of encounter including family members, especially children or pets, entering the virtual classroom.

The shift to complete online learning without any classroom-based encounters can still be considered as an unusual form of *online-only blended learning*. In this case, the

LMS platform provides a resource repository to support engagement with online material, and real-time online learning encounters replaces classroom-based teaching. There is a complication here in that most UK HEIs from September 2020 are temporarily introducing bi-modal teaching which combines blended with online-only blended learning. Thus, students will be able to complete a module by engaging with the learning outcomes through only online delivery or they can combine online with small group face-to-face teaching. The objective is to ensure that all students, located in various geographical locations and time-zones, even those self-isolating as protection against COVID-19, have equal access to a guided learning process that enables them to complete a module.

Online transforms teaching practice, delivery, and experiences. The reflective practice journey that we experienced as we contemplated delivering modules completely online led to the realization that we needed to modify our approach to facilitating learning outcomes through module design and delivery. Self-reflection on teaching practices and on learning experiences should play an important role in this reflective journey. On the one hand, reflecting on student evaluations, and on the intended learning outcomes, is critical and this raised three important questions:

  (i) In what ways can the shift towards online teaching address any concerns raised by former students in their evaluations of this module?
 (ii) Does the shift towards complete online learning require alterations to the expected learning outcomes and/or assessment modes?
(iii) What opportunities does online teaching provide to alter former practices and/or enhance the learning experience?

These questions were informed by a process of self-reflection on our experiences with presenting and attending webinars. The literature on DL provides important guidance on the design of online learning experiences, but rapid conversion of modules to online teaching is very different compared to the time and resources available to develop a DL module (Moore et al., 2011). Rapid improvisation was required. This improvisation involved reflecting on the balance between synchronous and asynchronous learning and, more importantly on the differences between these two approaches in terms of the student experience. There are two important points here. First, online makes it difficult for those participating to project and to read social cues combined with reduced opportunities for social connections to support learning from forming between students (Kuong, 2014). There is a tendency for the online experience to be considered by students and instructors as too task orientated and impersonal (Walther et al., 1994) and "a sense of being connected to a learning community is weak" (Kuong, 2014, p. 1004). Second, the challenge is to ensure that an online module is designed around high levels of interactions between students and instructors and the approach "has to emulate an instructor's guidance and interaction" (Desai et al., 2009). Thus, the shift to teaching online transforms the role of the instructor from teacher to guide, facilitator, coordinator, challenger, stimulator, encourager, or conductor, but in the context of ensuring effective interactions between students and instructors. This shift acknowledges that "more self-discipline is required by students in on-line education, unlike classroom education" (Panigrahi et al., 2018, p. 1) and that "learning engagement which is an important antecedent for learning

outcomes is lower for technology-mediated learning than face-to-face learning" (Panigrahi et al., 2018, p. 1) .

One of the challenges of configuring and managing online learning is the development of solutions to enhance learning engagement. This involves considering the importance of the voice in online teaching (Bao, 2020), but also the selection, assemblage, and packaging of resources. A key issue is that online provides an unusual opportunity for breaking away from developing a lecture for classroom delivery with the provision of a set of PowerPoint slides and some related material on a linked LMS site. The approach can be turned on its head with the initial task focused on identifying, selecting, and designing resources to support learning outcomes and then utilizing this material to support the development of recorded "lectures" or presentations. Alternatively, a presentation is simultaneously developed with linked resources. In a study of the online repositories provided by academics to support 1747 courses, Hershkovitz et al. (2011) identified that 544 courses had online repositories containing less than 15 files and that the range of files for the 1747 courses fluctuated between 1 and 1029 with an average of 41.64 files. This type of analysis highlights that classroom-based courses tend to under-utilize LMS as a tool to support the delivery of learning outcomes (Panigrahi et al., 2018).

The shift to online from classroom-based teaching provides an opportunity to break from the tradition of providing students with their learning in bite-sized 50-minute blocks that reflect approaches to timetabling lecture theatre allocation rather than the delivery of learning outcomes. This includes acknowledging that the resources assembled on the LMS become critical to support student learning. *The breakthrough in our improvisation journey was the realization that the shift to complete online teaching involved one in which our role as lecturer shifted towards the curation of "online" and "offline" student experiences.* The implication is that the statement made by Boling et al. regarding the shift from a teaching to a learning paradigm needs to be modified to acknowledge that managing or facilitating learning experiences involves a curation process (Boling et al., 2012, p. 118). There are two points to make here. The first is that this shift towards curation being part of the learning paradigm can be traced back to the initial widespread adoption of LMS within HEI, but that COVID-19 is forcing deeper adoption of these systems and the development of a curation-orientated learning paradigm. Thus, one can argue that research should begin to explore the impact that COVID-19 has on accelerating changes that were already underway in HEI. Second, the OECD (Reimers et al., 2020) annotated resources guide for COVID-19 forced online learning uses the term "curate" or "curated" four times, but only to describe the process by which this module has provided "a curated catalogue of radio and educational television resources" (OECD, 2020 L 2). Thus, this study implicitly acknowledges curation as a process to support the continuation of teaching and learning during the COVID-19 pandemic but does not explicitly acknowledge curation as a core teaching approach.

The process of curation has broadened from the initial emphasis placed on the curation of museum collections to the curation of digital information. To Dale, a "curation economy" has formed based on filtering content, expertise, professional approaches, technology and focussed curation (Dale, 2014, p. 201). This includes aggregation, distillation, evaluation or identifying trends, mashups or "unique curated juxtapositions" and chronologies (Dale, 2014, pp. 201–2). For module development, this process of curation takes two forms: curating content to support learning outcomes

and curating student experiences. The latter is important as this reflects the balance, or the blend, between self-study of curated material and real-time online encounters between students and lecturer(s).

The offline curation process involves the assemblage of resources intended to support learning outcomes. The online curation process focusses on deepening the delivery of learning outcomes through a real-time dialogue with students based around resources. This involves encouraging students to engage and curating verbal, public and private chat room exchanges. This includes real-time student polling to guide the learning process, but also the management of the student experience. For example, polling students on their selections of the essay questions and then discussing these questions and repolling to track alterations before, during and towards the end of an online discussion. Polling was also used to identify areas or topics that would benefit from further resources and to identify the best time for additional meetings. One advantage of teaching online is that additional online sessions can be proposed without any capacity restrictions related to lecture or seminar room availability. These online sessions are time-consuming and it is important to manage student expectations. Using polling in this way is part of the process of curating online student experiences as they can co-configure and influence the learning delivery process.

Extensive versus intensive online learning experiences

Our reflective practice led to an appreciation that curating online student experiences involves two approaches to facilitating online student learning encounters: extensive versus intensive. These are linked activities that support one another. The extensive reflects the curation of resources to support initially asynchronous learning but under-pins and is reinforced by intensive online synchronous learning encounters. Both approaches shift the role of the instructor from teacher to learning facilitator. This requires two interlinked activities. First, the identification, selection and curation of resources of all types intended to facilitate student learning, but this should also challenge students to critically engage with the material. This includes encouraging students to identify additional resources. Second, intensive online student experiences should ideally include small breakout sessions and opportunities for students to engage with one another and to develop their friendship support network.

Communication between students, and between students and instructors, plays an important role in facilitating and supporting the learning process. For online teaching this is especially important and instructors "should communicate what types of support are available to students and provide an easy way of accessing and taking advantage of the support" (Lee et al., 2011, p. 162). This includes three types of support – instructional, technical and peer. Instructional support requires that students are aware of the most appropriate ways of communicating with the instructor. During intensive encounters, instructors should remind and encourage students to continually engage by asking questions and engaging in discussions, but also by reminding students of the support structures that are in place. Technical support is critical and this needs to be responsive to student needs while peer support includes encouraging students to engage in construc-tive debate, but also to develop an online supportive culture that goes someway to

replicating the types of social community interactions that form around classroom-based teaching (Kuong, 2014).

The dichotomy between synchronous and asynchronous online teaching reflects one approach to developing an online module. The distinction between extensive versus intensive is an alternative dichotomy, but one that adds three additional elements. First, this is an approach that is based on identifying the resources that need to be created or provided to support synchronous and asynchronous online teaching. These resources are assembled to support the delivery of specific elements of a module's learning outcomes. Second, this highlights that this is a curation process which acknowledges that online teaching represents a shift from a teaching to a learning paradigm and that this learning paradigm includes a focus on assembling, grouping and packaging resources that are directly aligned to learning outcomes. A module with five learning outcomes would require resources to be identified and curated in such a manner that all students can appreciate the links between each learning outcome and the linked resources. This implies that part of the shift towards a learning paradigm involves the development of skills in curating resources. Third, extensive and intensive learning experiences facilitate reflective and experiential learning. The selection, presentation and bundling of resources to support extensive online learning provides learners with opportunities to reflect on what is included and excluded and to experience both the outcome of a curation process and engagement with the resources. The resources can include all types that are considered to support the delivery of the learning outcomes linked to the extensive learning. Thus, the curation process means that the module designer – the instructors – may not be present in real-time with learners, but they are still "present" given the curation role as a key activity in facilitating every student's learning journey. Curating online student experiences is a process of balancing these two types of learning experiences and in setting and shaping student expectations (Table 1). We explore each in turn.

Extensive

Extensive online learning experiences involve the curation of resources to support self-guided learning and intensive learning experiences. This includes PowerPoint slides, pre-recorded or filmed lectures and other supporting material, for example, videos, recorded webinars, and all types of digital resource. It is important that students are guided through this material and that it is curated and bundled together into discrete packages and directly linked to support key learning outcomes. This includes providing students with a learning map that guides them through the curated material and highlights the relationships between the resources and the learning outcomes and with the intensive online learning encounters. It is essential that it is packaged to ensure that all students know what they should be studying and when. For the Singapore module, this involved curating materials into learning support bundles that were linked to each of the ten linked topics covered by the module. This curation process involved both identifying the materials and then sorting them into bundles or packages. For the other modules it involved re-iterating the importance of engaging with the resources provided on Moodle.

The skill here is the assemblage of this material and providing a learning roadmap, or roadmaps, to facilitate learning. But this also includes identifying different types of

Table 1. Extensive and intensive online learning.

Process	Extensive	Intensive
Curation	Identification and curation of online resources to support self-study.	Development of resources to support online and real time learning experiences.
Preparation	Prepare and curate pre-recorded lectures and related supporting resources.	Understanding the technological functionalities and limitations of the online platform. Configuring the platform for each online session including engaging with students.
Curation of resource bundles	Grouping of materials in to bundles to support learning routeways within modules.	Linking the extensive resources to support the intensive real time sessions.
Co-creation with students	Resources added to the bundles or a new resource bundled created to support discussions that develop from intensive learning encounters. Resources can be developed by students as one outcome of an intensive co-creation exchange and this includes blog-style reflections and review-style appraisals of papers and debates.	An online real time co-creation exchange. It is important to monitor engagement levels across the student cohort including using breakout groups and polls to encourage and ensure inclusive engagement.
Student interactions	Feedback on the resource bundles should be sought from students early on in the module.	Use of public and private chat boxes to shape the exchange in real time.
Student experience	Formed around the variety of resources and the learning map provided by the module team.	Ideally, needs to be structured and the emphasis must be placed on an interactive co-creation learning experience.
Learning outcomes	Understanding the topic and issues.	Ability to shape arguments and to critically review and appraise evidence to inform analysis. Insight and creativity to understanding the themes explored in the module. To engage in group discussion.
Platform	Learning management system (LMS) as a repository of curated resources.	An easy to use stable LMS platform that can be recorded and that makes efficient use of bandwidth. Allows screen sharing, polling and breakout groups.

resource as diversity will support different learning styles including visual, auditory and reading/writing. We see this as a process of project planning of student learning encounters by curating material into learning bundles. We identified two stages in the improvisation journey involved in curating online resources required to support this extensive learning experience. First, a light-touch approach which meant ensuring that the presentation and order of the material was clear and would not require any verbal explanation. Students should be able to access and engage with the curated material without additional lecturer input. Second, a more complex approach in which additional resources are identified or created. This includes setting up an online departmental seminar series and developing a digital library of recordings to support online teaching. It also involves academics recording both talking head style blogs as well as members of the module team engaging in a recorded discussion and debate regarding, for examples, concepts, theory or examples.

One approach is to include blogs as part of the curation process. These may be blogs available online and written by commentators or by members of the module teaching team. One approach has involved an academic publishing blogs linked to all their academic publications combined with blogs that reflect commentary on current affairs and place-based blogs. This has led to an online blog library developing over a period of seven years of over 400 published blogs, and related images, with each blog containing

between 600 and 2000 words. These blogs have three purposes – engaging with end-users, applying published papers to current events, and developing material to support teaching. It is perhaps worth noting that some of these blogs have been downloaded over 30,000 times and informed media discussions. This link between blogs, course content and current affairs provides students with an appreciation that the module's content can be applied to understanding current events including local and national policy. In addition, links to any media coverage including radio and television appearances should be included.

The key is that the importance of the online resources must be emphasized to the students and the curation process should focus on both content but also the blend of different types of resources. There should also be an emphasis placed on topicality and a sense of excitement about the topic, its relevance and importance for practice and research. This should include resources that students want to engage with. The quality of the student experience is the priority here and this is partly related to the presentation of the resources and their variety. For some students, proximate learning discourages them from making full use of the online resources provided as copresent exchanges encourages students to ignore them. Online improvisation in response to COVID-19 altered student engagement with the extensive resources provided. Providing a resource roadmap as part of the extensive approach encouraged students to engage more broadly with the resources provided. This was a welcomed and unexpected development.

Intensive

Intensive online learning experiences revolve around online engagement with the academic(s) and other students in real-time as part of the co-creation of experiential learning experiences. This includes encouraging students to engage in reflective practice. This is not about exploring and self-reflecting on resources explored as part of a process of self-study, but about an online dialogue to shape and deepen understanding. This takes many forms. It is critical that the intensive does not try to replicate the extensive learning experience. Each should be designed to achieve different, but related pedagogical outcomes. Any overlap, or repetition, between the extensive and the intensive is a missed opportunity to deploy an intensive approach to deepen student engagement with the material. The intensive is about immediate reactions and about the questions that can be raised for discussion. It is about triggering and encouraging discussion and debate. On-campus learning experiences are perhaps too often orientated towards extensive learning experiences with limited opportunities to switch between extensive and intensive delivery modes. Online teaching platforms enable lecturers to follow real-time commentary provided by students via the private and public chat rooms. This facilitates a real-time co-creation process between students and lecturer in the delivery of an online interactive session. This partly explains the intensity and difficulty of these sessions as the chat rooms need to be observed and alterations made to the session in real-time.

Our improvisation occurred without the benefits of university guidelines including the types of online frameworks that universities have been creating to inform module delivery for 2020–21. A key issue was the realization that online teaching is not a substitute for proximate learning but should be considered as different. Online provides

an unusual opportunity to adopt an intensive approach during online interactions. There are two points to consider:

(i) The links between the extensive and the intensive. This is part of the curation process. The extensive provides the foundations to support the intensive.
(ii) Different approaches for the delivery of intensive online learning experiences. On the one hand, this can take the form of *shallow intensive-online learning* in which a limited dialogue occurs with the students in real-time. On the other hand, a *deep intensive online learning approach* can be adopted. For the latter it is critical that some form of structure is provided.

Deep intensive online learning involves engaging in online discussions with and between students. This needs to be guided by learning outcomes. One proxy measure is to consider the types of notes that would be taken by a student during and after an intensive online learning encounter. Without structure, notetaking and pedagogical outcomes are compromised. A key parameter is the size of the student cohort and how online discussions are handled. We were able to engage in a rich dialogue with 42 students, but perhaps 62 would have been impossible without too many students listening rather than participating. The key is to work with manageable groups and the size depends on the learning objectives and the approach adopted. This is where improvisation is challenging for cohorts of over 60 students and for these larger groups time is required to develop an effective approach to online teaching.

Too much structure and the session will have experienced mission creep and will have shifted from an intensive to an extensive learning experience. This might be planned or be accidental. The danger is that some students will not have undertaken the required extensive online learning required to underpin the intensive learning encounters. This is to be expected but module leaders should develop strategies to encourage all students to engage in both types of learning encounters (Table 1).

One thing to consider is the relationship between the extensive and the intensive and assessment or student performance. Exceptional student performance will require engagement with both online learning modes and resources. A key question to consider is: can a student complete the module by only engaging with the intensive and/or extensive online learning modes? Thus, can a student pass the module without participating in the intensive online encounters. The answer to this question must be "yes", but there is an issue regarding the performance level and what this means for the additional skills that are meant to be secured by participating in intensive encounters. For field and project-based modules participation in intensive learning is critical.

Deep intensive online learning can take two approaches. First, one that is shaped and evolves during online encounters. One approach, for example, is to request students to engage with a set of PowerPoint slides (with voice over) as preparation for a deep intensive online learning encounter. Another option is to organize compulsory pre-session student-led group discussions which are documented and a summary of the discussions is then uploaded to the LMS and copied to the lecturer. Thus, all deep intensive online learning encounters need to be underpinned by resources designed to support extensive learning. The extensive is the pathway to the intensive. During deep learning encounters, students are asked to identify topics, issues and PowerPoint slides

that require clarification using a combination of voice and engagement via the public and private chat rooms. This then facilitates a discussion co-created with students that is intended to intensify student understanding. Alternatively, begin with online real-time breakout groups and set each group the challenge of identifying a topic that they would like to facilitate as an online discussion as part of a co-created learning encounter between the students and the lecturer(s). Second, encounters that are extremely structured and designed by the module team. In all cases, there must be opportunities to depart from the script or the designed structure.

The transition to online and bimodal teaching (online combined with proximate) should be considered as an opportunity to transform teaching practices. The approach should be to provide an alternative rather than a substitute for proximate learning. By any means it is about elevating online learning as an adaptive response to enhancing learning experiences. Ultimately, the distinction between online and proximate learning will become blurred as most modules develop blended solutions.

Reflections and conclusions

This paper is based on our experiences of rapidly converting three PGT modules from proximate learning to online in March and May 2020. From September 2020, most lectures given in UK universities will be delivered online and possibly combined with some face-to-face but socially distanced learning experiences. Online teaching in real-time requires more focus than classroom-based interactions and is more tiring and time-consuming. In online encounters those involved must work harder to 'read' non-verbal or social cues including facial expressions, the tone and pitch of the voice, and body language (Desai et al., 2009; Walther et al., 1994). All academics involved in teaching will have to become used to curating student experiences and delivering learning outcomes by balancing extensive versus intensive learning encounters. This involves students and academics becoming accustomed to co-creating learning outcomes via online platforms. This requires a broader discussion regarding the longer-term impacts of forced application of online approaches to module delivery.

Our experiences of rapid improvisation to online teaching focused less on the technology and the LMS platform, but on the development of an approach to facilitate or curate student online learning experiences. There are important differences between LMS platforms, but all permit resources to be uploaded and assembled into teaching packs linked directly to learning outcomes. Intensive online learning experiences require the selection of an appropriate teleconferencing platform. The selection depends on each HEI's approach as the majority of UK HEI's appear to have identified preferred and often mandated platforms. At the University of Birmingham, UK, the decision has been to use Canvas Conferencing (BigBlueButton) for modules delivered to predominantly UK-based students and Zoom for modules with high numbers of students based in other national jurisdictions. UCL, from September 2020, strongly encourages the use of BlackBoard learning, combined with Moodle, but offers various options to meet lecturers' technical abilities and learning strategies.

Teaching modules completely online has been a new experience – a different experience for both lecturers and students. By no means, will this replace proximate learning but constitutes an opportunity to alter and reflect upon teaching practices seeking

innovative ways of blending extensive and intensive learning experiences. COVID-19 forced us to rapidly improvise solutions to maintaining and trying to enhance student experiences and learning outcomes via online rather than proximate learning. We were not trying to develop a DL module. A key issue is the evaluation of our experiences. From our position, we discovered that the transition to online learning needs to be considered carefully and a structured approach adopted. It is not something to be feared but should be embraced. We are very aware of the pressures that teaching and learning from home place on lecturers and students. These include issues related to gender inequality and managing the double burden of paid work with unpaid care work. During COVID-19, the closure of schools, combined with social distancing, meant that academics with younger dependents had to balance teaching online and research-related activities with childcare and home schooling.

The forced imposition of online learning was accepted by students as a necessary response to COVID-19 and social distancing. Nevertheless, students missed being on campus and being able to engage in proximate learning encounters. Our improvisation included a concern with maintaining and enhancing the student experience. Thus, the development of the deep intensive learning approach was intended to empower students through facilitating a co-creation process. This included adjusting the timing of sessions and polling students regarding extra sessions. The student evaluation of the Singapore module was revealing. This is measured on a 5-point scale. The average student assessment of the online module was 6% higher than the classroom-based delivery of 2019. The open text comments included the level of detail provided on the PowerPoint slides, the use of relevant and current examples, the ability to use the private/public chat room to highlight individual difficulties that informed the public discussion, the structure and the learning mapping and the emphasis placed on encouraging students to continually question and engage in discussion. One student noted that "questions were welcomed frequently, the lecturer tried to make the online experience as smooth as possible … providing learning materials before the online sessions was a good way for us to reinforce our learning". One student noted that they would have preferred Zoom as this online platform provided better functionality. For 2020–21, Zoom and Microsoft Teams are being integrated into Canvas.

This paper has focussed on the rapid conversion of PGT modules to online. It has not been informed by the challenges of applying this approach to either undergraduate modules or fieldwork. Nevertheless, acknowledging that online teaching involves curating and blending two distinct but related types of learning experience – extensive versus intensive – provides an approach that can be applied to all online programmes. Some may argue that this is too large a claim. Nevertheless, delivering a large first-year undergraduate module requires careful attention to the curation and customization of all resources required to support guided student-centred extensive online learning. The delivery of the online intensive learning experience will require careful planning and will be resource intensive in terms of instructor time. For fieldwork, it is important to explore the relationship between learning outcomes and being present within a local context (Spicer & Stratford, 2001; Stainfield et al., 2000). Thus, a set of context-related problems can be identified and an extensive approach to curating resources applied by the module leaders. Students are then invited to engage with the problems by engaging with the resources to support the extensive online learning experience and this includes

identifying additional resources. The intensive experience would usually be field-based, but there are opportunities to develop a virtual alternative and the nature of this alternative will be related to the fieldwork location and the learning outcomes.

Universities are service businesses and the COVID-19 pandemic has changed the rules. These rules were already changing as new forms of teaching and research emerged including DL. The shift to online teaching is not about substituting on-campus with online but developing a new and transformational approach that will extend the reach of universities and alter their fundamental essence. Part of this shift will reflect the emergence of new bimodal approaches to facilitating learning outcomes accommodating all types of students. At the centre of this new approach must be the curation of learning experiences.

Disclosure statement

No potential conflict of interest was reported by the authors.

ORCID

John R. Bryson http://orcid.org/0000-0002-6435-8402
Lauren Andres http://orcid.org/0000-0002-0039-3989

References

Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behavior and Emerging Technologies*, *2*(2), 113–115. https://doi.org/10.1002/hbe2.191

Boling, E. C., Hough, M., Krinsky, H., Saleem, H., & Stevens, M. (2012). Cutting the distance in distance education: Perspectives on what promotes positive, online learning experiences. *Internet and Higher Education*, *15*(115), 126. https://doi.org/10.1016/j.iheduc.2011.11.006

Bryson, J. R., Andres, L., & Davies, A. (2020). COVID-19, virtual church services and a new temporary geography of home. *Tijdschrift Voor Economische En Sociale Geografie*, *111*(3), 360–372. https://doi.org/10.1111/tesg.12436

Dale, S. (2014). Content curation: The future of relevance. *Business Information Review*, *31*(4), 199–205. https://doi.org/10.1177/0266382114564267

Desai, M., Hart, J., & Richards, T. (2009). E-learning: Paradigm shift in education. *Education*, *129*(2), 327–334.

Finlay, L. (2008) Reflecting on "Reflective Practice. PBPL paper 52 (January), 1–27. www.open.ac.uk/pbpl

Hershkovitz, A., Azran, R., Hardof-Jaffe, S., & Nachmias, R. (2011). Types of online hierarchical repository structures. *The Internet and Higher Education*, *14*(2), 107–112. https://doi.org/10.1016/j.iheduc.2010.07.001

Horton, R. (2020). *The COVID-19 Catastrophe*. Polity.

Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge? *Contemporary Issues in Technology and Teacher Education*, *9*(1), 60–70.

Kuong, H. C. (2014). Enhancing online learning experience: from learnings' perspective. *Procedia – Social and Behavioural Sciences*, *191*, 1002–1005. https://doi.org/10.1016/j.sbspro.2015.04.403

Lee, J. J., Srinivasan, S., Trail, T., Lewis, D., & Lopez, S. (2011). Examining the relationship among student perception of support, course satisfaction, and learning outcomes in online learning. *The Internet and Higher Education*, *14*(3), 158–163. https://doi.org/10.1016/j.iheduc.2011.04.001

Moon, J. (2004). Using reflective learning to improve the impact of short courses and workshops. *Journal of Continuing Education in the Health Professions*, *24*(1), 5–11. https://doi.org/10.1002/chp.1340240103

Moon, J. (2013). *Reflection in learning and professional development: Theory and practice*. Routledge.

Moore, J. L., Dickson-Deane, C., & Galyen, K. (2011). 'e-Learning, online learning, and distance learning environments: Are they the same? *The Internet and Higher Education*, *14*(2), 129–135. https://doi.org/10.1016/j.iheduc.2010.10.001

Murphy, E., Rodríguez-Manzanares, M. A., & Barbour, M. (2011). Asynchronous and synchronous online teaching: Perspectives of Canadian high school distance education teachers. *British Journal of Educational Technology*, *42*(4), 583–591. https://doi.org/10.1111/j.1467-8535.2010.01112.x

Panigrahi, R., Srivastava, P. R., & Sharma, D. (2018). Online learning: Adoption, continuance, and learning outcome—A review of literature'. *International Journal of Information Management*, *43*, 1–14. https://doi.org/10.1016/j.ijinfomgt.2018.05.005

Pinho, C., Franco, M., & Mendes, L. (2018). Web portals as tools to support information management in higher education institutions: A systematic literature review. *International Journal of Information Management*, *41*, 80–92. https://doi.org/10.1016/j.ijinfomgt.2018.04.002

Reimers, F., Schleicher, A., Saavedra, J., & Tuominen, S. (2020). *Supporting the continuation of teaching and learning during the COVID-19 Pandemic*. OECD. Retrieved 17 July, 2020, from https://www.oecd.org/education/Supporting-the-continuation-of-teaching-and-learning-during-the-COVID-19-pandemic.pdf

Simpson, O. (2002). *Supporting students in online, open and distance learning*. Routledge.

Spicer, J., & Stratford, J. (2001). Student perceptions of a virtual field trip to replace a real field trip. *Journal of Computer Assisted Learning*, *17*(4), 345–354. https://doi.org/10.1046/j.0266-4909.2001.00191.x

Stainfield, J., Fisher, P., Ford, B., & Solem, M. (2000). International Virtual Field Trips: A new direction? *Journal of Geography in Higher Education*, *24*(2), 255–262. https://doi.org/10.1080/713677387

Villar, E. B., & Miralles, F. (2020). Purpose-driven improvisation during organizational shocks: Case narrative of three critical organizations and Typhoon Haiyan. *Disasters*. https://doi.org/10.1111/disa.12428

Walther, J., Anderson, J., & Park, D. (1994). Interpersonal effects in computer-mediated interaction. *Communication Research*, *21*(4), 460–487. https://doi.org/10.1177/009365094021004002

Žižek, S. (2020). *Pandemic! COVID-19 shakes the world*. Polity.