

EMERGING PEDAGOGICAL TRENDS TRANSFORMING TEACHING AND LEARNING

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New demands of a knowledge-based society, new student expectations and recent developments in digital technologies are motivating innovative university and college faculty and instructors to re-think pedagogy and teaching methods. As faculty and instructors become more familiar with digital technologies for teaching and learning, pedagogical challenges and strategies are emerging. The recent developments are blended or hybrid learning, collaborative approaches to the construction of knowledge, use of multimedia and open education resources, ‘any size’ learning, new forms of assessment and self-directed and non-formal online learning. Three trends that will shape the future of curriculum are digital delivery, interest-driven and development of practical skills. Teaching and learning is thus alive and well in our colleges and universities and there are a great many innovations and new approaches being taken.

1. Blended learning

Until recently, there was a clear dichotomy between classroom-based teaching, often supplemented by technologies, a learning management system, and digital resources, and fully online teaching, in which the entire course is provided online.

Now there is a much closer integration of classroom and online teaching under the generic term of blended or hybrid learning, where classroom time is reduced but not eliminated, with the rest of the time being used for online learning.

Successful blended teaching and learning require a focus on what may best be done on campus, such as face-to-face interaction between students and instructors, and what may best be done online, such as providing flexibility and wide access to resources and experts. This requires a re-thinking of classroom layouts as more interaction takes place, involving the students, instructors, and outside experts who participate in-person or virtually. Teaching models for both classroom and online delivery need to be re-considered and re-calibrated in response to new technological capacities.

2. Collaborative approaches to the construction of knowledge/building communities of practice

From the early days of online learning, there has been an emphasis on enabling learners to construct knowledge through questioning, discussion, the analysis of resources from multiple sources, and instructor feedback. Social media have encouraged the development of communities of practice, where students share experiences, discuss theories and challenges, and learn from each other. The professor is no longer responsible for delivering all of the knowledge or even all of the sources for learning – but maintains a critical role as guide, facilitator, and assessor of the learning. Some institutions have now created course blogs and wikis that encourage contributions and reflections from the wider public, to accompany formal courses that are 'private' to enrolled students, thus opening up courses to external expertise, and providing students with important contacts and networks outside the institution.

Most professors would not have experienced learning, much less teaching, in such collaborative environments, especially when facilitated through technology. It requires a re-consideration of roles, authority, and how learning is achieved and measured.

3. Use of multimedia and open education resources

Digital media, YouTube videos, and open educational resources (OERs) in the form of short lectures, animations, simulations, or virtual worlds enable professors and students to access and apply knowledge in a wide variety of ways. OERs help students who have never fully mastered key concepts or techniques, or have forgotten them. They provide an alternative route for students who struggle to keep up in classroom lectures. They also appeal to an increasingly large group of learners who are just interested, but don't want to enroll in, a formal course or program. Instructors can incorporate them into their course designs. Even text books are changing. The electronic texts are accessible via mobile smart phones, tablets, e-readers and other mobile devices. Balancing the use of multimedia and open educational resources with professor-delivered content raises issues of course ownership and of measurable learning outcomes.

4. Increased learner control, choice, and independence

Students can now access content, free of charge, from multiple sources via the Internet. They can choose alternative interpretations, areas of interest, and even sources of accreditation. Students have tools, such as smart phones and video cameras that can collect digital examples and

data that can be edited, stored and used in student work. Learners within any single 'class' are likely to have multiple needs. Within the framework of the learning objectives, more flexible approaches to content choice, delivery, assessment, and other factors are emerging. Equally important is the development of learners taking responsibility for their own learning, and approaching this as a skill to be taught and developed.

This approach challenges the instructor to move away from selecting and transmitting information in large blocks or chunks, such as a one hour lecture, to guiding students to find, analyze, evaluate, and apply information that is relevant to a particular subject domain. This 'relevance' becomes more negotiated between instructor and student. Indeed, the term 'instructor' becomes misleading in this context, as the role moves more to that of facilitator with less control over *where* and *how* learning takes place, and often entering into negotiation over exactly *what* the content is.

5. Anywhere, anytime, any size learning

The development of 'any size' learning can be seen in the creation of smaller modules. There is growing demand from learners for short, 'just in time, just for me' learning modules that fit an immediate learning need. The creation and aggregation of these modules for credit requires reconsideration of course structure and the crediting of learning that is not equivalent to a full course completion. In the evolving world of open access to learning, students who successfully complete such modules may be awarded 'badges', with the possibility of credit being transferred at a later time into a more formal program.

Mobile learning, with smart phones, tablets and other devices, is the basis of the anywhere, anytime learning provided through online learning. Offering content, quizzes, multimedia resources, and connections among learners using mobile devices requires a new look at course design, content packaging, and a consideration of limitations of data packages.

6. New forms of assessment

Digital learning can leave a permanent 'trace' in the form of student contributions to online discussion and e-portfolios of work through the collection, storing and assessment of a student's multimedia online activities. Peer assessment involves students in the review of each other's work, providing useful feedback that may be used in revision of documents and a better understanding of issues. Learning analytics are being developed to make this tracking of student learning as

demonstrated through their digital activities easier and more scalable. Such analytical feedback to students can be continuous throughout a course, resulting in early diagnostics that enable learners to focus on areas of weakness before a final assessment.

7. Self-directed and non-formal online learning

Recent developments such as massive open online courses (MOOCs) provide many more potential learners with support and encouragement for self-directed or non-formal learning. The availability of free open educational resources combined with social networking enables large numbers of learners to access knowledge without the necessity for meeting institutional prior admission requirements, following a set course, or having a personal instructor. Computerized marking and peer discussion and assessment provide learners with support and feedback on their learning.

Three Trends That Will Shape the Future of Curriculum

1. *Digital delivery:*

No longer shackled to books as their only source of content, educators and students are going online to find reliable, valuable, and up-to-the-minute information.

The [open-source movement](#) has further pushed online content to include learners and educators in the actual content-creating process. Wikipedia was one of the first open-source sites, and though many still question the accuracy of Wikipedia entries (note the [2005 study](#) showed that the popular website is as reliable as Encyclopedia Britannica), there's a movement afoot to make it a more trusted source.

Following in the steps of Wikipedia – and the collaborative world of Web 2.0 — a growing proliferation of open-source sites aimed at education have [sprouted up over the past few years](#). Various sites offer their own expert-written, vetted content. But more importantly, they allow educators and students to add, edit, and change the order of all the information on those sites according to their own needs.

2. *Interest-driven*

Though students typically have to wait until their third year of college to choose what they learn, the idea of education being tailored to students' own interests is becoming more commonplace. Whether it's through Japanese manga art, [Lady Gaga](#), or [the sport of curling](#), the idea is to grab students [where their interests lie](#) and build the curriculum around it. Every learner

counts. The idea of learner-centered education might not be new — [research from the 1990s shows](#) that students’ interests is directly correlated to their achievement. But a growing movement is being propelled by the explosive growth in individualized learning technology that could feed it and we’re starting to see the outlines of how it could seep into the world of formal education. “The better way is to motivate each student to learn through his or her passion. Passion drives people to learn (and perform) far beyond their, and our expectations. And whatever is learned through the motivation of passion is rarely if ever forgotten,” writes Marc Prensky in his book

3. Skills

Eleven years into the 21st century, the buzz words “21st century skills” are being thrown around in describing what needs to be taught in schools: real-world readiness. Things like [collaboration, innovation, critical thinking, and communication](#) are thought to be important because they’re practical skills that can be used in the world outside the confines of school. “One thing is certain,” writes [Will Richardson](#) in the comprehensive tome *21st Century Skills: Rethinking How Students Learn*: although schools may continue to fundamentally look and act as they have for more than one hundred years, the way individuals learn has already been forever changed. Instead of learning from others who have the credentials to ‘teach’ in this new networked world, we learn with others whom we seek (and who seek us) on our own and with whom we often share nothing more than a passion for knowing.”

Conclusion

Teaching and learning is alive and well in our colleges and universities and there are a great many innovations and new approaches being taken. More students than ever are studying at the college and university level and more students are finding ways to leverage peer networks, social networks, and technology to enhance their learning. Innovative pedagogy is alive and well. What holds widespread adoption of innovative pedagogy back is the lack of a requirement for training for college and university faculty in the art and science of teaching, the lack of investment in support for faculty for innovation, and the lack of collaborative sharing networks linked to disciplines of study. We could do much more to advance the new pedagogy by being better ourselves at faculty engagement, deep learning about teaching and learning, and the smart use of technology to support this agenda.

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