

The Growth of e-Learning in Higher Education: Preparing an Agenda for a Professional Development Workshop

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Abstract

Demand for higher education and the abundance of technologies are reasons why e-learning in higher education can be expected to grow. The rapid development of communication technologies used for e-learning has implications for teacher training. A student-centered revision on the role of the stakeholders in the learning enterprise is paramount. Sensitivity training to cultural needs and professional development are recognized factors in how collaboration and social presence contribute to open communication and group cohesion. Technological tools need to be used to enhance learning outcomes. Formative assessment also promotes self-directed learning and is a source of empowerment. Through the lens of e-learning, the authors discuss the implications the above factors have for ongoing professional development in higher education.

The Growth of e-Learning in Higher Education

Despite the well-documented cases of high attrition in online enrollment (Bork & Rucks-Ahidiana, 2013; Greenland & Moore, 2014; Sitzmann, Ely, Bell, & Bauer, 2010), the growing demand for higher education on a global scale suggests that online learning will continue to be an option that most institutions will offer on some level. Earlier in the decade, as many as 62.4% of colleges offered online degrees, which represented a 32.5% increase since the turn of the century (Sheehy, 2012, as cited in Britt, 2015). This demand also comes from professionals looking to stay relevant in the competitive global job market as well as students who desire to obtain specialized skills that are necessary to penetrate the global workforce (Alalshaikh, 2015). Parrish and Linder-VanBershot (2010, cited in Alalshaikh, 2015) assert that the “rapidly changing world demands access to proper educational opportunities, even if this requires...distance learning approaches” (p. 2). Ahalt and Fecho (2015) cite pressure from increasing costs to education and the affordability of the online model as reasons for explaining growth. In one extreme, Bailey, Hendricks, and Applewhite, (2015) report on how one university moved completely online because economic realities

made the traditional brick-and-mortar no longer possible to maintain. The reality is that affordances of technology now make it possible to go completely virtual.

International companies are seeing the benefits that e-learning has to offer in bridging physical distances and uniting employees from across the globe for professional training purposes (Brito Neto, Smith, & Pedersen, 2014). In addition to narrowing the geographical gap between learners, technological affordances have grown in sophistication. Periodic e-assessment tools can offer timely feedback from the instructor who in turn not only alerts the learner to ongoing strengths and weaknesses throughout a development program, but such formative assessment also nurtures self-directed learning (Baleni, 2015). Other reasons for growing interest in e-learning include ease of tracking students progress (Gedik, Kiraz, & Ozden, 2013), quick machine-grading providing instant results to the learner, customization for individualized instruction (Grgurovic, 2012), student self-pacing of learning (Kim, Kim, Khera, & Getman, 2014), and e-group collaboration (Baleni, 2015). In short, rapid advancement of communication technologies for individual and group learning and the continuing demand for specialized higher education are reasons to believe that e-learning will continue to grow in modes of delivery—online, hybrid, and blended (Alalshaikh, 2015).

The Need to Embrace New Skills

The rapid development of communication technologies used for e-learning demands that instructors and learners embrace new skills or as Barber, King, and Buchanan (2015) phrase it, it requires that “we learn how to learn differently” (p. 61). The reality of dealing with rapidly changing technology and shifting modes of learning—face-to-face combinations with various degrees of computer-mediated learning or online—places new demands on instructional design and instructor training. More and more research is devoted to the need to adjust to this shift and the kind of skills required to perform adequately and successfully (Arenas, 2015; Bailey, Hendricks, & Applewhite, 2015; Bonvillian & Singer, 2013). In a study of international and domestic students at two Australian universities, Arenas (2012) explore the behaviors, attitudes, conceptions of teaching, and perceptions in a blended learning context—that is a mix between face-to-face and online. It was found that many of the learners could not communicate effectively using basic discussion boards and other communication technologies despite perceiving themselves as highly proficient writers. Arenas (2015) surmises that the problem may have stemmed from an inability to adapt face-to-face dialogic abilities to an electronic medium. Therefore, the implication for instructors suggests that training will be required to teach the learners how to learn (i.e. embrace new skills) to overcome those barriers imposed by non-traditional modes.

A study to measure 52 pre-service university student teachers’ perceptions of an online educational leadership program found that the majority believed they benefited from assignments because they patterned real-life job scenarios (Bailey et al., 2015). The takeaway from that study is that even novice working professionals are likely to embrace new skills required to learn online if the instructional design of the assignments and the instructional methods align with learners’ expectations. Similarly, Bonvillian and Singer’s (2013) caution that establishing links between new skills for e-learning and real-world applications should entail conceptual change. Open-ended problems where professionals engage in peer-to-peer or near-peer interactions can be an effective approach to acquiring the new set of technological abilities if they are based on sound methodology. The need to connect e-learning with new skills and a new way of learning cannot be overstated. As Barber et al.

(2015) remind all stakeholders in the e-learning community that learners using the computer-mediated technologies for learning

should be assessed authentically to demonstrate their knowledge in a variety of artistic and creative ways that best fit their digital skills and knowledge, and should develop the confidence and succeed in an Internet-based world. While institutions and systems may balk at this non-traditional approach to learning and assessment, we must move forward and embrace all that the digital world has to offer, relinquish institutional power, and place the reins squarely where they belong, in the hands of our students. (p. 66)

The Role of the Student and the Teacher

As alluded to earlier, the successful implementation of new skills for e-learning—be it completely online or blended with the traditional classroom—is predicated on redefining instructor and learner roles (Alalshaikh, 2015; Bailey, Hendricks, & Applewhite, 2015; Baleni, 2015; Banna, Lin, Stewart, & Fialkowski, 2015). A teacher-centered model of instruction simply cannot be transferred to a course that is held entirely online; nor should it be. The lack of a face-to-face interaction calls for a re-design in the roles and responsibilities that the instructor and the student need to establish. Given the multimodal nature of an online platform where the learners may have to adapt to synchronous and asynchronous modes of learning and communication, Bailey et al. (2015) argue that role of the instructor should more likely be seen as facilitator (a guide on the side) rather than being a micromanager (a sage on the stage). This fact requires the learner to re-discover what it means to be an active and a self-directed learner.

Conversely, instructors can train learners to embrace a self-regulatory attitude and develop agency in learning agency through the strategic use of formative assessment (Baleni, 2015). The learner can harness multiple assessor roles, including assessee, peer assessor, or participant in the creation of assessment rubrics (Baleni, 2015). Banna et al. (2015) suggest that professional development for online learning could be an excellent opportunity for instructors to learn how to work in various learner-led discussions and group projects. This could serve the dual purpose of having instructors experience first-hand what technology can do and how it is experienced from a learner's point of view. Baleni's (2015) view on assessment and self-regulated learning (SRL) is supported by Mao and Peck (2013) who write that assessment-oriented activities only account for part of the SRL development. Not every online learner is proficient enough in their abilities to direct their learning; instructional designers—and by extension, the instructor—need to consider student involvement in assessment.

Echoing Bonvillian and Singer's (2013) call for instructional design to align with real-world applications, White and Nitkin (2014) view the instructor as the linchpin for transformational learning. They see learning engagement connected to the relevance of the task to real-world applications on the one hand and self-directed learning that leads to transformation resulting from that dynamic on the other. The instructor's role is to facilitate that kind of transformative learning through guidance, inspiration, and structured use of time and resources. Details of how instructors can be resourceful in guiding learning include facilitating learner discussions on sharing knowledge, asking questions that steer learners towards making discoveries on their own, and directing learners to useful online resources

such as websites, articles, and databases (White & Nitkin, 2014). In short, by being facilitators and guides, the instructor relinquishes the leadership role to the learners, wherein student-led learning becomes the new role that allows for ownership of learning to take place.

The Need to Address Cultural Diversity

Equal access to learning and sensitivity to culturally diverse factors are complicit in the operation of an international online course (Alalshaikh, 2015; Brito Neto, Smith, & Pedersen, 2014; Greenholtz, 2003; Sadykova, 2014; Yang, Kinshuk, Yu, Chen, & Huang, 2014). In a background study on the impact of cultural factors on distance learning, online learning, and instructional design, Alalshaikh (2015) notes that the cultural backgrounds of students can have a significant impact on teaching and learning. Instructional design and teaching methodology need to be culturally sensitive and culturally appropriate for all learners. Alalshaikh (2015) suggests that professional development seminars are opportunities for instructors to be aware of how to deal with different cultures, and refrain from using instructions or examples that may be culturally inappropriate or offensive. For example, learners from some cultures may be unaccustomed to the Western tradition of challenging authority and as a result may resist active participation in learning activities that ask them to do so. Several approaches can be pursued in this type of situation. One strategy is to offer a variety of learning tasks to accommodate a broad range of learner styles and ways of learning. Another tactic is to be transparent about the values of a cultural tradition of an approach and draw a connection between that way of learning with the purpose and goals of the activity.

The need to be culturally sensitive is supported by Brito Neto et al. (2014), who write that the analysis of instructional design should account for a multicultural approach that influences learners' needs and limitations. In a similar vein, Sadykova (2014) observes that peers need to establish a relationship with others in the online learning environment to overcome such differences. Learners can become resourceful at compensating for the lack of culture-related knowledge that may interfere with communication or performance. Given the right opportunities, Sadykova (2014) argues, they can be their mediators of cultural exchange throughout the learning process. Yang et al., (2014) call attention to teaching frameworks such as the cross-cultural collaborative learning teacher's task model as a strategic approach that accounts for cultural diversity.

The Importance of Collaboration and Social Presence

The importance of collaboration—for professional development and instructional design—is a recurring theme in e-learning that usually encompasses a conceptual construct known as social presence (Banna, Lin, Stewart, & Fialkowski, 2015; Chaiprasurt & Esichaikul, 2013; Fahara & Castro, 2015; Garrison, Anderson, & Archer, 1999; Kovanović, Gašević, Joksimović, Hatala, & Adesope, 2015; Wicks et al., 2015). To mitigate the negative effects that result from the psychological and physical distance of the online learning environment, instructors need to nurture student-instructor and student-student interactions. Social presence refers to a learner's ability to project their personality—providing the sense of a real person—to a community of online learners (Kovanović et al., 2015). Online social presence is a construct that is connected with emotional expression, open communication,

group cohesion—all aspects that are vital for encouraging collaboration (Garrison, Anderson, & Archer, 1999).

Banna et al. (2015) suggest that establishing online ice-breaker activities is a good way for students to begin to foster social presence with each other. Designing for various forms of interactions is fundamental to creating a sense of community, which in turn sets up a readiness to collaborate online. The view that social presence and collaboration is necessary for online performance is supported by Chaiprasurt and Esichaikul (2013), who see this interaction as vital for developing learner motivation in pursuing shared goals. They applied the ARC Model—attention, relevance, and confidence—to the community of online learners and found that mobile instant messaging, mobile blogging, and mobile polls and votes were some strategic uses of e-tools that helped increase motivation and engagement for collaborative work.

Fahara and Castro (2015) argue social presence between the instructor and the learners requires an instructional design that promotes immediacy in interaction. For example, online task activities that promote immediacy are ones that are project-based and collaborative, which tend to stimulate student-generated dialogue with the instructor. The instructor can also nurture this kind of learning behavior by asking questions, by extending discussions into new areas of inquiry, or by simply commending learners for their hard work and determination (Fahara & Castro, 2015). In a similar study evaluating collaboration between 70 pre-service graduate teachers in an online course, Wicks et al. (2015) conclude that courses that promote high collaborative activities result in more meaningful co-construction of knowledge. Learners in the high-collaboration group valued their peers more, and they exhibited better planning and monitoring of their work throughout the course.

The Use of Technology Tools to Engage Learners

Research draws a connection between the online learner success and the level of engagement with technological tools (Barber, King, & Buchanan, 2015; Britt, 2015; Kovanović, Gašević, Joksimović, Hatala, & Adesope, 2015; Nakamaru, 2012; Oncu, 2015); therefore, the use of technology to engage learners can also play a vital role in professional development. To better understand the use of technological tools to engage learners, Barber et al.'s (2015) study shows evidence that appropriate use of e-tools results in improved learner autonomy through more meaningful self and peer assessment. The study also shows strategic use of online social networking services such as Twitter, YouTube, and Facebook leads to higher rates of participation. The study presents a positive connection of using social networking services with learner engagement, while Banna et al. (2015) found that Facebook may not be the most appropriate resource as students regard it as too personal a space for educational purposes. Nevertheless, they suggest that other social media with similar functions may be a better option for achieving high levels of interaction and overall engagement.

Despite all the affordances technology has to offer in stimulating engagement and enhancing learning outcomes, Nakamaru's (2012) research reminds us that not all learners are endowed with the same aptitudes and attitudes in using technology as instructors might expect. Goode (2010 cited in Nakamaru, 2012) shows that first-year university students all have different levels of "technology literacy" and instructor assumption of student digital literacy tended to favor those from privileged backgrounds. In other words, the assumption of

technology being the great equalizer in education may be overlooking the fact a rift may be created between those learners who have extensive tech socialization from those who lack such experiences. Worse still is the student who becomes penalized by an instruction that favors the more technologically literate. Professional development should include ways for instructors to take an inventory of student tech literacy. Training should encourage sensitivity and pedagogical responsiveness toward learners who will need more scaffolding in developing digital literacy skills to be fully engaged in a technology-mediated activity.

The combination of technological tools with authentic real-world tasks was found to be more efficient for encouraging engagement in the online setting, according to Britt's (2015) study. In short, it was found that creative and innovative use of technology plays a key role in engagement. That is, a pedagogy-first-technology-second attitude is instrumental in nurturing learner engagement. However, Britt (2015) notes that developing a highly engaging online course is not easy. Instructional design has to rethink pedagogical practices when determining the technological affordances with cognitive and psychological demands of an e-learning environment. The return on instructional investment can pay rich dividends. On the one hand, with a little creativity the course does not require expensive resources; having an innovative mindset can make the most of the tools available to fit the learning objectives of the course. On the other hand, research has found that online students "can and often do outperform traditional students since they are required to do more in online courses ...[However] to be effective, online instruction required strong methodology and opportunities for students to interact with each other and the instructor" (Maki & Maki, 2007, as cited in Dixson, 2010).

The Creation of Assessments that Measure Student Engagement

The creation of assessments for the purpose of measuring student engagement is another important factor for student engagement (Conole, Dyke, Oliver, & Seale, 2004; Northcote, Gosselin, Reynaud, Kilgour, & Anderson, 2015; Rohr, Costello, & Hawkins, 2015; White & Nitkin, 2014; Wicks et al., 2015). The enormity of available of electronic resources and their particular affordances requires an assessment of these tools with learner needs and abilities (Conole et al., 2015). "Suitability, ease of use, flexibility, and relevance" of tools is one kind of assessment that needs to be performed before an adequate evaluation of subsequent student engagement can be determined (p. 11). Also, scales established as reliable and valid by empirical research could prove instrumental in measuring student engagement. For example, the Online Course Alignment Scale can measure the effectiveness of an instructor's self-efficacy in aligning learning activities with resources, which in turn provides insight on student engagement (Northcote et al., 2015).

In a similar vein, Oncu (2015) argues that nurturing self-regulatory behavior and agency in the learning process more be a better measure of learner engagement. Oncu (2015) cites the grading system of MOOCs as proof that the sophistication of technology now makes it possible for self- and peer-assessment to be just as effective in learning outcomes as that provided by an instructor. Although his report recognizes that peer evaluation can be misleading, the proliferation of online teamwork in educational settings necessitates advancement in integrating effective technological techniques with learners' ability to self- and peer-assess academic engagement.

Rohr et al. (2015) suggest the low-cost option of using Twitter for assessment and student engagement. In a three-semester study of 80 university students enrolled in an online health course, it was found that strategic use of Twitter as a point of contact for student interaction was effective for encouraging engagement in a large class where students usually complained about feelings of isolation and disconnectedness. The authors caution, however, that careful consideration for how a social networking service aligns with course activities and student willingness and capability to use the e-tool is warranted. Twitter assigned activities should be carefully timed with assessment-related activities and course logistics (Rohr et al., 2015).

White and Nitkin's (2014) study of university students immersed in an intensive social issues program present findings on assessments that include learner engagement. In addition to reporting on direct evidence of student learning outcomes, their assessment procedures included:

motivation for applying to the program; evaluation of the course structure, logistics, and content; evaluation of faculty, teaching assistants and other staff; perspectives on and commitment to social justice; pre/post self-assessment of professional skills; and self-assessment of active student engagement, confidence and growth in seeking leadership and academic opportunities, and sense of community and belonging in the university setting. (p. 15)

Through such a comprehensive assessment procedure, White and Nitkin (2014) were able to delve deep into various deliverables of the program and provide a rich description of the factors that explained the success of the program as evidenced by student reports of engagement. The students reported feeling highly engaged because of the strong support they received for self-directed learning. Through the assessments, it was discovered that the interdisciplinary structure of the course content and collaborative activities contributed to student empowerment and overall sense of transformational experience. In summation, assessment can provide vital information about instructional design and student self-assessment can also invoke a learner self-reflection that makes the educational experience more meaningful.

The Need for Ongoing Professional Development

The consensus in research regarding the best way to meet the demands of learners in the various e-learning contexts is the need for ongoing professional development (Baran & Correia, 2014; Bork & Rucks-Ahidiana, 2013; Curwood, 2014; Northcote, Gosselin, Reynaud, Kilgour, & Anderson, 2015; Shattuck, Dubins, & Zilberman, 2011). Baran and Correia (2014) assert that faculty engagement in professional development becomes meaningful when programs appeal to them as adult learners who want to be empowered to make informed decisions about how to use resources that make sense pedagogically. In other words, for development strategies and activities to stick, they have to be meaningful and relevant to the practitioner. Moreover, they assert that professional development should also include the collegiality from peer support. Peer observation is one valuable way of developing professionally because the feedback derived from such a practice can enter into discussions of the successes and drawbacks of certain approaches (Baran & Correia, 2014).

Finally, Baran and Correia (2014) point to the need for support at the organizational level. If faculty see that efforts toward professional development are respected, valued, and especially rewarded by the institution, then the knock-on effect is more instructor motivation to make such efforts.

According to research, as an instructor's development of self-efficacy improves, the ability to execute a course of action with available resources increases (Northcote et al., 2015). Conversely, an instructor's negative perception of experience and practical skills—including the use of technology—adversely affects their confidence and attitude. Similar to the call by Baran and Correia (2014) to incorporate useful frameworks into professional development, Northcote et al. (2015) proposed the use of the TPACK (Technological, pedagogical, and content knowledge) framework to help instructors see how they can align technological integration with their ongoing change in practices. Since faculty with the least amount of experience with technological integration with education reported the most negative attitude towards e-learning, mentoring from the more technologically experienced could help first-generational users build self-efficacy to overcome such barriers.

The practice of critical self-reflection will help instructors reveal assumptions about learning with technology. In *Reflective Teaching in Higher Education* Ashwin et al. (2015) explain the key characteristics that the practice of teacher reflection has in the area of professional development:

1. Reflective teaching practices take shape at a particular time and in a particular place.
2. Reflective teaching practices are sparked by dissatisfaction with existing arrangements and involve a cyclical process of questioning our everyday assumptions.
3. Who we are, emotionally and intellectually, is key to our reflective teaching practices.
4. The contexts in which reflective teaching practices take place play a critical role in shaping them.
5. Evidence is crucial in reflective teaching practices.
6. Dialogue is essential in developing reflective teaching practices.
7. Reflective teaching practices are about making judgments at a particular place in time. (p. 45)

Ashwin et al.'s (2015) reasons for teacher reflection on the progress of their own professional development—though not directed at integrating technology in education—provide a structured basis by which an instructor can account for change (or lack thereof) in their teaching practice. The essential idea is reflective thinking about teaching is a systematic re-evaluation that underpins why teachers do what they do—namely, to improve the quality of education they deliver to enhance student learning outcomes.

Curwood (2014) traces effective professional development to epistemology—how teachers believe learning works. Since teaching online is a new medium it will require challenging pre-existing beliefs and practices long-held by instructors who learned mostly in a traditional, face-to-face mode. Critical reflection on one's practice vis-a-vis the e-learning mode of instruction and the impact that it has on the learner is an important component for professional development for effective instruction. While factoring in a teacher's values and beliefs about learning with technology is an important first step to professional development,

Curwood (2014) argues that it must also factor in the cultural learning as practiced in a specific institutional context. Defined as the process of enculturation, this approach to professional development should “entail hands-on learning with digital tools, close analysis of student work, collaboration with colleagues, and critical discussion” (p. 12).

Conclusion

The increasing demand for higher education on a global scale and the proliferation of technological affordances are reasons why e-learning in higher education can be expected to grow. The ever-changing development of communication technologies used for e-learning has implications for teacher training that will require a reassessment on how to learn with these new affordances. It also entails a revision on the role of the student and the teacher in the learning enterprise—one that is more student-centered. Sensitivity training to cultural needs can ensure that content and methodology is culturally appropriate. Professional development recognizes how collaboration and social presence contributes to affective factors which engenders open communication and group cohesion. Technological tools should be used to enhance learning outcomes and be connected to real-world tasks in order to foster deep and meaningful student engagement. Episodic assessment promotes self-directed learning, which in turn is a source of empowerment. Ongoing professional development is not only necessary for the sharing of strategies but also nurtures collegiality and motivation.

Essentially, contemporary professional development should be less technocentric as it moves more towards a consideration of how the use of technology coupled with shared values of conceptual models of learning and social practices affects the production of knowledge. Challenging teachers’ belief systems and long-held practices may make some faculty feel threatened or disengaged; therefore, wholesale changes from traditional brick-and-mortar tried-tested-and-true practices of the past should be not expected. Modernizing literacy has to be at an institutional level where all stakeholders—tenured faculty, contract lecturers, administration, and students—buy into the commitment, patience, and trust required for this kind of reform.

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