Conclusion

ONLINE PEDAGOGY AND COURSE DESIGN BEST PRACTICES AND LESSONS LEARNED: A SUMMARY

Introduction

The researches included in this volume highlight different dimensions of principles, processes, products, challenges and opportunities of applications of pedagogy and course design for online teaching and learning. These (some of the) lessons learned from these researches can prove to be a valuable set of guidelines to anyone engaged in online course design and development.

Pedagogy

With the changing paradigms in teaching learning, we have witnessed a change in the role of teachers and learners depending upon formal education systems and open and flexible education systems. With Internet at the helm of affairs in the twenty-first century educational systems a learner is the pivot of the learning process. With education gearing up to meet the expectations of fourth industrial age revolution, a learner has a much more dynamic role in not only the learning, but in the assessment of learning too. Making provisions for reflective exercises, collaborative projects, semantic mapping, or portfolio development can easily be promoted through online technology in creating collaborative and socially inclusive instructional interventions. Not diminishing their values, however, a shift from previously dominant philosophies of behaviorism and cognitivism can be observed towards a more encompassing collaborativist and constructivist ideology.

Use of ICT in any form (simple to complex) has impacted all three modes of educational delivery: *formal* or highly structured traditional mode, *non-formal* or openly structured and flexible mode, and *informal* which is completely unstructured. The new age learner with access to internet technologies and computing devices does not remain dependent on any one mode of this educational delivery. Popularity of flipped classrooms and other avenues of learning like Khan academy, MOOCs, OER etc. have empowered learners to switch from one mode to another or going trans-mode. The transformation from industrial society to digital society and the increasing internationalization of education, globalisation and mobility of learners has created a need for anywhere anytime learning and working. The pedagogy of the digital society is collaborativist and constructivist in nature with its focus on transforming learners as creators of knowledge.

Another trend is affective domain getting prominence. Emotions play a great role towards success or failure in a task. These can be quite critical in supporting or becoming a barrier to engagement in learning. In an online learning environment, identity, values and beliefs have a direct bearing on affective learning outcomes and call for proper planning and resource management.

Learning Design

An effective learning design should consider both cognitive and affective learning outcomes, and the affective states of learners as they engage with learning. The course design decisions must include a variety of approaches to social learning design by creating collaborative and individual learning environments. The Internet has significantly expanded the demand for lifelong learning and self-regulated learning, which can be met by creating ubiquitous learning environments and can support both informal and formal education pursuit. Much of the research has established that existing instructional design models reflect the era in which they were developed, thus may not suit the demands of present-day technology or future technology trends. Keeping in view the limitations of instructional design models and to cater to the requirements of learners who are a citizen of a fast-changing technological world, infusing various models, theories, and philosophies in an instructional development by seeking the best elements of each component would compensate by creating adequate flexibility which lack in individual design models.

Designing learning as more personalized and contextualized with adequate feedback and system controls would address individual learning needs and cognitive abilities of learners in the current globalised digital era. Each learner has different learning style, learning ability, needs, background and level of preparedness. Such learner would seek the attention 'as if he/she were the only participant in the learning environment'. Flexible and adaptive learning designs for online courses based on individual learner characteristics would be an answer to this challenge. Designing instruction in a way expecting the learners to follow a common learning path would not be an ideal design as individuals have their own learning needs and cognitive and affective abilities. The adaptive learning design environments provide a personalized and differentiated path for learning that can "help students learn at a faster pace, more effectively, and with greater understanding".

We all have loved listening to stories since our childhood. Telling story is an art. In an online learning or an environment where learners do not see instructors face to face or directly, telling stories is a powerful tool. Digital storytelling is an art of presenting content with a variety of multimedia, formally or informally, written with feelings and in first person, provides a unique perspective and experience to the learners.

Content

Content is considered to be the King in e-learning (Mishra & Sharma, 2007, p. 335). Barbour (2007) described several principles that course developers should follow when designing online content for adolescent learners and one of them is "to keep the navigation simple and to a minimum, but don't present the material the same way in every lesson" (p. 102). Within a broad design template, providing some flexibility in structuring content would allow creativity to enhance a particular subject area. Another important consideration is to only use multimedia when it enhances the content and not simply because it is available.

Social Media for Learning

Social media is an effective educational tool towards knowledge construction and social learning. It allows the users to create content in digital sphere, therefore contributes to improving relationships and dialogue between peers while promoting resources that foster collaboration and develop communication skills. Modern LMSs have provisions for features for promoting social learning, however, research has indicated that teachers and learners use other tools too like WhatsApp, WeChat, Twitter, Blogs, Facebook etc. in addition to access to resources in the LMS. They have been reported to be more user-friendly and convenient to communicate. Social media gives flexibility and freedom of expression to those learners too who feel shy in participating in class.

Technology

Innovations in technological applications have enabled learning designers to re-engineer course design practices. Adaptive learning, simulation technologies, social learning, mobile learning, cybernetics, gamification, and augmented and virtual reality are some significant trends, which call for designing learning activities making use of new types of pedagogies, such as collaborativism, problem-based learning, learning communities, virtual learning spaces, and more. Thus we need to think how devices, applications and platforms will talk to each other for delivering instruction effectively. Important factor here is not to use the technology for the sake of keeping students busy. Technology should be integrated to enhance learning, if it does not enhance learning, there is no need to use it. Further, we need to be sure which technology will work best in a given setting. One best practice found is to use 'everyday technology with which students are familiar (their phones and digital devices) in targeted ways that enhance, not reduce, the amount of time and quality interaction with content material.' In online learning settings, learners communicate in multilingual and intercultural environments, therefore to develop new forms of learning and competencies the technology integration in pedagogy should go beyond a tool-based orientation.

Learning Management Systems

Learning management systems offer a lot of resources, tools and activities for designers like fostering communication with the help of chat, forums, blogs, messaging, comments, tags, feedback, quizzes etc; various media integration like images, audio, video, HTML5 or CSS and much more depending upon features of LMS. For successful teaching is effective online facilitation of the learners. That can be achieved by regularly posting messages and encouraging learners to share their thoughts, questions, observations, and feedback etc. One of the challenge in online facilitation reported is poor responses and participation in online discussions. Teacher's active presence in such discussions is crucial. Some sort of reward system of kudos can be a motivation for learners to get involved positively.

Standards

Tracking learning content and experiences and to find if learning is actually happening is one of the main concerns and a growing trend. From SCORM based content to applications of xAPI, content can be designed in such a way that offers insights into strengths and weaknesses of course delivery.

Competencies

Competencies of teachers and learners play a significant role in successful realization of learning outcomes, be it online or conventional learning environments. However, in case of online courses, proper initiation and then sustaining it is very crucial because drop-out rate may depend on it. The purpose here is to make learning less individualistic and more community-based. As noted above, effective online facilitation is one of them. A good teacher must have the 'ability to carry conversations from the surface to a deeper and more meaningful level for the students'. An online teacher must be able to identify at-risk learners and keep a track of individual learners. Being with the learners in their online journey from start till end of course and encouraging learners to take charge of their learning is a best practice reported. As noted in one chapter of this book, 'the behavior of the teacher vis-à-vis the student leaders can either empower or dis-empower them, and the behavior of the professor when conflict erupts can empower or dis-empower students.' Poor online facilitation may lead to other repercussions, among some, student isolation, lack of participation in online learning community and poor development of learning skills.

Another best practice is to have a tech specialist to support faculty course developers for providing adequate help for things like Flash animations, Java scripted routines, HTML5, plug-ins or xAPI statements etc. Continuous training in multimedia presentation tools, asynchronous communication tools, LMS, and Web 2.0 technologies (i.e. blogs, wikis, content creation tools) is a must.

Outcomes-based education and competency-based learning are emerging movements where learning designers need to focus seriously. A proper set of rules and metrics to assess development of competencies and what has been learned is essential in designing online courses.

Feedback

In conventional classrooms, the feedback is direct, in-person and real-time and can be either to an individual or to whole class. In case of online courses, where feedback is asynchronous is a practice, the lack of auditory, visual or social cues can pose challenges to the teacher. The intention of feedback offered by the teacher may be misunderstood by the student, which may result into a feeling of isolation. For successful learning in online courses, serious focus on feedback is a must. Personalized, specific, and timely feeback has been reported to be most helpful. It is a good idea to acknowledge the presence of learners in an online class through personalized, specific and timely comments or communications. These could be clarifying assignments, sorting out administrative issues for their course, or understanding a particular concept. Affective and motivational feedback builds strong bonds between teacher and students.

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