

# Ensuring Quality and Integrity in Online Learning Programs

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# Chapter 1

## The Same but Different: Reframing Contemporary Online Education in Higher Education Towards Quality and Integrity

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### **ABSTRACT**

*The field of online learning, like many other technological innovations, has not burgeoned without controversy. Despite the debates about the role and value of online learning, it has continued to grow in many sectors, especially in higher education. Alongside the growth of online learning, discussions about its benefits and limitations have also flourished, and many studies have investigated the quality and integrity of online courses. This chapter offers an investigation of some of the history of online learning, concluding with a collection of practical recommendations and suggestions for future research directions to guide institutions embarking on online learning programs.*

### **INTRODUCTION**

Discussions around the topic of online education in higher education often feature strong views by those who design, teach or learn in online courses. While some are supportive of e-learning, espousing its benefits and affordances, others are not so positive. Such views may be dependent on the designers', teachers' or students' experiences in the online learning environment. An unenjoyable online experience can result in the formation of intense negative opinions about online learning. In

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contrast, positive online learning or teaching experiences can create loyal advocates of online education. In addition to students' and teachers' online experiences, many researchers and educators have explored the impact of online learning environments on the quality of students' learning. Whatever the overall balance of views expressed and the results of research studies about the value of online learning, it appears to be here to stay, along with its varied and associated emerging online pedagogies.

This chapter is written from two perspectives: one that acknowledges the benefits and limitations of online education; and the other in relation to the practice of converting on-campus courses to online courses, and vice versa. This chapter recognizes that online education in the higher education sector offers many benefits for both teachers and students but that an awareness of the limitations and challenges of online education is essential to maintain the quality and integrity of courses offered in the online realm. Also, at the basis of this chapter is an assumption that the design of online courses should not necessarily be limited to the conversion of a similar on-campus or face-to-face course; instead, the quality of an online course is often greater when it is designed according to a fit-for-purpose approach, that is, *for a specific audience and expressly for the online learning context*.

While the early days of online learning appear to have been characterized by discussions, frequently dichotomous in nature, about the benefits and dangers of facilitating learning in an online context (Kim, Liu, & Bonk, 2005), and lengthy debates about how to define terms such as online, blended, hybrid, integrated, interactive and distance learning (Leh, 2002; Osguthorpe & Graham, 2003; Rumble, 2006), current explorations of online education have entered a new era. Recent conversations about online learning and teaching have addressed a more comprehensive range of issues such as equity of access (Rose, Kennedy, & Plants, 2014), course preparation times (Kenny & Fluck, 2014), the quality of learning (Gómez-Rey, Barbera, & Fernández-Navarro, 2016; Smidt, Li, Bunk, Kochem, & McAndrew, 2017), the integrity of student assessment submissions (Lee-Post & Hapke, 2017) and the use of social media for learning (Mbatia, 2013; Wang, Niiya, Mark, Reich, & Warschauer, 2015) and teaching (Murray & Ward, 2017). In these contexts, teaching is often equated with the facilitation of learning.

This chapter aims to:

- Summarize past developments in online learning;
- Analyze research about the quality and integrity of online learning; and
- Offer practical recommendations and suggestions for future research to guide educators engaged in the process of designing, teaching and researching online courses in higher education.

## **MAIN FOCUS OF THE CHAPTER**

After examining some of the history associated with the growth of online learning in university contexts, including some problems associated with online education, the chapter offers pedagogical advice, practical recommendations and possible directions for future research to online course administrators, course designers and online teachers for consideration when moving into or continuing their work in online education. Beginning with a review of some of the common themes that appeared in the early days of online learning research, this chapter sets the current scene of online education by acknowledging the work of some of the pioneering researchers and educators in the field of e-learning. Some of this literature reports on educators' early attempts to "convert" on-campus, face-to-face courses to online learning formats. Also present in the early e-learning literature were the see-sawing considerations about the value and limitations of online education, and comparisons between face-to-face and online learning. With this background of the early days of online learning acknowledged, the chapter then explores a selection of the more recent developments in online learning that have led to some sector-wide realizations about the preparation and facilitation of online courses. Such considerations are often closely associated with issues of quality and integrity set within institutional bounds.

The chapter has been written with an audience in mind that may comprise course designers, administrators and teachers. Those responsible for the professional learning of online course designers and online teachers may also find this chapter of interest in terms of identifying points of focus for professional development activities and resources. For educators engaged in the research and scholarship of online education, future research directions are identified. Along with an underlying realization that online learning is different from face-to-face learning, these future directions offer a lead into the next era of online education.

## **BACKGROUND: ISSUES AND CONTROVERSIES**

In order to identify a set of research-informed recommendations for future online course designers and facilitators and to determine some directions for future research into online education, the past few decades in the development of online education are now reviewed, especially in relation to the limitations and potential benefits of online education and the value, or otherwise, of conversion as a method of course design.

## **Early and Recent Themes in Online Education**

The last twenty to thirty years in the higher education sector have been characterized by a steady growth in the availability of online courses. When online learning began to flourish in universities in the late 1990s and 2000s, many authors suggested guidelines for course designers and teachers of online courses and much of their advice was focused on the value of high quality online communication and the development of Communities of Practice (Ellis & Phelps, 1999; McInnerney & Roberts, 2004; Palloff & Pratt, 1999). The value of online communities and interaction between learners and teachers was espoused by researchers such as Palloff and Pratt (1999), Carr-Chellman and Duchastel (2001), Harasim (2000) and Weiss (2000). Soon after, the value of authentic learning and teaching practices was advocated as an effective approach to ensure the content of online courses and the experience of the online learner was as meaningful and relevant as possible (Banas & York, 2014; Bennett, Harper, & Hedberg, 2001; Herrington, Oliver, Herrington, & Sparrow, 2000; Herrington, Oliver, & Reeves, 2003; Kearney & Schuck, 2006).

In later years, the importance of teacher and learner presence was endorsed (Anderson, Rourke, Garrison, & Archer, 2001; Dringus, Snyder, & Terrella, 2010; Garrison & Cleveland-Innes, 2005; Richardson & Swan, 2003) along with an emphasis on humanizing online education (Andrew, 2012; Seng & Tan, 2003; Weiss, 2000). Even issues associated with the personality of teachers and learners in online learning contexts were explored (Anderson-Wilk, 2010; Chen & Caropreso, 2004; Kanuka & Nocente, 2003) together with the role of feelings and emotions in online education (Becker, Goetz, Morger, & Ranellucci, 2014; Cleveland-Innes & Ally, 2006; Hagenauer & Volet, 2014; Peterson, Brown, & Jun, 2015).

## **Terms Used to Describe Online Education**

While various types of online learning platforms and models developed globally across many higher education institutions, the definitions of such approaches also multiplied and, subsequently, were scrutinized. Harasim (2000) described courses with varying states of online presence by using such terms as adjunct mode, mixed mode or totally online mode. Some of the terms that were used and coined in other literature typically acknowledged the realm of online technologies including terms such as computer-mediated distance education (Palloff & Pratt, 1999), web-based courses (Carr-Chellman & Duchastel, 2001), web-based environments and virtual courses (Harasim, 2000), e-classes (Gerson, 2000), online instruction (Herrington et al., 2000) and the virtual classroom (White & Weight, 2000).

Also present in the early literature were descriptions of online learning contexts in terms that echoed on-campus teaching, such as the online classroom or the

electronic classroom (Palloff & Pratt, 1999). In later years, the definition of whether a course was considered to be delivered or facilitated through a blended, hybrid or integrated approach appeared less dominant in the literature. The preoccupation with defining a course as being delivered or facilitated through a blended, hybrid or integrated approach somewhat receded in the literature. Instead of focusing on the delivery mode itself, the affordances offered by each mode came into focus (Glogowska, Young, Lockyer, & Moule, 2011), as well as the quality and integrity of online learning contexts.

## **Converting Existing Courses to Online Learning Contexts**

In the early days of online learning, there was much discussion about *transferring* or *converting* traditional on-campus or printed distance courses to the online mode (for example, White, 2000). This conversion conversation was often associated with or followed by debates about the value versus the flaws inherent in a course offered online. The terms and phrases used to describe online learning predictably recognized the transition that many online educators experienced from teaching in on-campus contexts to teaching online (Perreault, Waldman, Alexander, & Zhao, 2002).

From these transitional teaching experiences of academic staff emerged many views about the conversion of on-campus courses to online contexts. Rather than developing platforms specifically for the relatively new online learning realm, educators experimented with repurposing existing on-campus courses and adapting them to online modes. There was much talk about “making the transition to online teachers or learning facilitators” (Ellis & Phelps, 1999, p. 71), “conversion from traditional distance education to online courses” (Davis, 2001, p. 1), making “the conversion from the traditional classroom to cyberspace” (Palloff & Pratt, 1999, p. 87) and “moving from face-to-face to online” (Wiesenbergs & Stacey, 2006, p. 871). In today’s world of online learning in higher education contexts, there is greater recognition of the unique affordances of online learning contexts (Arasaratnam-Smith & Northcote, 2017; Baran, 2018), especially those associated with quick and global communication opportunities, access to expert voices and personalization of learning tools.

This area of online literature has not been and is not straightforward in its message. Just as some researchers adopted the view that the seed of development of online courses often lay within the bounds of their on-campus forerunners, others were more of the opinion that online courses required their own pedagogical approach to guide and inform both their design as well as their facilitation (Cutler, 2004; Herrington et al., 2000). While the practice of converting on-campus courses to online learning environments continued and even became the accepted norm in some institutions, other researchers were advocating a revised view of e-learning – one

that acknowledged the unique nature of virtual learning contexts (O'Reilly, 2000; Stevens-Long & Crowell, 2002; Van Duzer, 2002). As a result, debates continued about the limitations and benefits of adopting a conversion approach to modifying traditional courses to the new mode. In her article, *Shift happens: Online education as a new paradigm in learning*, Harasim suggested, back in 2000, that the move to online learning represented a “paradigm shift” (p. 41) in favor of “principle-based design” (p. 52). Very soon after, in 2001, Carr-Chellman and Duchastel reported on the dangers of adopting an approach that simply reformatted on-campus courses for online conditions:

*... the web is simply being used as a medium for the delivery of instruction created within another framework. Such transposition from one medium to another may have some value in reaching certain outreach goals, but it also runs serious risks of diluting the original instruction and possibly rendering it ineffective” and “... there are many unfortunate instances on the web where such transposition leads to a stilted use of this medium for instructional purposes (p. 145)*

## **Emergence of Online Education Guidelines**

After a decade or so of growth in online courses, however, researchers and educators began to investigate the nuances of online learning which, to an extent, replaced discussions that were largely limited to comparisons of online versus traditional forms of education. Since the inception of online learning, the nature of online course design has matured and become more refined over the years, incorporating a recognition of many of the distinct affordances of ICTs (Interactive Communication Technologies) that have been shown to enhance the interactive nature of learning for both students (Crampton & Ragusa, 2015; Keppell, Suddaby, & Hard, 2011) and teachers in professional development contexts (Littlejohn & Margaryan, 2013; Matzen & Edmunds, 2007). Subsequently, many sets of guidelines and recommendations have been developed to guide course designers in their planning and development of online courses (for example, Dole & Bloom, 2009; for example, Goodyear, Salmon, Spector, Steeples, & Tickner, 2001; Salmon, 2013; Siragusa, 2006; Van Duzer, 2002).

The earlier researchers in online education also acknowledged that online education required a specific form of pedagogy: one that was suited to cyberspace and virtual learning contexts, and one that utilized the affordances of hyperlinked resources, anytime-anywhere learning strategies and new communication tools (Brown & Mbat, 2015; Edmonds & Smith, 2017). Around the same time, Herrington and her colleagues published a paper, almost two decades ago now, titled *Towards a new tradition of online instruction: Using situated learning theory to design web-based units* (Herrington et al., 2000). This article became a milestone in the history of

online learning design, suggesting that the advent of online learning in universities represented a movement in which “traditional instruction has not only sustained its existence in educational institutions but more recently relocated to the World Wide Web” (Herrington et al., 2000, p. 1). In their work, Herrington et al., described “traditional online instruction” as emerging from the practices of “traditional instruction” which was teacher-centred, compartmentalized by discipline and content-focused. Instead of perpetuating the teacher-led and content-centric design of traditional learning, authentic learning situations and examples were recommended, to which assessment tasks were meaningfully linked. Teachers were encouraged to be coaches and facilitators rather than content deliverers.

Online learning contexts and technologies were seen to be offering students more opportunities to engage in active and interactive learning practices, beyond simply the learning of content. In this way, Herrington and her colleagues not only cast doubt on an earlier perspective about online learning being a modern cousin of on-campus learning, but they also furthered a pedagogical conversation about the principles behind online education practices and asked questions about the central nature of learning – not only in online contexts but in general across the higher education context. In their article, *Moving from an instructivist to a constructivist multimedia learning environment*, Herrington and Standen (2000), provided an example of how a learning program was transformed from an instructivist pedagogy to a constructivist approach which incorporated authentic learning activities and assessment, collaboration, and the exploration of multiple perspectives, especially through the use of a range of expert voices.

While some researchers still debate the worth or otherwise of online learning over on-campus learning, or vice versa, many current debates have ventured into the quality and integrity in online education; including discussions about the pedagogy of e-learning and the quality of student learning, rather than fixating simply on the feasibility of online education or the evaluation of one delivery mode against another. In general, some contemporary literature about online learning reports “that no significant difference exists in aggregate student learning outcomes between online and face-to-face instruction” (Fendler, Ruff, & Shrikhande, 2018, p. 39).

## **Call for Humanization of the Online Learning Environment**

Despite the enthusiasm about how the affordances of online learning and teaching technologies have the potential to facilitate high quality learning, pedagogical discussions about the theoretical underpinnings of online learning environments and practices have frequently been peppered with calls for greater humanity, communication and interaction to promote a high quality learning experience for students (Garrison, Anderson, & Archer, 2001; Gunawardena, 1995). This movement

began in the late 1990s and early 2000s, during which time some authors began reporting on the humanity, or lack of it, evident in online learning contexts (Seng & Tan, 2003). Weiss (2000) reported on the “loss of personal contact” (p. 47) that was evident in the online classroom. O’Reilly (2000) suggested, in relation to the increase in technology-related courses, “there is a need to find greater humanity in the course development process” (p. 255) and especially recommended that the course design process was a stage of course development in which educational developers could bring “spirit and soul” (p. 255) to online education. Similarly, As the title of Keough’s (2005) paper states, *Relationships not technology are the keys to online learning*.

## **Focus on the Student Perspective and Teacher Quality**

In addition to highlighting the value of humanizing and personalizing the online learning context, the role of students and teachers also came under scrutiny. As time progressed, some educators acknowledged the importance of considering the student’s point of view in online learning contexts. Brace-Govan and Clulow (2000) claimed: “There is a good deal of literature which addresses the issues of teaching online but there is little material which examines the concerns students might have about learning online” (p. 118). Consequently, the students’ perspective in online learning became paramount in many researchers’ work with quality in online learning incorporating views from the students’ perspective (Sit, Chung, Chow, & Wong, 2005; Young & Norgard, 2006).

As well as emphasizing the importance of acknowledging the student perspective in online learning, the teacher’s role did not escape attention. Similar to the messages of Hattie (2003, 2009) in regards to the importance of teacher quality, increasing the knowledge and efficacy of online educators later became the focus of much research (Kennedy, 2015; Lehman & Conceicao, 2010; Northcote, Seddon, & Brown, 2011; Robinia & Anderson, 2010; Ward & Kushner Benson, 2010). Articles and books were soon published with titles such as *Increasing the efficacy of educators teaching online* (Shepherd, Alpert, & Koeller, 2007), *Becoming an online teacher* (Bennett & Lockyer, 2004), *Teaching online: A practical guide* (Ko & Rossen, 2004), *Clarifying the instructor’s role in online distance learning* (Easton, 2003), and *Competences for online teaching: A special report* (Goodyear et al., 2001).

## **Moving From Desktop to Mobile Technologies**

In past decades, desktop and laptop computers were often considered the hardware-of-choice by many learners and consumers in online and blended learning contexts. In more recent years, both higher education students and academic staff in universities

report a greater preference for mobile devices, including cell phones and tablets, when accessing their online courseware (Cochrane, Cook, Aiello, Christie, Sinfield, Steagall, & Aguayo, 2017; Cochrane & Withell, 2013; Edmonds & Smith, 2017; MacCallum & Verhaart, 2014). The use of mobile devices has enabled a higher level of personalization in online learning (Brown & Mbat, 2015) and they also transformed some of the activities of academic staff (MacCallum & Verhaart, 2014). Reasons for this trend may be due to the increased flexibility offered by such devices, alongside increased public availability of Wi-Fi access and decreased costs of both the devices themselves and the networks to which they connect. This trend has continued with Viberg and Grönlund (2017) recently describing the integration of mobile technology into society and students' lives as "pervasive" (p. 357). Adams Becker, Cummins, David, Freeman, Hall Giesinger and Ananthanarayanan (2017) suggest that mobile learning devices and strategies have the potential to improve student equity by opening up access to higher education to students from a range of backgrounds.

Furthermore, the growing popularity of social media and the manner in which it has been integrated into the personal *and* professional lives of teaching staff and their students has resulted in interactive communication technologies becoming more familiar to those engaged in higher education (Mbat, 2013; Murray & Ward, 2017; Qi & Chau, 2016; Schrader, 2015; Wang et al., 2015). The potential of social media to enhance collaborative learning techniques was noted (Tay & Allen, 2011). Similar to the use of mobile technologies, it "has become commonplace in higher education for instructors to use social technologies to motivate and challenge their students and to support learning objectives" (Waycott, Thompson, Sheard, & Clerehan, 2017, p. 12). Thus, the incorporation of a wider variety of media and mobile devices into online education within university structures is becoming more the norm than the exception.

## **Increased Access to Authentic Learning Contexts**

Online learning is becoming increasingly place-independent, as learners and teachers recognize the advantages offered by mobile learning (Nguyen, 2015). Not only are learners becoming less confined by their geographical location, the ubiquitous nature and affordability of mobile devices extend the location of learners to places beyond the small screens of their devices. The previous expectation that e-learning occurred while the learner was tethered to a keyboard, mouse and screen is loosening. Instead, hand-held internet-connected devices place learners within authentic learning environments that are more meaningful, up-to-date and relevant than their online classrooms (Brown & Mbat, 2015; Edmonds & Smith, 2017). Real life locations are becoming their classrooms as students are no longer dependent on

accessing second hand accounts or simulations of authentic environments but their mobile devices are providing them with the opportunities to learn and live within authentic settings. Students are afforded opportunities that enable them to be situated within more authentic learning contexts that are suited to their learning needs and modern lifestyles (Amiel & Herrington, 2012; Banas & York, 2014; Herrington, Reeves, & Oliver, 2010). While some of their learning activities may take place online, others may occur within a workplace context or may involve a combination of online and face-to-face activities. As such, when e-learning incorporates mobile devices, learners can be situated quickly and more meaningfully within authentic learning environments (Aguayo, Cochrane, & Narayan, 2017).

## **Barriers Still Exist**

Although the flexibility offered by online learning contexts and mobile technologies increase access for a greater number of students, equity of student access and student engagement is still an issue debated at many levels (Jones & Long, 2013; Rose et al., 2014). In more recent years, MOOCs have been hailed by some as a step forward in enabling greater access for students from varied backgrounds: “With the advent of Massive Open Online Courses (or MOOCs), it is theoretically possible for anyone with an Internet connection to access course materials from elite universities—a possibility that some commentators have hailed as a democratization of education (Jaggars, 2014). However, in the recent *NMC Horizon Report: 2017 Higher Education Edition* (Adams Becker et al., 2017), the issue of inequity of access of online resources still remains a barrier to some students accessing higher education. Although the idea that online learning programs increase the opportunities for some students who may not have previously been able to access higher education, “Barriers to equity persist as broadband remains unevenly distributed” (Adams Becker et al., 2017, p. 30). Lee (2017) encourages educators not to forget that “increasing the accessibility of university education is a complex and multidimensional social issue, one which requires serious, and continuing, scholarly discussions” (p. 21).

## **Workload Issues**

In addition to an awareness of the ongoing issue of student access to online courses, problems associated with the length of time required and the level of complexity involved in designing and creating an online course continue to cause concern from a teacher or a course designer’s perspective. The preparation required to develop an online course have been reported as being more involved than the time and complexity associated with teaching in traditional, on-campus courses. Back in 2006, Tomei estimated that “online teaching demanded a minimum of 14% more

time than traditional instruction” (p. 531) and noted that the workload of online teachers fluctuated more across a semester period than the more stable workload of teaching in traditional, on-campus courses. Furthermore, Wiesenberg and Stacey (2006) and, more recently Kenny and Fluck (2014), also reported on the time and workload challenges associated with teaching online for academic teaching staff in universities.

Many issues associated with online teaching and online course design, as outlined above, have influenced the practices, expectations and experiences of teachers and students who operate in online learning environments. These issues incorporate both positive and negative aspects of designing and teaching online courses, and learning in online courses, and they affect teachers, students and their institutions. From this previous literature about the growth of online learning, a sample of which has been cited above, a collection of pedagogical guidelines and practical recommendations are now offered in an attempt to guide the work of both course designers and facilitators of online courses within higher education contexts.

## **GENERAL GUIDELINES AND PRACTICAL RECOMMENDATIONS**

A collection of general pedagogical guidelines and practical recommendations, with examples, have been extracted from the previous literature about online learning in higher education contexts. These suggestions for future course designers and teachers are particularly focused on fit-for-purpose design, rather than the conversion of existing courses to online contexts. The affordances and limitations of online learning are also considered.

### **Consideration of the Affordances and Limitations of Online Education**

Clearly, online learning contexts embody both opportunities and risks for teachers and students alike. For course designers and online teachers, the pros and cons of online learning contexts cannot be ignored. Issues of workload, activity and assessment design, and the provision of appropriate communication tools must be considered when online courses are being prepared. These issues have implications for the professional development of academic teaching staff who require initial and ongoing support in how to effectively create and facilitate online learning environments for their students. However, the difficulties that may be faced by students should not be overlooked. Advising students about how to approach and solve potential barriers to

their learning in online contexts may assist students in their resilience to addressing challenges associated with their online learning.

Practically, the following suggestions are offered to ensure that the benefits and disadvantages of online education are acknowledged within university learning contexts:

- The long-term strategic plans of higher education institutions should include specific strategies and resources to assist in the development of course design and course facilitation (teaching) skills of academic teaching staff.
- Course designers and teachers should incorporate advice and revision points throughout their courses to support students through the more difficult sections of a course.

## **Utilize Authentic Learning Environments Online and Offline**

In their book, *Conducting research in online and blended learning environments: New pedagogical frontiers*, Dziuban, Picciano, Graham and Moskal (2015) emphasize the opening up of new frontiers in which to conduct research which “no longer shackles one to the time and place constraints of a physical classroom” (p. 3). In a similar way, learning in the online environment can also utilize such flexibility as a benefit for learners enrolled in online courses. For example, marine biology students learning about the physical impact of wave strength on seaside environments are no longer restricted to having such phenomena described by their lecturers in on-campus university lecture theatres. Nor are they restricted, in online courses, to viewing videos and graphics depicting such weather impacts on physical environments. The benefits of “integrating location-based mobile learning games in higher education courses to enhance educational experiences” (Edmonds & Smith, 2017) are now recognized. As such, a high quality online learning program can provide learning experiences that both incorporate *and* go beyond the boundaries of a screen. The following practical recommendations are offered to ensure online courses incorporate authentic learning contexts, activities and resources for students to access:

- Online learning programs can incorporate activities during which students physically visit locations relevant to their learning, such as the shores of beaches and other coastal environments to observe, record and analyze these natural phenomena *in situ*, albeit while toting their mobile devices to assist in their observations, recordings and analysis.
- Course designers are encouraged to construct authentic tasks that incorporate mobile or online technologies with activities that take place at physical locations. The combination of online and physical locations has the potential

to increase authenticity of student learning experiences or “authentic simulated experiences” (Rosenbaum, Klopfer, & Perry, 2007, p. 31). For example, Rosenbaum et al. (2007) investigated the use of a game played on a physical university campus using mobile technologies by medical students, to learn how to contain a disease outbreak.

## **Fit-For-Purpose Design: To Convert or Not to Convert?**

The process of converting an existing course to an online mode of delivery has been shown to be fraught with difficulties, including the phenomenon in which online learning programs are constituted of bulk uploads of content-heavy materials. As Harasim (2000) cautioned almost two decades ago: “Instructional models where faculty ‘present’ or publish information on the Web are less engaging and result in higher drop-out rates” (p. 53). Although the early days of online education saw many educators in higher education contexts using traditional on-campus courses as the foundational basis of their online programs (Davis, 2001), many modern educators advocate the use of blended learning (a combination based on the integration of online and face-to-face methods) in an approach that is based on pedagogical need before a choice of delivery methods. Instead of forcing a choice between delivery methods of facilitating a university learning program, educators are coming to realize the benefit of making instructional design choices based upon learning-centered and learner-centered issues such as disciplinary context, learners’ needs and the nature of learning outcomes. In this way, online learning is seen less as a poor cousin to traditional learning programs and more as a course type of its own, with its own unique values and advantages.

In recent years, publications that aim to guide online teachers and online course designers have tended to focus on “a practical approach informed by theory” (Vai & Sosulski, 2015). Discussions about learning and learners appear to be expanding, beyond more limited concerns of whether or not to design a course that is either online or face-to-face and beyond discussions about which technology or which Learning Management System (LMS) to use, instead focusing on the value of considering the “practical implications for designing and facilitating discussions that foster online learning communities” (Ouyang & Scharber, 2017). While the actual technology being utilized is still under scrutiny, the reason for its use is coming to the fore of educators’ minds and practices. In summary, courses that are facilitated in online or blended modes should be designed for these contexts, rather than being conversions of on-campus courses that were not necessarily designed for use with extensive online teaching and learning technologies.

To ensure that online learning programs are designed to suit their purpose and learning intentions, the following practical suggestions are recommended at the course design phase (that is, before teaching takes place):

- Biggs' (2014) model of constructive alignment is offered as a course design approach that ensures the course's learning outcomes drive the selection of appropriate teaching methods and resources (including online technologies, where appropriate). This approach assists in focusing the course design on the course's learning outcomes rather than being overly preoccupied with delivery modes. For example, in their design of professional development courses, Mirriahi, Alonzo, McIntyre, Kligyte and Fox (2015) purposely designed materials that especially integrated learning and teaching technologies while working towards "improving the digital literacy of teaching staff and enhancing effective online and blended learning opportunities for students" (p. 4).
- If conversion of an existing course that has been taught in a traditional on-campus format is opted for, instead of designing a course from the very beginning, close scrutiny should be exercised to ensure the learning intentions of the course match the newly created online mode.
- Instead of designing a course that is fully online or fully on-campus, educators are encouraged to consider creating courses that utilize the affordances of both modes of study. This practice has the potential to ensure that the design and/or selection of appropriate learning activities and resources are based upon the intentions of the course overall rather than the convenience of its delivery.

## **Interaction and Communication**

The role of interaction, a common theme evident in online learning literature, has still not been fully operationalized across university learning contexts. Throughout the history of online learning, much has been made of the value of discussion activities that promote active learning and engaging tasks. Faculty staff engaged in online learning and teaching continue to be concerned about effective communication in online courses (Wingo, Ivankova, & Moss, 2017). For many years, online courses that have neglected the human side of interactive learning have been criticized for being overly text-based (Kear, Chetwynd, & Jefferis, 2014), lacking in engagement (Hun Lim, Morris, & Kupritz, 2007) and devoid of personalized dimensions (Dole & Bloom, 2009; Dringus et al., 2010). This concern is sometimes even more concentrated when class sizes are large (Chen, deNoyelles, Patton, & Zydney, 2017).

Nevertheless, the quality of student learning can be enhanced through the use of activities that engage students in discussions of their online learning materials and bring them together as a community (Glogowska et al., 2011). In fact, McInnerney and Roberts (2004) suggest that “the difference between a successful and an unsuccessful online learning environment for many students” (p. 73) may be related to whether or not students can express themselves within a community. In addition to promoting a feeling of belonging and community, the introduction of communication-focused and interactive learning activities has also been linked to a higher quality of learning. Deep learning has been associated with learning activities and resources that emphasize meaningful interactions and communication between learners (Dunlap, Sobel, & Sands, 2007). In recent years, researchers have reported that “it has become commonplace in higher education for instructors to use social technologies to motivate and challenge their students” (Waycott et al., 2017, p. 12) and that “discussion design and facilitation have critical influences on online learning community development” (Ouyang & Scharber, 2017, p. 34). Although much progress has been made, indicating that more interaction and communication has become standard in some current online learning programs, the use of information and communication technologies has not yet been fully realized.

The following practical recommendations are suggested for educators who wish to enhance interaction and communication with their online students:

- Even in courses that are largely facilitated in on-campus locations, online communication can be used to benefit student learning. For example, the use of mobile video conversations were used to supplement the performance of physical tasks to improve informal workplace learning (Pejoska-Laajola, Reponen, Virnes, & Leinonen, 2017). Integrating interactive and communication technologies that engage learners is a useful addition to courses that are facilitated on-campus or online.
- Do not allow the provision of content to overshadow learner engagement and motivation. To assist students with understanding content, course designers and teachers are encouraged to incorporate social media, discussion technologies and interactive tasks (Waycott et al., 2017) that engage learners and develop a sense of community online (Ouyang & Scharber, 2017, p. 34).
- Provide opportunities for students to express themselves in ways that are visible to other students. Interactions that are meaningful, not tokenistic, should be encouraged between learners and their online teachers. For example, facilitating an online forum which enables learners to provide formative feedback about assessment tasks drafts, with appropriate assessment criteria as guidance, can be both a community-building and instructional experience for students.

- Higher education institutions need to provide professional development support programs that assist academic teaching staff to develop skills in the design and facilitation of online courses in general, and specifically in the design and facilitation of online discussions and interactions, as suggested by Baran, Correia and Thompson (2011). Such programs may involve novice online teachers auditing the online discussions of their more experienced colleagues.
- Lastly, allow pedagogical principles to drive the choice of interactive technologies, as Baran et al. suggest: “integrating technology into pedagogical inquiry” (2011, p. 421).

The above general pedagogical guidelines and suggested practical recommendations for online course design and facilitation have been drawn from recent and past educational literature on the development of online learning environments during the past few decades. Because this pool of literature is vast, two parameters were outlined, earlier in this chapter, to contextualize and define the scope of this chapter. As such, the guidelines and recommendations outlined above have particularly focused on a consideration of the benefits and limitations of online education as well as consideration of the practice that characterized the early days of online education, that of converting on-campus courses to online courses.

## **FUTURE RESEARCH DIRECTIONS**

Emerging from the above analyses of recent and past trends in online education and research, and the subsequently identified guidelines and recommendations for practice, a number of areas have also been revealed as possible future research directions.

Now that the pedagogical principles of online learning in university contexts have been debated, trialed and tested over a number of decades, it is recommended that online learning should not be seen as unusual, less than or as an add-on to more traditional university teaching approaches (such as face-to-face, on-campus courses). Harasim’s advice from way back in 2000 is still relevant here: “Online learning is no longer peripheral or supplementary; it has become an integral part of mainstream society” (p. 59). While this has become the case even moreso since Harasim wrote it almost 20 years ago, the online education environment has still not been fully recognized as a unique learning format by some educators. The following research suggestions may assist in contributing to the future research of online learning as a phenomenon that deserves its own unique nomenclature, theoretical foundations and protocols.

## **Engage Students in Research About Online Learning**

While much research about online teaching and online learning has been conducted by educational researchers and educators, more student voice needs to be incorporated into research about online education (McGettigan, 2016). Not only will this direction in research ensure that the greatest stakeholders of online education are given a voice to contribute to future developments in online learning environments and methods, many students in the modern world are experts in technology and hold valuable knowledge and experience in using a range of teaching and learning technologies. The involvement of students in research about online education may promote a more participatory approach to researching online teaching and learning. It may also increase our general understanding of online learning by exploring multiple perspectives of its outcomes, a need that was recently acknowledged by Wingo et al. (2017).

## **Interaction and Communication in Online Courses**

Even the early research in e-learning signaled the importance of online interaction and the dangers associated with the lack of it (Hawkes & Romiszowski, 2001; Picciano, 2002). Just as the early days of online learning were peppered with warnings about the over-use of instruction that was too focused on the delivery of content rather than the facilitation of learning (Herrington & Standen, 2000; Weiss, 2000), our future in online learning should also acknowledge the philosophy of learning on which the course is based *and* acknowledge the value of interaction and communication. To extend the work conducted by Jaggars and Xu (2016), more research is required that identifies the link, or otherwise, between the quality of online interactions and the quality of student learning.

## **Online Course Preparation Activities and Workload Implications for Faculty**

Further investigations are required into the extent of time, effort and resources that are required to develop online courses. While some discussion and research has taken place about how quickly or how long online courses take to design and create (Kenny & Fluck, 2014; Tomei, 2006; Wiesenbergl & Stacey, 2006), additional investigations are required to produce evidence about the time taken and resources required to design effective online programs. The lack of such evidence may, in part, be dependent on the fact that many online programs are derived from an earlier version of a face-to-face course and, as such, are not developed fully as an online

course from their commencement. Future investigations into faculty workload may also benefit from a consideration of varied disciplinary contexts as well as a recognition of the variation in faculty staff's experience in online learning contexts.

## **An Area of Research to Treat with Circumspection**

The early era of online learning was characterized by discussions that plotted the advantages and disadvantages of online courses against on-campus courses and, in some cases, featured comparisons of one LMS against another LMS. These discussions often considered how various course platforms influenced student completion rates. However, much of the research reported was difficult to compare and analyze because each study was contextualized by various factors that existed within the institution in which it was located. For example, while there has been some research reported about low numbers of students completing online courses, other research has reported the opposite. Just a few years ago, Shea and Bidjerano (2014) completed a national study in the US in which they investigated whether college students who were enrolled in distance mode graduated from their degree courses at a lower rate than their on-campus counterparts. Surprisingly, they reported that: "Contrary to expectations, the study found that controlling for relevant background characteristics, students who take some of their early courses online or at a distance have a significantly better chance of attaining a community college credential than do their classroom only counterparts" (p. 103). On the other hand, a study of MOOC (Massive Open Online Course) completion rates found that less than 10% of the students who enroll in these courses actually complete them (Jordan, 2014). In these two types of courses, comparison is meaningless because the types of courses are so different. Although studies have found one mode above another may be of more benefit to students (Means, Toyama, Murphy, Bakia, & Jones, 2010), pitting one mode against another is now seen as less useful than the analysis of the affordances of varied modes of study, based on the content being taught and the audience to whom it is taught.

Researchers rightly pose questions surrounding the value of comparing course completion rates between institutions, between disciplines and between various types of online learning programs because there are so many variables associated with each type of program. Comparisons of online versus on-campus modes of study are often unreliable as analyses approaches because the manner in which one institution defines an online course may be quite different from the definition given to a similarly named course in another institution. Furthermore, the use of online learning and teaching technologies is now commonplace in many courses that are referred to as being on-campus modes of study. Researchers and educators are cautioned against

comparing student enrolment and completion rates between different modes of study without serious analysis and allowance for the contextual factors involved in each case. Instead, course design efforts would be more fruitful if devoted to the analysis of student audiences, disciplinary distinctiveness, institutional areas of focus and the unique skills and competencies of their academic teaching staff.

## **Pedagogy Before Technology**

While this chapter has considered recent trends and directions in the realm of online and blended learning, the vast legacy represented by past educators' work in distance education should not be overlooked. While much of this work occurred in the 1960s through to the 1980s, before online learning began its trajectory in higher education, some of its principles remain relevant to the modern online learner. Thus, the final direction suggested for future research is the further exploration of suitable principles and pedagogical frameworks that will guide the effective design and development of high quality online and blended learning programs in higher education contexts. The student's learning rather than the transfer of content from teacher to student should be our aim as educators. The idea of refocusing on learning rather than content in online educational contexts is one that has been gradually gaining traction over the years. For example, Baran et al. (2011) suggest that "online educational environments have the potential for enabling the exploration and discovery of new pedagogical approaches ... Attempts should be made to engage teachers in learner-centered teaching approaches" (p. 436).

Just as Herrington and her colleagues were comprehensively guided by the relevant principles of situated cognition on their work in authentic learning principles and practices (Herrington & Oliver, 2000; Herrington, Oliver, & Herrington, 2007; Herrington et al., 2003; Herrington et al., 2010), so too future online educators are recommended to set their course design and teaching practices in suitable theoretical bases. By focusing on the theoretically sound principles that guide the creation of online learning contexts, rather than being distracted by an over-emphasis on the practicalities of course design, many experienced educators and researchers believe that such strong theoretical foundations will, in turn, result in a higher quality of online teaching and learning practices.

Lastly, while this chapter has not intended to argue whether online learning is better or worse than traditional, on-campus learning, it does purport that further research is required to establish the benefits and limitations of online learning, as Nguyen (2015) suggests:

*Overall, there is strong evidence to suggest that online learning is at least as effective as the traditional format, but the evidence is, by no means, conclusive. Online learning is a story that is still being written, and how it progresses will likely depend on those present. (p. 316)*

## **CONCLUSION**

In consideration of the last few decades that have seen some educators and students champion online education, while others have recoiled in pedagogical horror, many strong opinions have emerged, some of which are based on evidence and some that are not. While discussions in the early days of online learning were typically polarized in nature, representing definite and extreme views, some recent scholarly debate has ventured further into deeper issues associated with the quality and integrity of learning. How to best engage students to develop their critical thinking skills, how to support online educators to become facilitators of high quality learning and how to develop learning contexts that mirror authentic situations are concerns occupying the minds and screens of modern educators and students alike. As a consequence, the methods used to develop online courses are no longer limited to the practices associated with converting on-campus courses.

While one common theme that has materialized from recent literature about online education is a recognition of the unique affordances of the online learning context, another theme has receded somewhat into the distance; that is, the ‘old chestnut’ discussion that, in the past, has focused on the to-and-fro debate about whether online learning is better or worse than face-to-face learning. This chapter proposes that such discussions may not be that important once the realization is reached that online education is not a cyber version of face-to-face education. It’s not the same, it’s different.

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## KEY TERMS AND DEFINITIONS

**Course Design:** In the context of higher education online courses and within the constraints of this chapter, the term “course design” is interpreted as being the way in which a course is planned and created, in terms of intended learning outcomes, topic, content, structure and sequence. The manner in which the learning activities and assessment tasks are structured is also an element of course design, as is the approach taken to engage students in the use of selected resources.

**Humanization of Online Education:** The process of humanizing online course design and online learning experiences of students by enhancing the online presence of both students and instructors and by developing instructors’ soft skills associated with communication and interpersonal interaction.

**MOOC (Massive Open Online Course):** A course of study offered free-of-charge via an online learning platform that usually accommodates large numbers (i.e., thousands) of student enrolments.

**Online Learning Program.:** A degree or course that is offered through an educational institution in which students typically access course materials and complete learning activities through online learning and teaching technologies.