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Faculty Development for Online Teaching

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ABSTRACT

Despite dramatic increase in online education and the benefits associated with this instructional pedagogy, many challenges exist with the design and delivery of online learning. Faculty play a critical role in the process of quality online education. Yet, development opportunities for faculty are too few, often lacking a comprehensive approach needed for faculty to function optimally in the online learning environment. The interconnection among pedagogy, technology, context, students, faculty, key decision makers and administrators in higher education complicates the online teaching and learning processes. The purpose of this chapter is to address development issues related to faculty who teach online by embracing training and other critical developmental support needed to ensure success of online education. Various training and development frameworks and models are recommended as ways to prepare and support faculty to teach effectively online.

Keywords: Online Education, Online Instructional Pedagogy, Training and Development, Online Development Frameworks/Models, Technology, Learning Outcomes

INTRODUCTION

In the United States more than 6.7 million students are enrolled in at least one online course (Allen & Seaman, 2013). Of the total student enrollment in higher education, approximately 32% of students take at least one course offered in the online format. The exponential growth in online learning has been accompanied by a variety of challenges. While online learning has presented many opportunities for students, ranging from convenience, flexibility, access to education, cost reduction, and college success, many critics, including faculty, question its authenticity and value. Only 30% of academic leaders are of the perception that faculty value and accept this instructional delivery method (Allen & Seaman). Furthermore, almost 45% of instructors are of the view that preparing for, and teaching online courses, can be more time consuming. Approximately 25% rate the learning outcomes as substandard to the traditional face-to-face classroom setting (Allen & Seaman).

Massive Open Online Courses (MOOCs) are also an emerging form of online learning. Numerous universities and other public and private organizations across the world are offering MOOCs to millions of people (Margaryan, Bianco, & Littlejohn, 2015). Though it is argued that the presentation of course materials in MOOCs are highly organized, research indicates that the quality of instructional design is low (Margaryan et al.). Yet, opportunities to develop faculty for online teaching are too few and when offered are of low quality with the focus primarily on the technology and little or no

emphasis on the pedagogy of online teaching (Lane, 2013) or other supporting factors of online education. Furthermore, training is typically delivered in a face-to-face lab setting with hands-on activities rather than utilizing an online learning platform.

The mushroom in online learning as well as the cost-saving benefits to institutions has been unmatched with faculty preparation. While the above findings are valid, there are models of online training and development initiatives that can be adopted to influence online teaching and learning, as well as the perceptions of academic leaders and stakeholders. The chapter presents a comprehensive understanding of current issues, best practices, and propositions for improving the standards of online education through faculty development. Recommendations for future research are also provided.

BACKGROUND

Online education is characterized by: 1) the separation of teachers and learners which distinguishes it from face-to-face education, 2) the influence of an educational organization which distinguishes it from self-study and private tutoring, 3) the use of a computer network to present or distribute some educational content, and 4) the provision of two-way communication via a computer network so that students may benefit from communication with each other, teachers, and staff (Keegan, 1988).

The history of online education has gained momentum since the 1960s with the first computer linked virtual classroom created by the University of Illinois. This experiment enabled students to access learning resources while listening to remotely broadcasted lectures (Smarty, 2010). Since then, the growth of online education in US Colleges has created greater access to higher education, attracting many different types of learner communities. The expansion of the World Wide Web enabled countries around

the world to quickly reap the benefit of virtual education as well as access to online information. Within only a short time, large corporations embraced online employee training as a strategic action to slim their training budgets, save traveling cost and time, and minimize the loss of work time as well as software distribution costs (Pappas, 2014).

Initially online education was attractive to working adults. Today, online learning has become mainstream education for many learner communities, irrespective of age, gender, and location (Schulte, Dennis, Eskey, Taylor, & Zeng, 2012). No doubt online education created lifelong learning access to many who dreamed of higher education. With the rapid expansion of the Internet and learning technologies around the world, aspiring learners have the opportunity to earn any type and level of degree without physically traveling to a college (Smarty, 2010). Increasing access to online education for all age learners has changed the way educators and learners see the world and the way the working, teaching, and learning processes unfold. Many academic institutions invest in innovations and technological advancements to embrace the future potentials of online education, in spite of documentation of negative views of online education (Bailie, 2015; Lloyd, Byrne; McCoy, 2015; Kirp, 2003).

Developing credible and legitimate programs and formalizing the degree offerings with accreditation of online degrees have been critical concerns (Smarty, 2010). In 1999, Jones International University became a noteworthy landmark of being the first accredited online educational institution by the Higher Learning Commission and the North Central Association (Kirp, 2003). With the first accredited online degree program, many public and private universities began offering numerous online degrees. Recently, online degree offering became a lucrative business; especially for private for-profit

institutions that employ adjunct instructors from anywhere in the world without investing much to hire and train full-time instructors (Kirp, 2003). Low cost and high returns of online education have become a driving force that attracts numerous online colleges around the world, often times at the expense of high quality online programs.

In recent times, many well-established highly reputed public institutions began to experiment with online education and actively engage in a quality improvement effort as a way to secure financial sustainability through online education (Schulte et al., 2012). With this booming online education industry, several concerns related to legitimacy, purpose, and quality of education have become pressing issues of online education. Kirp (2003) raised concerns about online education as a tension between revenue generation and the mission and values of higher education. Kirp asserted that the purpose of education is to achieve public good; however, online education is often seen as market-driven in which the prime motive is to earn a higher profit. The controversy between market-driven education and public good driven education led to a rethink and redesign of online education to achieve academic excellence. Despite greater access to online education, retention and graduation rates have been dramatically low compared to face-to-face education (Haber & Mills, 2008; Kirp; Lee & Busch, 2005; Muilenberg & Berge, 2005; Seaman, 2009).

Research on online education portrays myriads of opportunities and challenges and highlights ongoing controversies of whether online learning can have similar effects as that of face-to-face learning (Schulte et al., 2012). The following section addresses several challenges that hinder the effectiveness of online education.

EXPLORING THE ISSUES OF ONLINE EDUCATION

The phenomenal growth in online learning challenges higher education institutions to ensure that online course offerings are of high quality. Many educational institutions face innumerable challenges that are worth exploring. Gaining accreditation of online programs, attracting technology savvy instructors who are willing to devote more time compared to face-to-face teaching, and enhancing the rigor and quality of degree programs and employability of online graduates are few examples of serious issues of online education. These issues are categorized and discussed in relation to university administration, faculty, students, and technology.

University Administrative Issues

There is concern about the lack of support and incentives provided by institutions to ensure quality of online teaching (Baran & Correia, 2014). Traditionally, higher education has been known to be slow moving, with change being measured in years, and sometimes decades. However, of late, external forces have combined to challenge higher education's resistance to change. These forces range from the emergence of new student population to the growth of technology and the Internet, and a continued reduction in governmental support. Additionally, these changes have caused institutions to re-examine how they function and how they interact with the outside world (Folkers, 2005). Online education has become a real expression of the changes in higher education; however, the incorporation of online education has far-reaching effects, impacting the organization structurally, financially, and culturally. These forces bring challenges to higher education and issues arise for administration as colleges and universities seek to move from the physical 'marketplace' to the virtual world of the 'marketplace' through the integration of online programs (Folkers).

The impact of online teaching efforts on personnel review processes such as faculty tenure and promotion causes strain on administration (Ferk & Judd, 2002). Issues broadly associated with scholarship and creativity that can affect a faculty member's professional development path becomes problematic for assessment. The status of online education within the higher education administrative decision making systems is of concern.

Baer (2002) cited that for-profit firms use the Internet to offer courses and degree programs in direct competition with nonprofit and government-supported colleges and universities. At the same time, many firms seek to partner with academic institutions to offer online instruction. Collaboration therefore requires partners to define responsibilities for administrative services, promotion and students' election, technology, content development, instruction, awarding of credits, and overall quality control. It therefore poses the question of whether to split the traditional faculty role of both course designer and teacher, and assign different professionals for the two functions. This becomes an issue for administration and universities. Collaborations will expand the markets for online learning but a number of difficult issues remain to be resolved (Baer). Overall, instructors are more satisfied with online teaching when the institution offers relevant support (Wasilik & Bollinger, 2009). Inadequate technical support, hardware, software, instructional design, and no recognition of the value of online teaching hinder the implementation of effective teaching of web-based courses by faculty (Pajo & Wallace, 2001).

Faculty Related Issues

Faculty members play a crucial role in building capacity and providing quality online education. The number of faculty members who teach online continue to increase as the need for online programs grow. There is an increasing demand for technology savvy faculty members. Despite emerging new job opportunities, some faculty members experience a level of unease regarding the value and authenticity of current online teaching and learning practices (Baran & Correia, 2014). Furthermore, there is a lack of faculty development programs needed to equip faculty with multiple skills essential to become effective online facilitators.

Teaching in the online learning setting requires a different skill set (Lane, 2013). Although some instructors embrace the opportunity to teach online, many resist the task. Several instructors teach their first online course without appropriate training and development, or adequate preparation time needed to execute the course effectively. These instructors complete online course preparation in the exact manner as if they were teaching a face-to-face course. The preparation and actual teaching is done with little or no rethinking of prior classroom beliefs and assumptions nor teaching philosophy (McQuiggan, 2012). As faculty members make this transition, they neither rethink nor reconstruct their attitudes and beliefs about how they teach and how students learn in the online setting. Adapting to the new roles and skills helps faculty to adapt more easily to teaching online (Baran & Correia; 2014).

Research has also shown that faculty with experience teaching online show very little concern for: lack of student interaction with him/herself and other students, not being able to change or quickly adapt to the new environment, lack of technological skills, not achieving course outcomes, lack of training, inadequate time to monitor course,

and the overall course quality (Hunt et al., 2014). On the contrary, inexperienced online instructors will more easily admit and show concern for the lack of interaction with students, lack of online pedagogical skills, and the need to observe others teaching in an online setting (Hunt et al.).

People Skills

Teaching is a complex exchange between the instructor and student. Therefore, instructor understanding of demographic and psychographic characteristics of learners is arguably central to facilitating effective instruction (Bigge & Shermis, 1992; Knowles, Holton, & Swanson, 2005) even in the online setting. Researchers point out several relevant theories of learning such as stimulus-response and behavioral theories, cognitive development theories (Bigge & Shermis), and Bandura's (1973) social learning theory as critical to developing collaborative team skills and learning. In today's diverse global economy, people skills has become a critical skill for almost all learners to navigate successfully in the workplace. Incorporating people skills into course design is needed to create online virtual groups with projects assigned to support student learning in real-life to meet the course learning objectives and team learning competencies (Kasl, Marsick, & Dechant, 1997; Ubell, 2010). An experimental project using Google Doc as a way to enhance collaborative writing found that students were able to utilize new technology to work in groups and produce authentic assignments (Gautreau et al., 2012). Another example utilized video conferencing technology to guide students and found that the integration of multi-media instructions would enhance learner engagement.

The ongoing controversies of how to instill people skills in an online learning environment not only applies to students but also creates a need for instructors to master

multiple skills to guide learners to develop learner abilities to meet global workplace needs. Therefore, ongoing concerns to ensure the comparability of quality online education with face-to-face learning and how to customize online education to better support the learners of all generations are noteworthy aspects that need methodological solutions.

Student Related Issues

During the last three decades, online universities have been trying their maximum effort to increase retention and student learning. Furthermore, the authenticity of learning, the degree of student engagement in learning, measuring student learning outcomes, and practical application of learning have become serious concerns.

It is important to explore key variables such as learner characteristics, technical capabilities, attitude towards online learning, time management skills, graduation rates, and employability to assess the effectiveness of online learning. The primary goal of educational institutions is to prepare students for a global workplace that requires a higher level of technical, conceptual, and interpersonal skills to perform and integrate systemic capabilities to real-life situations (Robbins, Coulter, Sidani, & Jamali, 2015). To curtail some of the predominant inter-generational issues, it is important to reduce the differences in expectations between the instructor and student, minimize the gap of technology competencies, and learning styles (Gibson, 2009).

Online learners can be classified as multigenerational and highly diverse; therefore learner attitudes, desires, expectations, learning, and technology capabilities are also varied. Accommodating multigenerational learners who have varying levels of learning abilities and different expectations in an online format has been noted as a

daunting task for instructors (Andert & Alexakis, 2015). However, generational differences and uneven technology skill levels in an online classroom as well as varying learner abilities at times prompt instructors to focus more on technology, rather than content and teaching complex conceptual and subject-specific content. Hence, instructors need to develop multiple expertise (Bailie, 2015) to manage diverse learning habits and capabilities, subject and content specific expertise, and solving technology related issues simultaneously. Instructors who have multiple skills and knowledge to manage such challenges are rare. To remedy this vacuum of essential technology expertise, many universities employ technology experts to pre-design and develop the course shells that include content knowledge, assessments, discussion boards and rubrics. Often, online tests are also preset and students can self-administer tests on a weekly basis with automatic grading linked directly to the grade book. A predetermined course shell is often mismatched with instructor expertise leaving instructors disconnected and disengaged with students because there is not much flexibility to incorporate instructor expertise to day-to-day student learning into an already fixed course format.

There is a growing concern about the attrition rate of students enrolled in online courses. While research indicates that students need to exercise higher levels of discipline and self-motivation when taking online courses, a major factor that contributes to student dropout rates is the lack of teacher presence where students feel physically and psychologically distant and isolated from the instructor. For some students, these feelings of isolation and disconnectedness result in withdrawal, poor performance, and failure (Bowers & Kumar, 2015), raising many questions on the effectiveness and quality of online teaching.

Researchers raise questions such as - how can students apply technology and extract its greatest advantages for the global and virtual realities? How can they gain real-life expertise? Can instructors use learning tools and techniques such as group projects, field experiments, internships, study abroad programs and in-class discussions as similar to a face-to-face learning (Lloyd, Byrne, & McCoy, 2012)? How can students select a project and carry out extensive investigations to gain a deeper understanding and how can they effectively build virtual teams to provide deeper learning and peer learning (Andert & Alexakis, 2015)? To answer these questions, more experiments and new instructor training models are needed, as well as, flexible course modalities that can instill and utilize multiple expertise of both instructors and students.

Technology Related Issues

Successful integration of technology in online teaching depends on accessibility, availability, and the extent to which it is embraced and utilized by faculty. Learning Management Systems (LMSs) are Internet based technologies that support and facilitate online teaching and learning processes (Fathema, Shannon, & Ross, 2015). Some of the most widely used LMS platforms include Moodle, Blackboard, Desire2Learn, Angel Learning, Canvas By Instructure, and Pearson LearningStudio. Gautreau (2011) defined LMS as a “self-contained webpage with embedded instructional tools that permit faculty to organize academic content and engage students in their learning” (p. 2). Students can become engaged through features such as online group chats, discussions, PowerPoints, lecture materials, readings, videos, assessments/assignments, and grading, which together support teaching and learning. However, the educational content, technological resources, and interaction possibilities that LMS platforms now provide are more

complex. Although higher education institutions invest significantly in utilizing LMSs, these systems are not optimized by faculty (Fathema et al., 2015).

With the rapid growth in online learning, LMSs have become indispensable in higher education. Approximately 99% of universities own a LMS, however, an estimate of 50% of faculty use these systems frequently. Furthermore, the majority of faculty members do not employ the LMS's most advanced capacities and features that will potentially enhance student learning.

Lack of training (Pajo & Wallace, 2001; Pandra & Mishra, 2001), knowledge, skills, role models, and time are perceived by faculty as significant personal barriers for teaching in the electronic learning environment. Faculty also display attitudinal barriers, such as, no faith in technology, unwillingness to work with technology, and lack of concern about student access (Pajo & Wallace).

Faculty members are more inclined to teach online when there is a personal interest to use technology and where there is sufficient provision for technology infrastructure (Pandra & Mishra, 2007). A study (Fathema, et al., 2015) revealed that system quality had significant positive effect on perceived ease of use and perceived usefulness of LMS. This suggests that quality issues of the LMS are important for faculty. Examples of quality issues are functions, content, navigation speed, and interaction capabilities. Faculty use of technology was also significantly related to their perceived self-efficacy, which indicates that “faculty members with higher self-efficacy find LMS useful and easy to use comparative to faculty members with lower self-efficacy. In other words, faculty members who are confident about their LMS skills perceive LMS as a useful technology and experience lower complexity using it”

(Fathema et al., p. 226). Faculty members are more likely to develop positive attitude using LMS if there is adequate guidance, personal/group assistance, and/or specialized instructions (Fathema et al.). Matching technology and organizational concerns with student and faculty concerns are complex yet an important task to gain advantages of online education.

With so many issues related to online teaching and learning, new approaches to course development and improvement must be considered (Swan, Day, Bogle, & Matthews, 2014) to meet the increase in demand for online course offerings and to enhance the online learning process. In the following section, a description of the formats of training opportunities for faculty is provided. Also, recommendations are offered using various models and frameworks as development opportunities for faculty to improve the quality of online education. To more fully improve faculty performance in the online environment requires active involvement and support of university administrators and faculty, adequate provision of technology needed to facilitate learning, student input, along with faculty willingness and enthusiasm.

SOLUTIONS AND RECOMMENDATIONS

Faculty development is essential to the quality of online learning (Meyer & Murrell, 2014). The quality of online programs is positively related to how development approaches respond to the needs of faculty who teach online. Development initiatives play a crucial role in assisting faculty to “adopt online pedagogical practices and reconstruct their teacher persona in an online environment” (Baran & Correia, 2014, p. 96) for successful implementation of online learning. Development programs aid faculty to “engage in pedagogical problem solving and discovery about online teaching” (Kreber

& Kanuka, 2006, p. 122). Though there are few development models for online instruction utilized by some institutions, there remains a great need for development initiatives to prepare instructors to teach in the online environment (McQuiggan, 2012).

From a thorough review of the literature, Meyer and Murrell (2014) found that development opportunities for online teaching occur in various formats ranging from a one-day or multiple-day workshop or seminar to a semester-long course, or a multi-semester training initiative. These opportunities can be offered face-to-face, for example in a computer lab to provide learners the tools to practice their new skills. Development opportunities can also be offered online as modules, courses, or webinars. These undertakings can be offered in one-on-one setting, small or large groups, and also across multiple institutions. A faculty development expert or a team of development experts, or an advanced faculty member of online teaching often orchestrates the training. One of the most frequent training activities is the design and development of an online course (Meyer & Murrell, 2014). Other popular types of training offered are focused on the LMS, consultation with instructional design experts, peer training, peer or expert review of a designed course (Herman, 2012).

Meyer and Murrell (2014) in the findings from the review of the literature indicated the similarity of training content, often focusing on tools such as wikis, blogs, podcasts, mobile technologies, and social networking programs. Training also has a focus on pedagogy related to developing an online community, for example, through discussions, the implementation of active learning strategies, problem-based learning, and experiential learning. Depending on the extent to which the course may have already been developed, training content may also be inclusive of determining objectives,

identifying and/or modifying online resources or materials, and designing assessments of learning (Meyer & Murrell).

The needs of online learners who come with varying technology skills require integration of multi-level technology in course design and learning activities. This requires universities to utilize multiple instructional design models to assimilate and expand the application of learning through creative learning activities. Integrating multimedia projects have been tested and found positive results in improved learner engagement. For example, video conferencing, use of YouTube as an instructional delivery method, email, and phone communications are some of the methods experimented. However, the use of multi-media has its own advantages as well as disadvantages as not all learners have the access and expertise to use them. Below, various models and frameworks representing development opportunities for faculty are elaborated on as ways to enhance online learning and teaching.

Nested Professional Network for Online Teaching

Baran and Correia (2014) viewed online teaching as a complicated interaction among personal, pedagogical, contextual, and organizational factors in higher education, and as a result, proposed a nested professional development framework for online teaching. This framework is comprised of support needed at three levels: 1) teaching, 2) community, and 3) organizational factors. Together, the interchange of these factors, contribute to successful online teaching. Drawing from Baran and Correia's framework, a description of each level is provided below.

Support at the Teaching Level

Support at the teaching level encompasses technological, pedagogical, and design

and development support. Technological support is central to accomplishing the goals and outcomes of online teaching. Faculty members need as much assistance with the technological platform, especially in the earlier or transitional stages of online teaching. According to Baran and Correia (2014), faculty members should be guided based on their level of technical proficiency as they explore and use the new features. Faculty should be provided training to ensure they know how to structure their course in the LMS, “make the technologies work, trouble shoot when problems arise, and help students with technology issues” (p. 98).

In addition to technology-focused training, it is important that faculty gain assistance with appropriate pedagogy for the online environment. A thorough knowledge of the various technologies needed for specific pedagogical tasks (e.g. promoting student interaction and collaboration) will help faculty to more effectively achieve student-learning outcomes. Faculty members also need support to design and develop online courses. This support is offered through more formal training or workshop initiatives to equip faculty with skills to design and evaluate course content. These workshops help faculty to increase interest in online teaching, boost confidence levels and accomplish online goals (Baran & Correia, 2014).

Support at the Community Level

Baran and Correia (2014) also encouraged support for faculty at the community level, which includes communities of practice and peer support. Community support is vital to alleviate the intellectual and social isolation of faculty who teach online and to create a network of faculty who teach online to encourage interaction about the rewards and challenges of online teaching as well as to promote collegiality. There is a need to

promote collaborative professional communities. Research provides evidence that faculty members who belong to social networking groups adapt more easily to teaching in the online setting (Barab, Correia, & Thompson, 2013). “Building community around online teaching can be further fostered through annual conferences and meetings in which different stakeholders share ideas about online education” (Baran & Correia, 2014, p. 99).

Peer support is another method that can be utilized to develop faculty who teach online. This is usually done primarily through mentoring programs where more experienced faculty are paired with faculty who are new to online teaching (Baran & Correia, 2014; Schmidh, Tschida, & Hodge, 2016). Peer observation, has been incorporated into professional development programs and is another technique to guide and support faculty through the online teaching experience. Through observation in the online environment, peers can provide feedback, make recommendations, and share success stories on best practices and how to improve as an online instructor (Baran & Correia, 2014).

Support at the Organizational Level

It is crucial to have full support for online learning from administrators and key decision makers in higher education. Engendering a culture that promotes learning in the online environment is important to achieve the goals of online learning. Support at the organizational level is an important motivational factor for faculty members’ sustained commitment to online teaching (Cook, Ley, Crawford, & Warner, 2009). Faculty can be recognized through rewards and incentives for the increased workload and extra effort associated with adapting to and learning new technology and pedagogies of online teaching (Herman, 2012; Samarawickrema & Stacey, 2007). Recognition from

administrators on the value of online teaching will motivate faculty to teach and develop quality courses for the online environment (Baran & Correia, 2014). Baran and Correia's professional development framework "recognizes successful online teaching in higher education as an outcome of the interaction of support activities at teaching, community, and organizational levels" (p. 96).

Quality Matters

Quality Matters (QM) is a US quality benchmarking and certification program designed to ensure quality design in online and blended courses (Swan et al., 2014). QM has gained widespread interest and more than 700 institutions (Roehrs, Wang, & Kendrick, 2013) and is a highly regarded tool of quality assurance for online learning and has been endorsed by reputable consortiums such as Sloan-C (Mercer, 2014). A rigorous review process, along with research-based rubrics on best practices and instructional design principles are used to assess the design of an online course (Mercer). "QM is grounded in an instructional design view of higher education and assumes that effective learning in higher education flows from well-specified outcomes, objectives, and assessments" (Swan et al., 2014, p. 74). The instructional design of the course influences effective online teaching (Roehrs, et al., 2013).

Swan et al. (2014) described QM as a framework that addresses the design and development of the course and not the implementation process. As a faculty-centered peer review process (Roehrs et al., 2014), QM utilizes a rubric, which consists of 41 items in eight instructional design principles: course overview, learner objectives, assessment and measurement, resources and materials, learner engagement, course technology, learner support, and accessibility (Swan et al., 2014). There are 13 essential

core standards in the rubric to emphasize the concept of alignment, which means “course objectives would drive the development of learning and assessment activities, and selection of course materials and course technology” (Roehrs et al., para 5). Typically, three reviewers work collaboratively to decide if each item meets the requirements. Reviewers are faculty members who are trained and certified to assess the design of online courses. On review of a course, suggestions are made for improvements in the form of scores on a rubric and written recommendations for change (Roehrs et al.; Swan et al.). Items within categories are assessed using point values of 1, 2, or 3 on a meet/does not meet basis. Courses must satisfy the 3-point criteria assigned to each standard and obtain at least 72 points to achieve certification. After the instructor addresses the feedback, the course is resubmitted for approval. When all expectations are met, the course is then QM certified.

In addition to fulfilling the requirements of the QM rubric, the instructor also provides “additional information on course expectations, technology used, delivery methods for material, audio/visual components, weekly iteration by students with instructor and each other, and level of email usage for communication” (Swan et al., 2014, p. 74). This supplementary information, along with the QM rubric allows reviewers to provide a more robust and accurate evaluation to the instructor. Faculty members can be trained to use the QM rubric to be able to review and improve their courses (Roehrs et al., 2013). More faculty members should commit to redesigning courses to meet the QM standards to enhance online learning outcomes.

Program for Online Teaching

Program for Online Teaching (POT) Certificate Class is an online training model

designed to prepare faculty for online teaching. This model, offered in an open environment with participants from across the globe, emphasizes multiple methods of online instructional techniques, facilitated by a group of trained faculty. In addition to the group of faculty instructors, the POT Certificate Class also has volunteer mentors from within the current class and previous classes (Lane, 2013). Using this team based approach not only gives faculty needed support but also builds self-efficacy that can aid in the effective design and delivery of quality online courses (Horvitz, Beach, Anderson & Xia, 2014). The POT model allows faculty the experience to be an online learner while learning to design and develop an online course and provides the opportunity to utilize web resources, mobile technologies, and other essential online learning tools. Altogether this helps to build a learning community among the faculty as they learn; a vital component of all online courses. Successful participation in this program results in certification (Lane).

Community of Inquiry

There is also the Community of Inquiry (CoI) framework that can be used by students to evaluate the presence of faculty instructing an online course. While QM and other training opportunities address the design of the course, CoI focuses on the learning processes from a constructivist perspective (Swan, et al., 2014). The CoI framework is built on the premise that learning in the online environment is supported by three presences – social presence, teaching presence, and cognitive presence. Together, these three presences work to reinforce deep and meaningful learning online. Through a survey, the students' perceptions on each presence can be measured (Swan, Richardson, Ice, Garrison, Cleveland-Innes, & Arbaugh, 2008). Although this is a subjective measure

of online teaching, faculty can continually improve on teaching and learning in the online environment based on feedback from students through use of the CoI survey.

FUTURE RESEARCH DIRECTIONS

Despite abundant research publications, experimental projects of various pedagogical models and technologies that provide a greater understanding of the benefits of online education, there is still room for future research. Online education though has six decades old history, all stockholders are still uncertain about what exact pedagogical models, delivery modes, and technological expertise can improve the quality and effectiveness of learning to enhance learner expertise that matches the needs of a changing global workplace. There is a huge gap of testing various pedagogical models to learn what models can bring equal or higher learning impact compared to face-to-face learner-centered educational models. Changing technology has created many challenges (Lloyd, Byrne, & McCoy, 2015). Constant research to learn which technological aspects and tools can bring more viable effective and engaging learning environment is still needed.

There are many unanswered research questions. How can educators and educational institutions get accustomed to and develop expertise so quickly to meet the speed of change in technology and user experience; are there specific technological tools and methodologies that all stakeholders such as learners, educators, administrators, investors and general society can benefit from? Selection of technology and learning platforms can be a daunting decision for many educational administrators. From a profitability perspective, investing in rapidly changing technology can be a serious

concern because it requires constant updates of institutional technologies to provide training to faculty. Integrating emerging technology to content design is another critical aspect that needs more research. The rate at which the majority of faculty members who teach in the face-to-face classroom environment can switch gears to learn new online pedagogical models have been discussed as a serious consideration. Faculty time management and fulfilling their other related job responsibilities need to be further explored.

Due to the opportunity to attract all aged learners who have different levels of technology expertise, selecting the best matched pedagogical models need constant research and requires testing with different learner and teacher communities. There are enormous opportunities for future research to learn how to make the opportunities in real life situations. More research from different stakeholder perspectives are warranted.

CONCLUSION

According to Allen and Seaman (2011), online instruction in post-secondary education continues to grow in popularity and so does the demand for effective teaching strategies using this mode of delivery (Durrington, Berryhill & Swafford, 2006; Tabatabaei, Schrottner, & Reichgelt, 2006). Since there is very little or no face-to-face interaction, it is important for online instructors to establish their presence in the course. This can be accomplished by communicating with students on a regular basis, sharing course content, and building a sense of community within the class (Palloff & Pratt, 2003). Exemplary practices of faculty who teach online courses need to master competencies such as knowing and creating the course content, designing and structuring the online course, knowing the students, enhancing teacher-student relationships, guiding

student learning, evaluating online courses, and maintaining teacher presence to create highly interactive learning environment (Baran, Correia, & Thompson, 2013). Creating a culture that promotes learning in the online environment as well as full support of educational institutions, peers, and other key stakeholders is also essential for the success of online learning and teaching.

An in-depth understanding of online instructional pedagogy and the use of technology, along with the support of key university administrators and peers, and the integration of student feedback, will contribute to faculty effectiveness and robustness of online education as well as improve the outcomes of online learning. Consequently, the successful implementation of training and development initiatives will help to change the perceptions of academic and industry leaders, faculty, students, and all stakeholders to recognize the value and credibility of online education.

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KEY TERMS AND DEFINITIONS

Community of Inquiry: A framework used by students to evaluate the presence of faculty instructing an online course (Swan et al., 2014)

Learning Management System: A self-contained webpage with embedded instructional tools that permit faculty to organize academic content and engage students in their learning (Gautreau, 2011)

Learning Outcomes: Observable, measurable behaviors that are a consequence of online instruction (Simonson et al., 2012)

Nested professional Development Network of Online Teaching: A framework that recognizes successful online teaching in higher education as an outcome of the interaction of support activities at teaching, community, and organizational levels (Baran & Correia, 2014)

Online Education: Characterized by: 1) the separation of teachers and learners which distinguishes it from face-to-face education, 2) the influence of an educational organization which distinguishes it from self-study and private tutoring, 3) the use of a computer network to present or distribute some educational content, and 4) the provision

of two-way communication via a computer network so that students may benefit from communication with each other, teachers, and staff (Keegan, 1988).

Program for Online Teaching: An online training model designed to prepare faculty for online teaching. Facilitated by a group of trained faculty, this model emphasizes multiple methods of online instructional techniques and is offered in an open environment with participants from across the globe (Lane, 2013)

Quality Matters: A US quality benchmarking and certification program designed to ensure quality design in online and blended courses (Swan et al., 2014)