Technology and the Future of Higher Education

Moderator:
Tom Abeles
President, Sagacity Learning Universe, Inc.
3704 11th Ave. South, Minneapolis, MN 55407  USA.
Email: tabeles@ibm.net

Summarizer:
Doroteia Pita
Department of Education, University of Madeira
Campus da Penteada, 9000 Funchal, Portugal
Email: teia@dragoeiro.uma.pt

Discussion Schedule
Discussion: 19 - 28 Apr. 99
Summing up: 29 - 30 Apr. 99

Pre-discussion paper

What is the future of higher education? Is the university of reason and culture, the institution of Kant and von Humboldt becoming the university of excellence? Are we becoming a global, wired, set of institutions with no geographic boundaries and courses which are exchangeable like spark plugs in a car? Are we concerned about competencies and skills? Are we concerned about values and, if so, whose?

Will we see standard courses from mathematics to philosophy presented by professional actors with scripts verified by scholars and production by Disney studios with distribution by major publishers? Will we see liaisons of institutions with employers on one side and secondary institutions on the other?

Corporate universities, private for-profit institutions, public institutions, private non-profit universities and other mixes yet to be seen are here and on the horizon. Emphasis on teaching rather than research as hiring criteria, research driven institutes, and alternative structures for employment are emerging or changing.

All of these call for different approaches for creating and delivering content. Up to the present time, most developers of software and hardware for The Academy have looked at traditional courses and how to translate them into various delivery vehicles. Capital and human resources are being committed to mapping the traditional institution into an electronic world. Does the future of the university require a different approach and, if so, what?

Some questions:

1) what are the emerging rolls for the faculty in the traditional undergraduate institution?

2) what will the competition look like for delivering content and certification?

3) what will the university look like as the evolution occurs?

4) What will the fate be for the physical campus? What will a virtual institution look like?

5) What will the structure of the virtual campus? Will the groundskeeper be the webmaster? Will the university own or lease space and talent? Will it own courses?

6) What is the time frame for this evolution?
Post-discussion summary

The discussion on Technology and the Future of Higher Education started with the presentation by the moderator of the pre-discussion paper. During the first days of the discussion, the ideas put forward in the forum followed two different paths: a more optimistic view of the future and a more cautious one. The former asserted that education had a lot to gain from a greater impact of technology and privatisation. The latter rose the question of possible loss to education if technology became its fulcrum.

The forum agreed that presently two consequences of the impact of technology on higher education were already visible. On one hand, new and different organisations (global, virtual, private, etc.) establishing themselves and offering their products; on the other hand, traditional state funded higher education being forced to change and focus on the learner and learning.

Relevance of the discussion

The relevance of discussing the future versus looking at the past in order to make present decisions was an issue touched upon in the discussion and Bob Leamnson’s «prediction» for the next decades showed how, in these times of rapid change, the past-present-future concepts sometimes become blurred. Many on-site institutions have already begun, in more or less desperate or imaginative ways, to change. As Tom Abeles also put it, when referring to his image of the university as a giant box of Leggo’s: «this is not the future, this is here today». Muwafig al-Ruweili asked for similar predictions for the underdeveloped world, to which M. Atilla Oner answered that «Probably the same with some delay which will vary from one country to another». Thus, the pace and paths of change vary greatly, both in time and from place to place. The relevance of the discussion lies not merely in trying to guess the future, but as an attempt to better the present and to avoid future pitfalls.

Technology

Technology is forcing change on the roles and models of higher education. Some members of the forum raised the controversial issue of the possible damaging effects of technology on education. One of the conclusions reached is that technology is not to blame, but the ways in which it is used. The fact that technology may damage instead of improving education implies that there is still a lot to be done in exploring paths for the successful integration of technology in educational contexts. «The learning effectiveness of different channels and combinations of channels seems to depend even more on how the channels are used, and for whom, than the particular channels themselves» (Jens J. Hansen quoting Wilbur Schramm). Moreover, fear for the outcomes of technology has always been present in times of great changes. Ken Myers pointed out that «Perhaps Socrates felt that nothing short of personal contact was a valid learning environment». Mireille de Moura quoted a dialogue between Socrates and Phaedrus, from Plato’s Phaedrus, in which Socrates condemned writing, and ironically concluded, «So Socrates condemned the negative aspects of technology.... But Plato recorded his words!». Other reasons may account for fear of technology. Ken Myers referred that «No longer can educators hide behind theories, supposition, speculation, opinion or any other comfort zone».

New educational models have and will be created as an answer to the fact that «People are demanding effective ways of learning through technology and someone is going to deliver that solution and address their needs» (Ken Myers). The way is open for new forms of delivering education. For instance, «In a number of virtual institutions the courses are deconstructed -texts, lectures, lessons and other materials are prepared by a team. The delivery or work with students is in the hands of others and the evaluation is in the hands of a third» (Tom Abeles). In this new context, «the poor ways of “teaching” or “educating” or “training” will have to adapt to this new Bob Leamnson’s question «Will extraordinary skill in accessing information lead to wisdom–an ability to make some sense of it all–or to “information sickness?”» probes on the issue of what can be done to lessen the disadvantages of technology and enhance its advantages.

Content versus the Learner

In the article abstract from Educause, quoted by Arun-Kumar Tripathi, the following is written regarding IT training: «most of today's online course designs focus on cutting-edge technology and the quality of course content, without providing a supportive environment for the student». This issue of «content» versus «learner», one of the many discussed by the forum, was pointed as a very important aspect of the integration of technology in education. A lot has to be done in this area, so as to ensure that new models of teaching and learning are indeed successful. The fact of neglecting «the learning process» results in that «teaching becomes less effective when the focus is on the teacher and on the technology» (William Klemm). However, on the other hand, «Technology has forced teachers to focus more on the quality of their curriculum and on learners needs» (Cheryl Diemeyer).
The annotated slide show http://www.cvm.tamu.edu/wklemm/EdTechnol/index.html was referred to as an instance of how to evolve towards «encouraging students to be more active learners through collaborative, Wiliam Klemm). Both teachers and students have to explore these alternative ways of teaching and learning «The problem we face is the difficulty the students are experiencing in shifting from the "passive behavior they are used to (forced to!) show in other classes” to the "active behaviour in my class”… (M. Atilla Oner).

Catherine Burke reminded the forum that «the necessary requirements of accessing this brave new world include something more basic than the slowest or the fastest bits and pieces of technology». Also that «around one in every four adults in this country currently experience mild to severe difficulties in their ability to read». That instead of «proclaiming educational technology as one of the answers...something far more radical is required to release future generations from the dreadful condition of illiteracy in a modern post-industrial world».

The role of faculty
One issue raised concerning the future of higher education was the role of faculty, particularly the traditional model role of the «masters». Two different perspectives were raised: whether education will continue centralised around «masters», «not limited as to when and where they teach and for whom» (Tom Abeles) or whether it will evolve towards «new forms of collective work and collaboration» (George Free).

The former perspective materialised in on-line learning would recall what was a normal practice in last century Edinburgh, where «students would pay to hear a particular lecturer. The better speakers drew the biggest crowds Chidwick). Another situation is described in a paper by Murray Turoff «where he develops the economics of a university where all the faculty are masters, supported by a staff to put virtual space in place for these masters» (Tom Abeles). Maybe «what will disappear or be levelized in the education system is the role of most faculty who will see their positions significantly changed to respond to george's perception» (Tom Abeles).

Accreditation and Value
The accreditation and value of courses was also discussed. The moderator of the forum presented a possible scenario: that of universities giving credit and using privately produced distance experiences («Let us suppose that I had a very large catalogue of distance experiences») of a separation «into a non-credit learning portion and a separate for-credit certification element» (Tom Abeles). Lora Kaisler described her organisation (IMSA) as one experience, which corresponds to the scenario for education presented by the moderator. Besides accreditation, value is also an issue: «...there are fully accredited institutions offering fully accredited degrees via distance learning right now. However, the value attached to these off-site degrees doesn't seem to be as great as the value attached to an on-site degree» (Fred Nickols).

Conclusion
All in all the forum expects that higher education will offer a much wider set of possibilities, which will attempt to cover the new needs of learning in the information age. The range of choice will be characterised by a greater diversity, from the campus-based to the on-line organisation. Thus, many different models are possible, in terms of content, delivery, and aims.

Related Articles or Internet sites
From Arun-Kumar Tripathi
http://www.nap.edu/readingroom/books/BeFIT - “Being Fluent with Information Technology» (book) and announcements at http://www2.nas.edu/whatsnew/29a.html

http://www.educause.edu/ir/library/html/cem9918.html - “Preparing for a very different future” (an interview with Prof. Molly Broad)

http://web.uccs.edu/aale/concept7.htm#top - Association to Advance Lifetime Education (conference)

From Lora Kaisler
http://www.imsa.edu/center/ - Professional development and research (organisation)

From William Klemm
http://www.cvm.tamu.edu/wklemm/EdTechnol/index.html - Annotated slide show on collaborative, constructivist learning activities.