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*One day, people will learn through electronic circuits.*

Marshall McLuhan, 1965

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A few years after having made an educational film in 1911, Thomas Edison proclaimed: “Books will soon be obsolete in schools [...] It is possible to teach every branch of human knowledge with the motion picture” (1913)<sup>1</sup>. Since Edison’s promise to revolutionize teaching through films, the integration of technologies in higher education has encountered many transformations and developments: the use of the telephone, television, video, computer, as well as information and communication technologies (ICTs).

However, since the early 1980’s when, for the only time in its history, *Time Magazine* altered its annual practice of naming a “Person of the Year,” choosing instead to name a “Machine of the Year,” the computer and the Internet have known an ever increasing popularity within higher education. In introducing the theme, *Time Magazine* publisher John A. Meyers wrote, “Several human candidates might have represented 1982, but none symbolized the past year more richly, or will be viewed by history as more significant, than a machine: the computer.” Today, ICTs, capable of enabling universal access to knowledge, hold a power and reach that not even Edison could have imagined. ICTs simultaneously combine text, image, sound, interactivity and programming.

They can also “record” and transmit worldwide. The information society, promised in the 1970’s, praised in the 1980’s and looked upon in the 1990’s with a combination of respect, fear and a sense of disbelief has become an obvious reality in the 21st century (Government of Canada, 2000).

Already a few years ago, the “*Conférence des recteurs et des principaux des universités du Québec*” (CREPUQ) emphasized the fact that universities were evolving within a context of change in terms of the relationship to knowledge and were entering full force into the maelström of numerical information, computers and the Internet. For CREPUQ (1999), this technological revolution brings with it countless advantages that universities can and must value while accomplishing their fundamental mission of education and research. Indeed, the integration and judicious use of ICTs would allow the field of higher education as a whole to grow by enabling collaboration, improving research environments and contributing to intellectual production conditions in a significant manner.

In retrospect, it appears that the terms used to describe the coming together of computers and higher education have mirrored the aims of education. The first

term used was computer-assisted instruction, then computer-based education, after that, technology based education and, later, the integration of ICTs in education. At the present time, while they enable access to resources which, in the past, were difficult to obtain, ICTs also facilitate the sharing of knowledge. Whereas it used to be grounded upon a theory of knowledge dissemination, the use of computers and ICTs in higher education is now faced with knowledge navigation<sup>2</sup>.

An evolution in terminology has also taken place with regard to distance education: on-line courses, “Web-based” courses and, more recently, open and distance learning. As a matter of fact, open and distance learning reflects the new pedagogical focus in higher education. Undeniably, while the individualization of teaching constituted the ultimate objective of distance education, university pedagogy now seems more centered upon learning through networks and the building of learning communities.

Beyond the discourse asserting the “intrinsic virtues” of ICTs in terms of learning, the coming together of technologies and higher education is emerging as an independent field of research, requiring specific scientific study, probing and analysis. At

the university level, there are a variety of contexts in which technologies are integrated that have not – yet – scientifically and systematically proven themselves to be effective. Experiences are varied and numerous. For example, some focus on in-class teaching supported by ICTs, others examine hybrid courses in which learning is achieved both in class and through distance education, and there are those that look at courses that are given entirely at a distance without any face-to-face professor-student contact. Despite the overwhelming presence of technologies in universities and the constant increase of pilot projects focusing on teaching with ICTs, there are still both many unanswered questions on their true effectiveness (see for example Ruano-Borbalan, 2001; and Zhao & Frank, 2003), and very few sound and empirical studies (Ungerleider, 2002) or well-documented and rigorous experiments.

Among the numerous projects of the editorial board of the Prof&TIC Web site<sup>3</sup> of CREPUQ, it was decided to create the *International Journal of Technologies in Higher Education*. This journal is a collective and pioneering initiative of Quebec universities. Its international scientific committee is composed of members from numerous North American, South American, European and African countries. Its purpose is to serve as a forum for the exchange of information on the current use and applications of technology in higher education. The scope of the *Journal* covers online courseware experiences and evaluation with technology, critical perspectives, research papers and brief reviews of the literature. The *Journal* will also disclose a number of well-documented pedagogical and technological approaches and present interdisciplinary expertise and diverse university experiences.

The creation of this journal is a response to three major concerns expressed by a

group of professors, researchers and consultants who work in Quebec universities. First, the *Journal* aims to answer the needs of scientific dissemination of experiments and pedagogical practices dealing with the integration of ICTs in higher learning. It appears increasingly indispensable, in Quebec but also in Canada and the French speaking world at large, to publish a scientific journal dealing with information and communication technologies in higher education which publishes only peer-reviewed articles.

The *Journal* also emerged from the need to promote teaching *per se* in the university culture. A large number of professors, lecturers and other university educators are reluctant to innovate and integrate ICTs in their teaching practices, not because they lack technical knowledge or belief in the educational value of technologies, but rather because such efforts are little recognized, if at all, by their institutions of higher learning. Indeed, in many universities today it appears that greater academic acknowledgment and rewards are associated with research performance (i.e., grants and publications) and very little, if any, recognition is accorded to the value of innovative quality teaching.

Lastly, the publication of this scientific journal is a way of rising above the simplistic discourse on the integration of ICTs in higher education. In order that all students may, in the long run, benefit from better instruction, universities must call upon a wide range of possibilities offered to them by new technologies as well as open and distance learning. However, if we want to progress beyond the exploratory phase of using technology in higher learning, we must centre and structure efforts to integrate ICTs based on scientific research results and well-documented pilot projects. The Advisory board of directors of the *Journal* thus intends to make the techno-pedagogical connection more wide-spread in higher education, as it is still too uncommon and tenuous.

Do the new information and communication technologies truly contribute to the improvement of higher education and to the democratization of fundamental knowledge? What do ICTs allow us to do in terms of higher learning? In university education, have technologies become a compulsory link to knowledge? Can ICTs increase the possibility that a greater number of people will have access to higher education? Are ICTs truly effective in university pedagogy? Does open and distance learning have a future? These are but a few of the many questions that the *International Journal of Technologies in Higher Education* will attempt to answer through the articles published. ▀

Happy reading!

## References

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## Notes

- 1 <http://www.earthstation1.com/homepage.html>
- 2 Some institutions such as the University of Michigan maintain knowledge navigation centers for their students (<http://www.lib.umich.edu/knc/>)
- 3 <http://www.profetic.org>