



Learning Commons

Communities of Inquiry 

The Research University and e-Learning

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The impact of information technology on the research university will likely be profound, rapid, and discontinuous...
(Preparing for the Revolution, 2002)

The Internet has changed everything, including institutions of higher education

In 1969, the Internet had a rather modest and unassuming military and academic origin. Three decades later, the Internet has evolved into an unstructured network of millions of computers that has impacted the lives of millions of people around the world.

The saying "the Internet has changed everything" could not ring more true than in higher education. Institutions of higher education that once coveted professors as prized purveyors of information have had to acknowledge that much of this information is often easily accessed through the Internet. In turn, institutions of higher education have had to adapt accordingly to reshape the role of the professor to something other than solely a dispenser of information.

Can e-learning realize the quality standards of a research university?

In many cases, the integration of Internet technologies have enhanced classroom learning by bringing teachers and students together online, resulting in not only removing barriers to access, but also facilitating learning communities. The remarkable growth and development of information and communication technologies used in the learning process, typically referred to as 'e-learning', is not only likely to continue, but will accelerate for several more decades. This has forced universities to rethink existing approaches to the delivery of learning activities. It is becoming increasingly apparent that a quality learning experience can be socially situated in a virtual space. That is, a highly interactive critical community of inquiry can be created and supported online with a choice of communication modes. But, can e-learning realize the quality standards of a research university?

This is a difficult question that is worthy of our attention. To begin with, it is increasingly apparent that students and society are becoming disenchanted with passive lectures that emphasize content dissemination and information assimilation. Leaders in higher education have long recognized that engaging and active inquiry learning approaches are core attributes of a research university. Opportunities must be provided where students are required to assume greater responsibility in the process of constructing meaning within a community of inquiry, and where critical and creative learning skills are further developed.

It is also becoming evident that new and emerging information and communication technologies have, and will continue to have, an increasingly profound effect on how we communicate and think. There will continue to be a demand, and a requirement, that universities develop e-learning applications in order to enhance the quality of teaching and learning. We cannot simply claim that it is not our business. Information and communication technologies are pervading all forms of instruction – including the traditional lecture – and most often for the better. Perhaps more importantly, however, is that the role of research universities should not be to simply 'keep up-to-date' with new technologies; rather, research universities should be leaders in the use of new technologies within the learning process, with a focus on understanding the changing needs of learners and society. Research universities must position themselves to recognize, adapt, and become leaders of the changes that will occur in the next decade.

It is no secret that virtually every major research university is adopting, or seriously considering adopting, blended forms of learning (the combination of both face-to-face and technology-mediated learning experiences). Technology has irrevocably transformed both the teaching and research conditions of universities.

The impact of disruptive technologies in higher education learning experiences

Information and communication technologies will have an intense, immediate and disruptive impact on existing university teaching and learning. We are seeing the early signs of these changes with the successful prototyping of blended learning designs.

Blended approaches capitalize upon the unique properties of communication media such as spontaneous verbal, reflective written, or visually rich communication. The thoughtful and intelligent blending of face-to-face and technology-mediated learning draws on the strengths of both, resulting in more effective and efficient learning transactions than what each can offer independently. In particular, blended approaches provide a realistic means for universities to better address the dialectical values they profess. Reflective Internet, text-based discussions and inquiry complement spontaneous verbal classroom discourse and lectures very well. In this way, blended approaches combine the strengths of each medium to provide a quality enhanced educational experience. Moreover, there is the real potential of significantly reducing space and time constraints that exist in most research universities. If done well, this represents both an academic and financial win.

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Is e-learning a good fit for the research university?

Mandate issues for research universities are not trivial concerns. Mandates translate into how universities approach teaching and learning, the importance of a scholarly culture, and the integration of research. However, not yet well understood is how information and communication technologies are impacting certain learning outcomes – such as the ability to critically assess information, think and communicate using Internet technologies. In light of all this, the central question for a research university remains: How will research universities fulfill their mission and vision in the 21st century with the imposition of information and communication technologies, and the increasing pervasiveness of e-learning?

At present, information and communication technologies have not yet had a significant impact on the vision and mission at the University of Calgary because the adoption of e-learning has been modest. The most optimistic data suggests that, at best, only a third of our students have benefited from a course management system (e.g., Blackboard). This is in contrast to many North American universities that have near 100% online presence for all courses. It is

likely, however, that the University of Calgary will soon see greater adoption of e-learning approaches within the next year or two.

The changes that we will experience at the University of Calgary will likely be related to the use of the Internet as a tool for inquiry. When faculty structure course content for their e-learning courses and use the Internet as a tool of inquiry, they are no longer the sole provider and/or source of content. Inquiry must include accessing and assessing information from diverse sources if universities expect to develop information literate and critical thinkers. While we all must be skeptical of technology, we also have an obligation to openly consider the properties and possibilities of information and communication technologies to enhance the effectiveness and efficiency of the educational enterprise consistent with the values, mission and culture of higher educational institutions.

Universities must continually assess technological opportunities and challenges in terms of research and teaching. This must start with, but also go beyond, awareness raising and making recommendations. We must commit to a vision and action, but be prepared to be flexible and adjust as new developments and insights arise.

E-learning goes beyond access to information. The true value of e-learning is to fundamentally restructure our thinking and approaches to the learning process. The following is an articulation of the crucial elements to position the research university for the inevitable and profound changes in the next decade.

1. Articulate an institutional vision
2. Communicate support of senior administration
3. Develop an action plan
4. Provide sufficient resources and seed funding
5. Focus first on enhanced effectiveness
6. Construct successful prototypes
7. Provide central faculty development, support and coordination
8. Continuously assess and apply lessons learned

Both e-learning's future and demise has been greatly exaggerated. However, a recent survey by a major publisher found that 83% of U.S. and Canadian higher education faculty believe web-based technology is "a key contributor to success and plan to spend more time integrating web-based tools into teaching and course delivery" (Technology and Student Success). Moreover, in the same study, 91% of faculties consider the web extremely important in course preparation. Many of us sense that we are on the cusp of profound changes in the next decade, but we are at a loss how to position ourselves for this transformation. This is a crucial time for the research university and procrastination and inaction is a dangerous course (Preparing for the Revolution, 2002). Without a clear vision, there is enormous resistance to any change.

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