Pedagogy empowered by technology: Workload commitments for online programs – A position paper

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Abstract

With the increasing ubiquity of web-based tools to facilitate learning and teaching, and with the renewed pressure of the pivot to online learning due to Covid-19, educators across universities worldwide are now required to prepare and deliver online programs. In moving towards these new approaches to teaching and learning, there are a number of competing and significant challenges facing staff:

- There is no one universal definition of online learning;
- Existing workload models represent traditional forms of content delivery;
- Prestige of research over teaching still largely exists across the sector (Bradwell, 2009; Keengwe & Kidd, 2010; HEA, 2014; OECD, 2005; O'Connor, 2009; Woodley, Funk & Curran, 2013).

With digital skill-building very much on the Irish national agenda for higher education (National Forum, 2015), institutions are now facing important decisions around how best to support staff and foster cultural change towards new technologically enhanced learning paradigms; now more important than ever within the context of the pandemic.

This position paper draws on research undertaken at local, national and international levels and is focused around providing an underpinning for the following:
- a) Working definitions of what constitutes various forms of online delivery
- b) Policy documentation around workload models
- c) Implications for a post-Covid teaching world.

This paper aims to provide a reference point for academics, sessional staff and heads of school regarding current best practice and recommendations for online teaching and learning in higher education.

1. Introduction

It is difficult to agree on one single definition of online learning due to the myriad of different contextual settings and applications across institutions (Gregory & Lodge, 2015), and yet its importance cannot be understated in creating a common language for academics, managers and institutional leaders. At its most fundamental, "online learning environments include a diverse range of pedagogical practices and are often characterised by active learning student-centred pedagogical techniques" (Baker, 2003; Browne, 2005, in Keengwe & Kidd, 2010, p. 534). Further, "online learning goes beyond planned subject learning to recognise the value of the unplanned and the self-directedness of the learner to maximise incidental learning and improve performance" (Keengwe & Kidd, 2010, p. 534).

The following infographic designed by author 2 (and based on sources from the Online Learning Consortium, 2016; Sener, 2015) represents the working definitions and modes of online teaching and learning approaches:
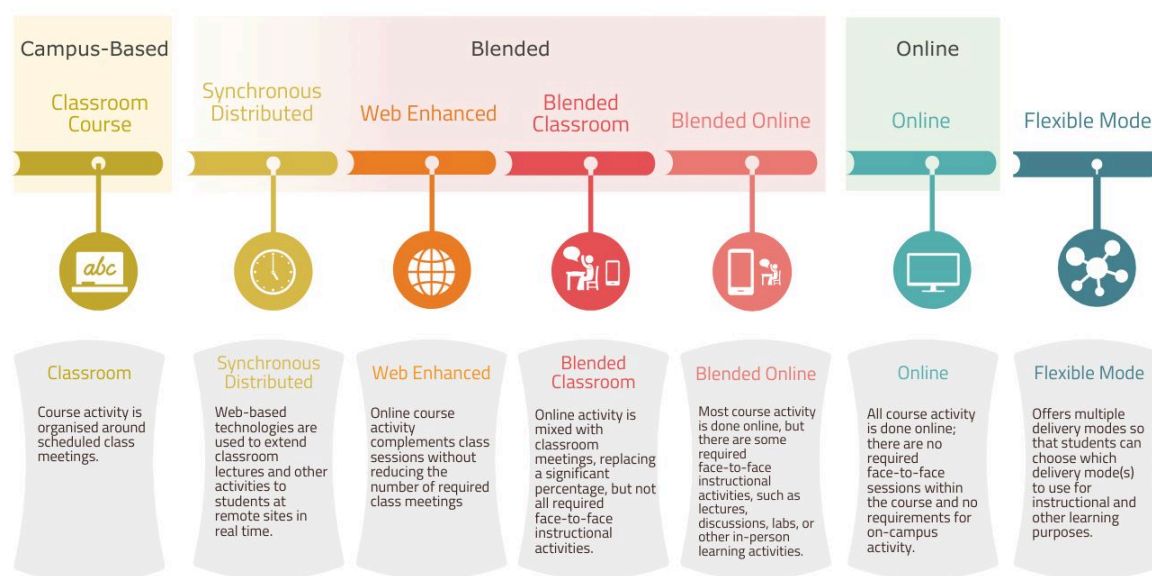
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Figure 1: Models of Technology Enhanced Learning

According to Sener (2015),   the models of technology enhanced learning are:

- Classroom: The 'traditional mode' where course activity is organised around scheduled face-to-face classes – lectures, seminars, tutorials etc.
- Synchronous Distributed: Web-based technologies are used to extend classroom lectures and other activities to students at remote sites in real time, but there is still a

face-to-face element. For example, face-to-face lectures with the inclusion of a live-streamed event such as an online conference.

- Web Enhanced: Online course activity complements class sessions without reducing the number of required class meetings. Essentially, technology is an additional support – students may have to do a small assessment/exercise online but is not a replacement for classroom time. For example, a regular classroom module that has an online multiple-choice quiz.
- Blended Classroom: Online activity is mixed with classroom meetings, replacing a significant percentage, but not all required face-to-face instructional activities.
- Blended Online: Most course activity is done online, but there are some required face-to-face instructional activities, such as lectures, discussions, labs, or other in-person learning activities.
- Online: All course activity is done online; there are no required face-to-face sessions within the course and no requirements for on-campus activity; the reality now facing many as part of the 'new normal' imposed by the current pandemic.
- Flexible Mode: Offers multiple delivery modes so that students can choose which delivery mode(s) to use for instructional and other learning purposes. For example, students can attend on campus sessions or they can join live sessions if they wish, but they do not have to come to campus.

3. More Time or a Waste of Time? The Global Context

3.1 The Changing Role of the Educator

The changing landscape of education has meant that life as a scholar has changed significantly. Academics now need to be adept at many different skills other than 'just' researching, writing and presenting. There are increasing demands on educators from management, pressures to increase profits and massification of programs and modules, 24 hour/day availability in order to fulfill teaching and learning university strategic directions (Bezuidenhout, 2015). The lecturer in the traditional model of 'sage on the stage' has become outdated. This gatekeeper of knowledge has been replaced with more fluid ideas around what constitutes good teaching, and the accessibility of knowledge in many formats. Technology enhanced learning, when done effectively, can enable the facilitation of more engaging and interactive teaching, providing opportunities for "students to become a little less spoon-fed and a little more self-directed in their acquisition of knowledge". (Morgan, & Conway-Herron, 2009, p. 74).

The prevailing culture however seems to be that online teaching does not necessarily equate to good teaching, where face-to-face lecturing is "still accorded a privileged status" (Morgan & Conway-Herron, 2009, p. 72); and that research still holds a prestige status over teaching for the purposes of academic promotions (Gous & Roberts, 2015). "Comparing face-to-face and online courses increases the challenge because there are considerable differences between the environments, which are in many ways like comparing apples and oranges" (Van de Vord & Pogue, 2012, p. 5). Anecdotally, there is also the perception that teaching online is somehow easier and less labour-intensive than face-to-face delivery.

The reality of course is very different. Delivering an online module comprises a number of different stages, each containing their own sub-set of stages: content design, development, implementation, continual evaluation, and revision (Keengwe & Kidd, 2010). Crucially, there is also often the assumption that the design and administration of modules or programs will remain the same when migrated to an online environment when this is not the case – converting a module which is part of the 'traditional delivery' to online requires "more time, skills and knowledge related to course delivery and facilitation in online environments". This being in addition to the technical skills required (Keengwe & Kidd, 2010, p. 535). Clearly this translates into greater workload and number of hours spent preparing online content and delivery. One study undertaken by Chapman (2013) which looked at the development of various online content across 188 organisations in the US concluded that: "on average, the development ratio for blended learning is 49:1, meaning it takes 49 hours to create one finished hour of blended learning" (Chapman, 2013, para .1). There were a number of different variables taken into account in this study including new vs repurposed modules, number of students, and use of outsourced content development. While this may not be true of every institutional context and program, it is certainly a provocative statistic and provides a starting point for further discussion and investigation. It should be noted though that it would be equally difficult to come up with a single figure for the hours required for the development of a traditional face-to-face lecture.

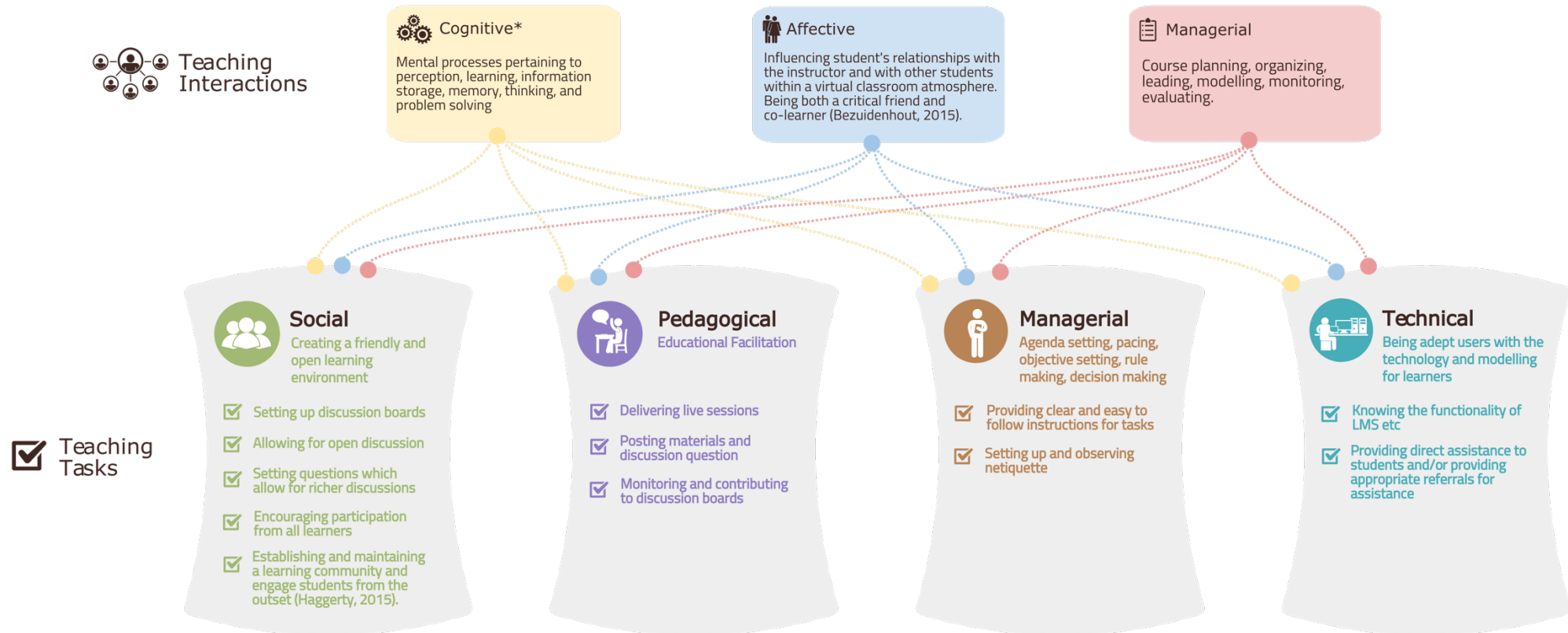## 3.2 What takes so long? Planning is just the start

Once a module has been designed and is 'live', the work has only just begun. In delivering the content online, there are a number of different interactions and tasks undertaken by the facilitator. According to Keengwe and Kidd (2010), and Coppola, Hiltz and Rotter (2002), the interactions which occur between the facilitator and the students can be classified under cognitive, affective and managerial domains. In addition, academic staff teaching online also undertake roles of "the expert, the questioner, the observer and/or the facilitator but to name a few" (Haggerty, 2015, p. 204). Indeed, Downes (2010) identified no less than 23 teacher 'roles' for facilitators delivering online content; similarly Ní Shé et al. (2019) identify a total of 9 in pre-2010 literature and 6 in post-2010. For the purposes of this paper we have used Keengwe and Kidd's, (2010) summary which situates roles under social, pedagogical, managerial and technical competencies, and their relationship with the cognitive, affective and managerial interactions can be seen in the following infographic, Figure 2: Roles of Academic Staff – Teaching Tasks and Interactions:

- Cognitive: Learning is more of a two-way process with the change from verbal to written communication mediums. Facilitators engage in a deeper level of mental processing as a result of editing questions and responses to questions and spending more time in formulating written responses to questions in comparison to answering questions in a face-to-face classroom environment. Facilitators are also able to guide students to deeper levels of critical and independent thought by sharing further resources for students to refer to, or posing further probing questions. Also the fact that all students are required to respond to questions posed online means that facilitators can engage with all students, including the typically 'shy' student in class. The requirement for all students to engage in discussions also puts the onus back on them for their own learning, and encourages students to be confident with

the content. Also, by reading contributions from others, students then are engaging in a process of content review.

• Affective: It can be challenging to foster positive relationships in a virtual space with students whom facilitators have never met face-to-face. The added challenge then is to also facilitate positive relationships between the students themselves. This can be difficult without non-verbal cues such as body language and eye-contact. Written communication can also result in miscommunication. On the other hand, sometimes this medium can also mean students are more willing to share information about themselves they may not have had the confidence to share in a face-to-face setting. Facilitators may find they develop a different persona in the online setting, being less formal and more open to their own learning alongside their students.

• Managerial: Much more time is often spent gathering and preparing resources for digital delivery, and organising classes/sessions online. More time is spent by facilitators in terms of monitoring activity and responding to questions online compared to a face-to-face setting, and making sure that discussions are heading in the right direction.

The infographic below was designed by author two of this paper and is based on literature from Coppola, Hiltz and Rotter (2002) and Keengwe and Kidd (2010). It shows the various teaching interactions (cognitive, affective and managerial) and how these have a complex influence on the various tasks undertaken by the facilitator. It is perhaps not surprising that these multiple role expectations in online learning are causing increased stress and anxiety for academics as they navigate new approaches to teaching and learning (Bezuidenhout, 2015; Tynan, Ryan & Lamont-Mills, 2015).

Teaching Interactions

Cognitive*
Mental processes pertaining to perception, learning, information storage, memory, thinking, and problem solving

Affective
Influencing student's relationships with the instructor and with other students within a virtual classroom atmosphere. Being both a critical friend and co-learner (Bezuidenhout, 2015).

Managerial
Course planning, organizing, leading, modelling, monitoring, evaluating.

Teaching Tasks

Social
Creating a friendly and open learning environment

☑ Setting up discussion boards

☑ Allowing for open discussion

☑ Setting questions which allow for richer discussions

☑ Encouraging participation from all learners

☑ Establishing and maintaining a learning community and engage students from the outset (Haggerty, 2015).

Pedagogical
Educational Facilitation

☑ Delivering live sessions

☑ Posting materials and discussion question

☑ Monitoring and contributing to discussion boards

Managerial
Agenda setting, pacing, objective setting, rule making, decision making

☑ Providing clear and easy to follow instructions for tasks

☑ Setting up and observing netiquette

Technical
Being adept users with the technology and modelling for learners

☑ Knowing the functionality of LMS etc

☑ Providing direct assistance to students and/or providing appropriate referrals for assistance

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Figure 2: Roles of Academic Staff – Teaching Tasks and Interactions

What can be done to facilitate learning and teaching in this new paradigm? Morgan and Conway-Herron argue that much around existing university structures is predicated on "very outdated notions of teaching and learning" (2009, p. 73). Indeed, Downes (2016) argues that the role of universities and academics will change significantly in the not too distant future and the lines between campus, blended and completely online will be become irrelevant; arguably this has come into stark focus in light of the Covid-19 pandemic. It is therefore the responsibility of the institution to keep up with the changes and the impact on staff. Work of centralized learning and teaching support units remain crucial in supporting staff across the university.

4. International Workload Allocation Models

"Current workload models represent very traditional notions of teaching. Lecturing is still accorded a privileged status over a cluster of activities referred to as 'facilitation of learning'…While these activities retain their lower-order status in a hierarchy of teaching, academics will have little incentive to re-conceptualise their teaching. Lectures will remain the cornerstone of teaching, irrespective of its pedagogical appropriateness" (Morgan & Conway-Herron, 2009, p. 72).

There are many variables in online teaching which need to be taken into account. For example, the task of providing feedback in a face-to-face setting is very different to online. In a classroom setting, a lecturer or tutor can provide general feedback to the class at the same time. Online however, feedback can often be more individualised if required. Also, the fact that feedback given online is in a written form compared to verbal feedback which is quicker to deliver to a group (Van de Vord & Pogue, 2012). Synchronous delivery where lectures/tutorials are delivered in real-time require academics to be present at pre-arranged times, while asynchronous delivery allows for content to be prepared beforehand and for feedback to be delivered at the academic's pace, typically through discussion fora. It may be noted then that decisions made around modes and methods of online/blended delivery can have a significant impact on the workload involved in development of these programmes. Early and frequent consultation with Instructional Designers during development is therefore key in the successful application of technology to education.

A number of studies internationally have focused on the issues around workloads and online teaching and learning in higher education. The literature shows that staff report various workload allocation models as being irrelevant, or do not sufficiently allow for accounting their work in online environments. This feeds the perception that staff are better off not adopting e-learning approaches because of unreasonable work allocation expectations (Gous and Roberts, 2015 (South Africa); Tynan, Ryan and Lamont-Mills, 2015 (Australia); Van de Vord and Pogue, 2012 (USA)).

The following infographic is a summary of the common concerns of academics from around the world in relation to workload allocations and online teaching.

"a critical element which is potentially a silent barrier to the ubiquitous implementation of effective practice in TEL in tertiary education; that is, academic workload allocation"

Gregory & Lodge (2015, p. 211)

1. A Changing Role

International literature is unanimous and reflects the changing role of the educator and of education: Shift away from sage on the stage to guide on the side paradigm

Gregory and Lodge, 2015; Bezuidenhout, 2015; Bradwell, 2010; Gous and Roberts, 2015; Haggerty, 2015; HA, 2014; Hornibrook, 2012; Keengwe and Kidd, 2010; Kennedy, Laurillard, Horan, Charlton, 2015; Mœglin and Vidal, 2015; Morgan and Conway-Herron, 2009; Tynan, Ryan and Lamont-Mills, 2015; Tynan, Ryan, Hinton and Lamont-Mills, 2012; Van de Vord and Pogue, 2012; Woodley, Funk & Curran, 2013

2. Complexity of Issue

Perceived workloads are not only measured in hours spent, but also because of different affective and cognitive tasks required

Bezuidenhout, 2015; Gregory and Lodge 2015; Gous and Roberts, 2015; Haggerty, 2015; Mœglin and Vidal 2015; Morgan and Conway-Herron, 2009; Tynan, Ryan and Lamont-Mills, 2015; Van de Vord and Pogue, 2012.

3. Wellbeing and Mental Health Concerns

Anxiety and stress increases for academics

Bezuidenhout, 2015; Gous and Roberts, 2015; Tynan, Ryan and Lamont-Mills, 2015; Kinman 2016.

4. A Need for Role Boundaries

Need to stipulate role boundaries and expectations for staff – health risks of being constantly available and boundaries between work and home life

Bezuidenhout, 2015; Gous and Roberts, 2015; Tynan, Ryan & Lamont-Mills, 2015

5. Current Workload Models are Unsuitable

Institution-wide and flexible workload models needed. Current workload models are unsuitable for the context

Bezuidenhout, 2015; Gregory & Lodge 2015; Hornibrook, 2012; Tynan, Ryan, Hinton & Lamont-Mills, 2012.

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Figure 3: Themes in the Literature

As per the infographic, international literature drawn from Australia, South Africa, the UK, New Zealand, Ireland, the UK, France and the USA unanimously agrees that the role of the educator, and indeed of education, is changing. We are seeing the shift away from sage on the stage to guide on the side paradigm. However, as per figure 2, it is clear that the multiple roles required in becoming the guide on the side in moving towards this new paradigm is extremely complex. These complexities can cause anxiety and stress for academics, as no doubt many currently feel with how Covid is impacting their teaching. In particular with the blurred lines between home and work life during the restrictions due to the pandemic, there are definite needs for role boundaries. Finally, the literature pertaining to current workload models being unsuitable was written pre-Covid; there is again no doubt that they are possibly less so now.

In light of these issues highlighted above, the importance of expertise and support provided by centralised units and instructional designers is vital in the current environment, particularly in a time when high levels of burnout in academic staff have been found as comparable to staff in traditionally 'high risk' groups such as health and social care workers (Kinman, 2016). The pressing reality is that "it is no longer possible to work in ways that belong to a transmission era of university teaching" (Tynan, Ryan and Lamont-Mills, 2015).

The National Forum for the Enhancement of Teaching and Learning (2015) points to the need for further research to be theoretically grounded by a new concept of 'virtual time' which is 'socially constructed' time and is different to 'clock time'. This echoes work undertaken by Gregory and Lodge (2015) who suggest the development of workload models which enable conversations around labour-intensive efforts required for online teaching vs 'clock time' hour requirements.

5. Implications in a post-Covid world

Based on these trends and in light of renewed pressure created by the pivot to online with Covid-19, there is no doubt that teaching staff need ongoing support. This needs to be at an all of institution level, underpinned by strong strategic directions in teaching and learning. Ongoing support and proper resourcing of instructional designers is also vital. Finally, guidelines for lecturers and an outline of role expectations and boundaries when teaching online, informed and underpinned by tenets of good mental health and well-being are vital as academics grapple with the 'new normal' and dealing with the even more blurred boundaries between work and non-work time.

In addition to support, the amount of work which may be added to an existing workload for an academic is difficult to quantify, and more research is needed. Flexibility is key here. Further, there is no universal yardstick by which to quantify effort given the range of options available in development therefore consultation with institutional instructional designers before undertaking development of online learning should provide guidance on how decisions made around pedagogy can affect workload. Policy in line with workload models should allow for dialogue between teaching staff and their managers. The use of institutionally relevant rubrics to inform discussions around time taken in preparing online materials might provide a useful framework for these discussions. Finally, there may be merit in exploring alternative time-saving approaches for online instruction such as posting of audio discussion and audio feedback which may be less time consuming than text-based online responses.

"Online learning without strong pedagogical positioning within a curriculum philosophy is just teaching with electronic tools" (Haggerty, 2015, p. 203). Professional development therefore needs to take the approach of pedagogy first, technology second. Staff development needs to include a consideration of how e-learning approaches and e-pedagogy can inform future iterations of academic development programs, for example, in embedding digital literacy and instructional design pedagogy into Certificates and Diplomas in Teaching and Learning in Higher Education and/or standalone modules and/or electives. A focus on online learning and teaching as "pedagogy empowered by technology" (Nichols, 2008 in Haggerty, 2015, p. 205), and grounded within the principles of the scholarship of teaching and learning

(SoTL) will help shift the narrative away from ad hoc, stop-gap measures to including technology in teaching, and encourage an inquiry-focussed, research-informed approach.

There is evidence that there is a movement for change at a national level, publications such as 'Teaching Online is Different' (Ní Shé, et al., 2019), underscore a shift in attitudes which is occurring in Ireland in underpinning the complex differences that are in fact a reality.

We are at a critical stage as we consider how teaching during a pandemic can be a catalyst for reimagining the future of pedagogy empowered by technology. Further research is needed around lecturer perceptions/expectations/experiences of online teaching and learning. Perhaps a post-Covid context will enable a collective working towards and contributing to institutional cultural change which values teaching as equal to research, and new forms of teaching approaches over old-fashioned didactic delivery.

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