



# NEXT STEPS

for Teaching and Learning:  
Moving Forward Together



## Key themes in online and blended learning, 2010-2020



**This Insight outlines key themes in online and blended learning scholarship in the period 2010-2020, before the Covid-19 pandemic. The review begins with definitions of key terms and then outlines several major themes in online and blended learning as well as recent critical approaches.**

### Introduction

A key task as we look to the future in Irish higher education is to reflect and make sense of what we have learned since March 2020 in the context of what we already knew about effective education in all modes – in person, online and blended. As described by Deirdre Butler (2020), we must combine what we knew before Covid (BC) with what we learned during Covid (DC) as we plan for the future of education after Covid (AC). The substantial research literature in online and blended learning offers relevant theories and practices that can productively be applied as we plan for the future, to ensure that higher education will be as flexible, resilient and equitable as possible.

### Defining terms

There are many different and overlapping definitions of online, distance and blended learning and digital education. However, in the early days of the Covid-19 pandemic a new term, Emergency Remote Teaching (ERT), became widely used<sup>1</sup>. ERT is defined as:

**a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances. It involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses and that will return to that format once the crisis or emergency has abated. (Hodges et al., 2020)**

The rationale for using this term was to emphasise that online teaching in response to the Covid-19 pandemic, or indeed any crisis or disaster, is meaningfully different from well-designed, well-planned online learning experiences. For the purposes of this review of pre-pandemic literature, the terms online and blended learning will be used. Readers are asked to keep in mind the nuances identified below.

Distance education describes education that is remote and technologically mediated in order to span geographic and/or temporal distances between learners, teachers and institutions. Since the 19th century, distance education technologies have evolved from postal correspondence to broadcast media (radio, television, film) to the interactive, internet-based technologies we use today, with each new development building on the foundations of its predecessors (Anderson & Dron, 2011).

Online learning describes any form of learning conducted partly or wholly over the internet, although it is more specifically used

to describe a form of distance education intentionally designed in advance to be delivered fully online (Bates, 2016). Knowledge and practices of online learning have evolved considerably since the first use of computer mediated communication (CMC) in higher education in the 1980s; web browsers and Virtual Learning Environments (VLEs) in the 1990s; lecture recording systems, open educational resources (OER), social media and massive open online courses (MOOCs) in the 2000s; the rise of mobile computing, datafication and learning analytics in the 2010s. The scope of the term *online learning* is narrower than that of *digital education* and *e-learning*, both of which encompass teaching and learning using the full range of digital tools, technologies and resources (not just the internet). In addition, none of the above terms has the “in-built claim to improvement” of the term *technology-enhanced learning* (TEL) (Rapanta et al., 2020).

The term *blended learning* is typically used to describe a combination of online and face-to-face modes, or the “thoughtful integration” of the two (Garrison & Kanuka, 2004). In more recent usage, however, it has become an umbrella term for the use of digital technologies in education (Hrastinski, 2019). Other related terms include *hybrid* and *hyflex* learning. *Hybrid learning* is used by many as a synonym for blended learning (Olapiriyakul & Scher, 2006) and by others to refer specifically to the integration of face-to-face and online learning across a programme. *Hyflex learning*, on the other hand, describes a model that allows students to participate either in-person or online, and to make that choice on a continual basis (Beatty, 2014).

Despite this array of various terms, it must be noted that no form of education is entirely in-person or entirely digital: “contemporary face-to-face learning is blended learning for all intents and purposes” (Fawns, 2019) and “‘virtual learning’... is always ‘in person’, even when the person is alone and home in front of a screen” (Gourlay, 2021). In practice, the modes of online, blended and face-to-face learning are inextricably linked.

### Key themes in online and blended learning

A longstanding and extensive body of knowledge exists in the broad domain of online and blended learning. This section summarises key themes in the scholarship of online and blended learning, with a particular (though not exclusive) focus on developments in the period 2010-2020.

#### Teaching online

Developed over twenty years ago, the Community of Inquiry (CoI) model (Garrison, Anderson & Archer, 1999) remains a widely used model for understanding, designing and practicing online teaching in higher education, with some variation across discipline areas (Arbaugh et al., 2008). The CoI model addresses three interdependent dimensions of presence considered necessary to create meaningful online learning

<sup>1</sup> Since its definition in May 2020 the term ‘Emergency Remote Teaching’ has been referenced in over 6000 scholarly articles as well as by numerous government departments and agencies including Ireland’s Department of Education and Skills (2020) and the ESRI (Darmody et al., 2020).



experiences: teaching, cognitive and social. *Teaching presence* encompasses designing and facilitating a course so that learners can achieve meaningful learning outcomes. *Cognitive presence* is the extent to which learners are able to construct meaning through learning, reflecting, communicating and sharing with others. *Social presence* is the ability of learners to identify with, communicate and develop relationships within a learning community. All are necessary for effective and meaningful learning. As highlighted in the CoI model, online teaching requires a complex mix of roles, i.e. learning design and organisation, direct instruction, building online community, providing learner support, designing assessment and providing feedback, among others (Ní Shé et al. 2019). Digital pedagogy, a broader term, refers to the use of digital technologies for teaching and learning and applies in online, blended and face-to-face environments (University of Toronto, 2021).

### Online learning design

The aim of learning design, for all modes of learning, is to design conditions under which learners have the optimal opportunity to learn (Parchoma et al., 2019). Designing for online learning includes additional aspects unique to the online context. Firstly, the importance of online learning design is accentuated because teacher presence is mediated largely through the course design and materials, generally without the opportunity for in-person mediation. In addition, online learning design typically happens entirely before rather than during a course, providing the opportunity for more deliberate and team-based approaches to learning design (Dijkstra et al., 2013). Online learning design focuses on how the learner can meet learning objectives, rather than how the teacher relays content; important aspects include considering learner motivation, designing for active learning, shifting the focus from content to learning, and providing flexible learning pathways (Crosslin et al., 2018; Salmon, 2013; Witthaus et al., 2016). Notable online learning design frameworks include the 6 Learning Types (Laurillard, 2013; Laurillard et al., 2018), 7Cs of Learning Design (Conole, 2014) and ABC Learning Design (Young & Perović, 2015).

### Building community online

Acknowledging the importance of human interaction in education, the experience of community is essential in online teaching. A key premise is that the aspects of social interaction that may be inherent in face-to-face mode must be intentionally and explicitly built into the design of online teaching (Haythornthwaite et al., 2000). The concept of social presence in the CoI model addresses this aspect of online learning; online learners require the social presence of their instructor and their peers in order to feel part of the learning community, reduce feelings of isolation, and build the trust that is necessary for effective learning. There are myriad ways to build community in online learning – even when communities of students are diverse and widely distributed. These include clear and consistent communication, creating communal online spaces, facilitating small group discussions, inviting learners to share images and other media, and overall creating a friendly, supportive and equitable environment for learners (Bali et al., 2019).

### Synchronous and asynchronous modes

Online learning is often said to facilitate “anytime, anywhere” learning, in contrast to face-to-face learning where teachers and learners are physically and temporally co-present. There are variations with respect to time in online learning, however. In synchronous online learning, teachers and learners may be

physically distant but engage online together in real-time, e.g. via platforms such as Zoom or Teams. In asynchronous online learning, teachers and learners engage at different times, e.g. via discussion forums, email, collaborative work spaces, social media. The first impulse of many who teach online for the first time is often to try to mimic synchronous teacher-student engagement. Overall, however, research indicates that combining both synchronous and asynchronous formats contributes to helping students to learn, develop connections and gain satisfaction in online learning (Watts, 2016). The affordances of digital and open technologies can be used for a wide range of asynchronous engagement options such as posting text or multimedia resources, using online polls/quizzes, inviting students to contribute to collectively authored resources and co-creating a course blog to collect posts from students and/or others. Active engagement and interaction in online environments are key. Decisions regarding modes of interaction should include consideration of the needs and motives of all students, demands of the course content, and availability of technical infrastructure and support (Buxton, 2014; Watts, 2016).

### Digital assessment and feedback

In all modes of learning, digital assessment strategies offer a range of opportunities to make assessment more diverse, engaging, interactive, open and agentic (Bayne et al., 2020). In terms of diversifying assessment practice, opportunities for multimodality in digital environments mean that assessment can move beyond text to include video, audio, animation, image making and more. Such diversity facilitates offering students more choice, can make assessment more engaging, provides more opportunities for dialogic feedback (Y1Feedback, 2016) and offers more possibilities for student partnership in co-creating digital assessment strategies. Providing options for students to share assessed work openly offers additional avenues for authentic assessment and engaging with others beyond the bounds of the module or programme.

### Virtual Learning Environments (VLEs)

The first Virtual Learning Environments (VLEs) were designed to facilitate fully online distance learning courses and programmes. Over the past twenty years VLEs have become ubiquitous in higher education institutions, supporting four main activities: content delivery, assessment, interaction and communication, and analytics (Anderson, 2016). As with any technology, VLEs variously shape, enable and limit the practices they aim to augment; thus, debates about VLEs have endured for as long they have been used in higher education. Critics note that default VLE structures tend to shape and constrain pedagogical practices and limit the development of valuable digital/web literacy practices (Williams, 2013). Gilly Salmon (2017), however, refers to VLEs as a ‘keystone species’ noting that newer VLE developments provide opportunities for mobile learning, multiple forms of feedback, collaboration, social learning and openness. A longitudinal study of students and teaching staff in Irish higher education in 2018 (#VLEIreland) concluded that VLEs constituted meaningful learning environments rather than simply systems to supplement traditional learning (McAvinia & Risquez, 2018).

### Openness

Over the past decade, there has been an increased use of open tools, open educational resources (OER) and open educational practices (OEP) for teaching, learning and assessment in higher education (Cronin, 2017). Through the use of OER and OEP,



educators and students can share their own resources and build on others' resources to enhance learning. OER (including open textbooks) and OEP can enable increased access to resources for all students, creation/adaptation of resources for specific contexts, greater diversity and equity in course materials, and opportunities for collaboration and partnership. Overall, moves towards openness in digital and online learning provide opportunities to increase access, enhance pedagogy and further equity (National Forum, 2021).

### Massive open online courses (MOOCs)

A notable development in online education in the past decade was the dramatic growth of massive open online courses (MOOCs). The first MOOC was offered in Canada in 2008, enabling large numbers of online learners to collaborate, create and share using open platforms and social networks. Beginning in autumn 2011, multiple universities began to offer open online courses and these were soon called MOOCs; 2012 was dubbed 'the year of the MOOC'<sup>2</sup>. While the original MOOCs intentionally used OER and OEP to enable participants to co-create knowledge through diverse networks, institutional MOOCs tended to rely on video lectures and typically did not openly license their course materials. At this remove, MOOCs can be viewed as simply another development in the evolution of online, distance and open education (Schuwer et al., 2015). MOOCs continue to be developed and offered globally, but the single term 'MOOC' masks significant differences in definitions of openness, pedagogies, assumptions about learners and level of integration with other higher education functions such as assessment and certification.

### Complexities and critical approaches

A range of issues influences the adoption of online/blended learning, and digital education more broadly, within higher education. This review cannot address all of these, but they permeate the literature, demonstrating the potential but also the challenges in using digital technologies for teaching, learning and assessment. Some of these cross-cutting issues include access to digital technologies and devices; accessibility of resources and tools; digital literacies development (students and staff); academic integrity; digital well-being; support for students working online; professional development for staff using digital technologies in teaching, learning and assessment; the use of learning analytics; as well as surveillance, privacy and GDPR considerations.

The past several years have seen a marked rise in critical approaches to education and technology, including in the domain of online and blended learning. Technologies mediate, and are mediated by, practices. Technologically deterministic approaches to blended and online learning, or skills-focused approaches to continuing professional development for staff, do not take account of the "entanglement" of technologies with practice (Gourlay, 2020; O'Leary, 2020). The term *postdigital* has proven useful in conceptualising some critical approaches, recognising the ways that digital technology is already embedded in our existing social practices and challenging assumptions about the necessarily sequential progress of technology (Fawns, 2019; Jandrić et al., 2018). In 2013, Selwyn and Facer noted, for example, that educational institutions were already "awash" with technology; the issue now is to shape

our use of this technology to ensure that higher education will be as flexible, resilient and equitable as possible for all who learn, all who teach, all who support and lead, and our wider communities.

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