

The Pedagogy of Technology – Our Next Frontier?

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ISETA has been working for years to provide alternatives to the lecture and to advance the cause of student centered learning. Today, technology is advertised as advancing the frontier of student centered learning. Technology is being adopted as a solution to student centered learning at a rapid pace. The term “technology” includes a broad range of systems from in-class technologies to those used to build distance learning systems. Is technology providing what it advertises? The question to be asked when evaluating the use of technology is: will the desired learning modes be satisfied? If not, what is the impact of technology on the learning? What are the upper and lower limits on learning to have an effective learning experience? Finally, when does the pedagogy fail to support the use of technology and student learning? (Lloyd). It is important to remember that “what improves learning is well designed instruction.” (ANTA) This is the case without regard to the methodology.

Pedagogy is “the science or profession of teaching; also, the theory or the teaching how to teach” (Funk & Wagnall). Pedagogy therefore, can be considered the study of the profession of teaching. It is the development of the learning environment and the practice of methods that provide that learning environment. The practice of good teaching has been the subject of many books and countless articles. One such article was the *AAHE Bulletin* that contained the “Seven Principles of Good Practice in Undergraduate Education” (Chickering). “The seven practices are:

1. Good Practice Encourages Contacts Between Students.
2. Good Practice Develops Reciprocity and Cooperation Among Students and Faculty.
3. Good Practice Uses Active Learning Techniques.
4. Good Practice Gives Prompt Feedback.
5. Good Practice Emphasizes Time on Task.
6. Good Practice Communicates High Expectations.
7. Good Practice Respects Diverse Talents and Ways of Learning.” (Chickering)

Armed with these and some fundamental presentation and interpersonal skills a professor is on the way to being a master. So why worry about technology?

Unfortunately, in the current economic environment on most campuses there is a drive to “Write Once – Distribute Everywhere” (Lloyd). There is a drive to use technology to assist in the delivery of course materials, to increase enrollments and to reduce costs. Where are we in the development of the pedagogy to support this new learning “methodology”? An answer is that “we first use new technology in old ways.” (Gillespie). It is common that as the new technologies are introduced to use them the old way. Notes are converted to overhead slides, slides to PowerPoint, and PowerPoint is placed on the computer to form the basis of distance education. No more old yellowed paper notes but - the same old material. The same material developed for one medium is presented via a new medium.

The new medium can be any level of technology; however, distance education may require the most study because of the lack of contact between students and teachers, learners and facilitators. In “Implementing the Seven Principles, Technology as Lever”, it is clear from the beginning that technology is a tool. “Faculty members who already work with students in ways consistent with the Principles need to be tough-minded about the software- and technology- assisted interactions they create and buy into. They need to eschew materials that are simply didactic, and search instead for those that are interactive, problem oriented, relevant to real world issues, and that evoke student motivation.” (Chickering). Student motivation is one of the most important factors to academic success. Poorly developed instruction can reduce motivation. So, is it the technology or the professor that causes this loss of motivation? Essentially it is the lack of pedagogy: an instructor problem.

The Australian National Training Authority (ANTA) indicates that technology is coming before pedagogy: “The value of any technology for education is proportional to the needs for that technology to realise educational objectives. We are constantly reminded that learning must be developed around learning needs, meeting educational objectives and producing viable graduates. However, at this stage of development, the effort put into exploring technologies to ‘keep at the cutting edge’ is at the expense of equal investment in the underpinning educational design.” Further, there is an argument that repackaging of lecture handouts to satisfy technological media is not the type of redevelopment necessary to effectively use the technology. Development requires knowledge of best practices and a sincere effort to make the distance event like the classroom on campus. “Teachers who are applying good instructional design principles to online learning are likely to have been the ones who have always done so regardless of the medium” (ANTA).

So, how does this impact ISETA? Should it impact ISETA? Pedagogy is “the science or profession of teaching; also, the theory or the teaching how to teach.” (Funk & Wagnall). It is important that the pedagogy is included in instructional design and that professors spend the time to learn about the medium and develop the pedagogy rather than repackage the old yellow notes. Good teachers teach well regardless of medium. Good teachers investigate the pedagogy of the medium and work to ensure that learning is being accomplished. The best practice can be a lever with the use of technology. Technology is a tool, not the solution to learning. The pedagogy of teaching with technology is lagging behind the technology. It is important that pedagogy and technology be developed together to ensure the maximum learning experience is available to students. ISETA has been impacting pedagogy for years. It may be time to impact this new teaching method by being part of the solution: The developers of pedagogy that makes technology a better teaching and learning vehicle.

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