

Challenges and Research in Distance Education

Journal Analysis Report

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Introduction

Evolving technology and emerging research continuously impact how distance and distributed education is practiced. Only through inspection of the most relevant research can a picture of improved methods and techniques be presented. The peer-reviewed journal *Distance Education* was analyzed to provide a summary of emerging issues, challenges and opportunities when using technology for training, instruction and learning. This journal's review covers research from 2011 through 2012.

Four main issues emerged from this analysis. The first issue identified is the competency of online educators and their development. What skills and competencies do online educators require? Secondly is the preparation and readiness of learners in the online or distance environment. How is readiness assessed and improved? Presented next, is a review of synchronous versus asynchronous learning environments. Which environment will produce a richer learning experience? Lastly, there is an exploration into the topic of open educational resources as it relates to higher education, globalization and social inclusion. Can this emerging resource be harnessed?

Teacher Competencies

Are your instructors ready to teach in the distance or distributed environment?

Teaching in a classroom or face-to-face and teaching in an online environment present many similar challenges. Both must develop a plan to transfer knowledge to their intended learner. Both must devise ways to assess their course and the learner's knowledge. The question remains, does a good classroom teacher make a good online teacher? According to Baran, Correia & Thompson (2011), teaching in the online environment requires a new set of educator roles. The authors present a review of relevant research on the roles and competencies of the online educator. The conclusion can be drawn that the roles of the online instructor are different than that of their classroom counterpart. Goodyear proposed that the online instructor should be a "process facilitator, advisor/counselor, assessor, researcher, content facilitator, technologist, designer, and manager/administrator" (as cited in Baran et. al., 2011, p. 426).

Edwards, Perry & Janzen (2011), also propose to define the new role of the online educator. Through a study of online graduate students, the authors propose the term exemplary educator. The authors conclude there are three characteristics of an exemplary online educator, educators as challengers, educators as affirmers and educators as influencers. The challengers encourage their students to reach beyond the knowledge expressed online, thus, reaching a new level of understanding through inquiry, self-exploration and research. The affirmers attempt to recognize the knowledge and potential in their learners. Affirming a learner can lead to a heightened sense of self and belonging, consequently increasing the motivation to learn. The ability to influence a

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student is directly related to online presence and expertise of subject matter of the instructor. The most effective instructor should be one that encompasses all three qualities.

What makes an effective online educator? Edwards et. al. (2011) propose that the ability to foster an online community is key. Creating a learning community where the instructor can challenge, affirm and influence their learners. Macdonald and Paniatowska (2011) focus on staff development as a means to improve online educators and the learning they hope to attain. The authors present evidence derived from the development and implementation of an online module. The module was designed to help staff use and understand the tools available for teaching in the online environment. Through real world practice, educators were able to learn and improve their skills with educational technology. This practical approach to technology education resulted in elevated confidence when using technology in education.

One cannot assume that an effective classroom instructor will automatically make an effective online instructor. The roles and competencies are similar but in no way the same. In order to develop the skills required to effectively instruct online, there are two distinct opportunities presented in the research. The first is to develop the educator's interpersonal skills and qualities. Improving how they interact with students and develop and foster an online community of learning. The second is a practical approach. Educators benefit from real world instruction on educational technology. The result is an increased ability to navigate the latest technology and increased confidence to use it in instruction.

Learner Readiness

Are your learners ready to enter the distance education environment?

Similar to the previous issue of teaching, learning online is similar to learning in the classroom but requires an additional set of skills. In order for distance or distributed learning to be effective, the learner has to be prepared to accomplish that in the given environment. Dray, Lowenthal, Miskiewicz, Ruiz-Primo & Marczynski (2011) developed a tool to test the readiness of students for online learning. There are many current assessment tools for online education readiness. Most utilize self-assessment to gauge how the learner matches up against the ideal characteristics of the online learner. Dray et.al. (2011) attempt to take it one step further by assessing both learner characteristics and technology capabilities. The addition of a technology assessment includes not just the learner's access to technology but also gauges their comfort level with its use. This two pronged approach to assessment more wholly assesses a learner's readiness for learning in the online environment.

Phelan (2011) discusses the use of Brookfield's critical incident questionnaire as a tool for assessment in online learning. The questionnaire is introduced at predetermined occasions during the learning experience. The themes drawn from questionnaire are discussed with the learners during the learning experience. This type of assessment during instruction allows for

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immediate course correction, improved understanding or validation of instructional methods. An unexpected result of this type of assessment is an increased sense of community. The process of questioning and discussing the questionnaire contributes to the success of the instruction. The conversations between instructor and student, are in addition to the instructional activities and may promote a heightened sense of appreciation for learning through interactive activity (Phelan, 2011). Consequently, this appreciation makes them more motivated and ready for the learning experience.

In order to improve the use of technology for instruction and learning, you must assess your learner before, during and after instruction occurs. Pre-assessment should gauge whether a learner embodies favorable characteristics to be successful in the online environment and if they possess the technology capabilities to carry out the work. If deficiencies are present in either area, remediation on those skills is required to prepare the learner for meaningful learning and instruction. Assessment occurring during and after instruction can indicate whether or not the instruction was effective and if the learner was ready to learn. A bonus outcome to assessing during or after instruction is being able to gauge the learner connection to the learning community or it can make them more comfortable in it. These assessments can provide clues on how to better prepare learners or instructors for online instruction.

Synchronous versus Asynchronous Environments

Do students learn better from a synchronous or an asynchronous format?

Distance or distributed learning, with the assistance of technology, can occur synchronously or asynchronously. Synchronous learning occurs when learners and instructors are online at the same time interacting together. Tools of this type of instruction include: web conferencing, chat rooms, video conferencing and voice applications like the telephone. Asynchronous learning is the opposite and occurs without direct contact between learners and instructors. It does not require them to be online at the same time. Tools of this type of instruction include: e-mail, blogs, discussion forums, collaborative documents and social networks. There are advantages and disadvantages to each format.

Synchronous learning has the ability to connect learners from great distances. It allows learners from all over the country or world to participate as long as they have the required hardware and software. Stewart, Harlow & DeBacco (2011) found that videoconferencing promoted interaction between the instructor and students and most closely resembled face-to-face interactions. The authors offer personal interaction and real time feedback as synchronous education benefits. An obvious disadvantage of this format is scheduling. Learners and instructors have to be online at the same time to participate; it is similar to classroom instruction in this manner.

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Asynchronous learning has the benefit of not being schedule dependent. A disadvantage is it lacks the real-time feedback loop that synchronous learning affords. Nandi, Hamilton & Harland (2012) conducted a study to evaluate the interaction of asynchronous learning environments. The authors maintain that quality asynchronous interaction is possible, but depends on both the instructor and the learner. Their research shows “that rather than designing a fully student-centered or instructor-centered discussion, a combination of both approaches can be advantageous” (Nandi et. al., 2012, p. 27). They elaborate further to express that the feedback loop does not need to be in real time, it just has to be meaningful correspondence between learner and instructors.

From the research presented, it can be concluded that meaningful, deep learning is present in both environments. The decision to use synchronous or asynchronous will depend on many variables. The audience is one main concern. An assessment of the learning audience and their schedule, location and available technology is integral in the decision between synchronous versus asynchronous. The educational content is another item to consider. The knowledge, skills or attitudes being taught and the desired outcomes of learning should also be considered. Only after a full assessment of the variables, can the best method be determined.

Open Educational Resources

What are open educational resources and how can they promote learning?

Open Educational Resources (OER) as a topic is an important emerging topic. The journal *Distance Education* devoted an entire special issue to its recent research and issues. OER are free and open online resources used for the advancement of learning or instruction. They may be used by the instructor or learner without specialized licenses or permissions. A list of OER examples would not encompass the breadth of content and tools encompassed by the topic. OER can be any resource used for instruction or learning, as long as it is free and open to public use. The special issue of *Distance Education* focused on the use of OER, its barriers and possibilities.

OER presents great opportunities to broaden higher education and make it more inclusive. Conole (2012) summarizes problem of higher education’s use of OER stating, “despite the rhetoric about new social and participatory media generally and OER specifically, the reality is that their uptake and reuse in formal educational contexts has been disappointing” (p. 131). OER, in their very nature, support broad inclusion in learning opportunities. Lane (2012) echoes Conoles thoughts by stating that “only a very small proportion of higher educational institutions are involved with publishing OER” (p. 146). So, it would seem, that OER are not being used to their full potential. While OER is helpful and allows access to a few that previously did not, the opportunity to participate, it is not widely employed outside the scope of an institutions own students and faculty. It may be too early in the development of OER to address the outreach of educational opportunities beyond their own student body. Willems and Bossu (2012) promote the use of OER in higher education as a means to promote equity in educational opportunities.

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The authors go on to offer that OER has the ability to improve access and reduce the cost of higher education to a broader audience locally and globally.

OER have the ability to impact developing nations, providing educational opportunities to countries and populations that previously had no means of access. Higher education or education in general can be a means to overcome many international problems like poverty, hunger and political or social extremism. Promoting education to these developing nations and populations has the potential to improve workforce contributions globally thus improving the global economy. Richter and McPherson (2012) point out that OER must do a better job of providing context to a foreign audience. They also state the need to make OER alterable for usability by foreign audiences. They provide a list of e-learning design recommendations for broad use and reuse of OER global considerations. The themes of the recommendations are adaptability, providing better context and formulating abstracts for longer works.

How will OER influence learning? Olcott (2012) presents four issues in facing the use of OER. First is the blending of OER with institutional management structure. The nature of OER is to be free and open. How will that mesh with an institution needing to manage it and incorporate it into its structure? His second issue is the formal or informal use of OER. Will these resources be informal support systems or will they be integrated into the structure of the institution. The third issue is how to develop a sustainable business model. Do these resources, that require an investment to develop, remain free or should there be compensation structures put in place? Olcott's last issue is mobilizing the use and awareness of OER. How can it be best promoted and researched in the future?

Conclusions

Four main themes were gleaned from analyzing the past two years of the journal *Distance Education*. First is the competency of online educators and their development. Educators must have the proper skills in order to teach effectively in the online environment. There is a need to define the instructor roles and provide for the development of skills. This can be achieved through interpersonal skill development or practical instruction on the use of technology in the online environment.

Second is learner readiness for learning in the distance environment. Assessing how learners match up with the ideal characteristics of an online learner and assessing their technology competence before instruction offers the opportunity to remediate a learner before instruction occurs. Performing assessments during and after instruction provides opportunities for immediate course correction. These assessments may also allow a learners attitude towards online learning to improve therefore making them more ready for online learning in the future.

Third is the review of synchronous versus asynchronous learning. Meaningful learning can be achieved in either environment. An institution or instructor must perform an audience analysis

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to determine which method would best serve their audience. A review of the available technology should also take place, as this could be a limiting factor to either format. Finally an assessment of the content and its ideal assessment tools should be considered. The proper format will be dependent on these factors.

Fourth is the topic of open educational resources as it relates to globalization and social inclusion. OER is a relatively new idea and research is emerging. The benefits are plain to see as they promote a learner centered, collaborative environment. When learners are able to interact with each other and their instructors, learning is deeper and more meaningful. OER are easily accessible and promote educational equality. Socio-economic status, race, age, country of origin are a few of the many characteristics that can be taken out of the equation when considering access to and successful learning. The challenge moving forward is to use these resources effectively and promote their use.

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