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Online Education as a Source of Innovation in the Age of Globalization: Prospects for Applicability to the Universities

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Abstract

Technology will greatly expand access to higher education and fundamentally change the models of education with which we are familiar. In particular, technology will enable education that is learner-centric, individualized, and interactive, making education far more relevant to the needs of individuals. It will allow for anytime, anyplace learning, which will be particularly attractive to working adults, and it will enable true lifelong learning in a formal sense. These new forms of educational delivery will require new ways to measure and credential learning. Ministry of Education, together with industry leaders, need to actively support the new learning paradigms for them to take root and flourish.

1. Introduction

Higher education can no longer be viewed as merely a campus-based event for individuals ages 18 to 25 before they enter the world of work. Technology is driving the demand for new forms of higher education because the pace of change in the workplace is requiring adults to be constantly retrained.

Education, and associated credentials certifying learning, will increasingly be required on an ongoing basis as our workplace evolves with ever-increasing change. Technology will also provide us with alternate forms of postsecondary education delivery that will better meet the ongoing education needs of working adults.

Online education in postsecondary education affords the opportunity to create a learning environment that is learner-centric, individualized, and interactive. Specifically, online education enables us for the first time to put knowledge and learning within reach of all those who have access, at the time and place where such knowledge is needed. Internet-based education offers the potential of thousands of classes on hundreds of subjects available anytime night or day, at any place, at the convenience of the student. Although postsecondary education has been both place-bound and time-bound, we now adults ready to enter the world of work.

Technology will impact, to some degree, our traditional campuses and students. Universities will teach technology use and will have ongoing requirements to have the latest technology available. Professors will increasingly require students to use the Internet for research and supplemental information and sometimes for communication and collaboration. Some universities will develop a "brick-and click" approach by offering a combination of classroom courses, online courses, and hybrid courses that combine online teaching with classroom discussion, as well as offering online courses through their continuing education departments to reach out to other learners.

However, the use of technology does not change the fundamental distinctions between our traditional educational system and the new models of online learning. Those distinctions are in the role of the student, the role of faculty, and the role of the institution. Most institutions, especially educational institutions, have difficulty in reinventing roles, so it is likely that new institutions will take the leadership role in online learning. The new models of online education serve different functions than our traditional universities. Fundamentally, online education is more applicable to lifelong learning than to education as an event, and it is more applicable to working adults than to students just out of high school.

2. Traditional Education versus Online Education Based Models.

The South Korea has the finest postsecondary education system in the world, and the research and service contributions of our universities are an important component of our free and innovative society. There is significant evidence that research universities have positive economic effects in their communities.

Campus-based universities and colleges also serve as an important "transition point" for young people graduating from high school, who are not yet prepared to enter the workforce and serve as fully participating citizens. The social aspects of the campus experience are important elements of learning at this stage of life, though they receive no credit or grade. The model of our

existing universities and colleges is based on the idea that postsecondary education is an opportunity, generally for 18- to 25-year-olds, to dedicate several years to learning and preparation to become fully functioning time jobs, families, and a good idea of the additional education they need. They have little patience to sit through long lectures of information that may or may not be relevant.

These students are able to take responsibility to define the learning that is important to them, and they will be demanding consumers of educational content. Many of these individuals simply cannot participate in formal education that is place or time specific. They require the anytime, anywhere learning afforded by online education.

2.1 Role of the Institution

Our universities and colleges are set up to define the learning that is required. They do this through required courses, prerequisites, and a specified number of credit hours. They also do this at the course level, with each professor deciding what he or she will teach in a given semester. Institutions certify learning by having professors assign grades to student performance and by counting credit hours completed toward a degree. Generally, an institution certifies only the learning that is done there, with some provision for the transfer of credits from elsewhere. In online learning, learning experiences may be from anywhere, not only from other universities and colleges but also from personal study or corporate training and work experience. The role of institutions will be to certify learning regardless of where it is done. This will change the institutional role from mandating classes and credit hours to developing measurements of knowledge and skills.

3. Challenges for Online Education in Postsecondary Education

The potential of online learning cannot be realized without addressing some significant challenges.

3.1 Quality of Instruction

The quality of instruction is paramount. Many of the current online courses are of very poor quality; amounting to little more than professors putting their lecture notes online, enable the maximum sharing of content. At the same time, if states are funding online course development at state universities and colleges, they should be insisting that these courses be used across the state, and perhaps shared among states, rather than the same courses being developed at each state institution.

3.2 Sharing of Courses

Developing high-quality online courses is expensive. A typical development team would include, at a minimum, an instructional designer, a subject-matter expert, a graphic artist, a programmer, and an editor. Although faculty members are often the ones tasked with putting courses online, few if any of them have all of these skills. A few universities are organizing to support faculty development efforts, but this is not widespread, partly because of the high cost of doing so. The only way for institutions to afford the cost of high-quality course materials is to amortize the cost over many students by sharing courses. The current model is for every institution to develop its own set of online courses. The idea of sharing courses in many ways goes against the tradition of our universities as individual silos of learning where faculty design their own classes, there is a precedent in the use of nationally published textbooks.

3.3 Intellectual Property Rights

The concept of sharing online content, in the form of courses or simply individual learning objects, raises the issue of intellectual property rights. The issue is most often framed as to whether the faculty or the institution owns the course, but the issue is more complex. Developing high-quality online courses is beyond the capability of most faculties. It requires the skills of a team and the corresponding investment, and the challenge is to have adequate incentives for faculty, other team members, and the institution to participate in the development and wide distribution of online courses. The revenue-sharing model is more important than the ownership question, but both must be addressed to learning is directed by the individual and not by an institution, and if that learning is unique to each individual and may be accomplished either through formal classes, by independent study, through work experiences, or in other ways, then the measuring and credentialing of that learning become critical. Perhaps the most important impact of the Internet on education is that it transfers authority from learning institutions to individuals. This trend, at least for adult learners, will lead to some surprising consequences.

- Individualized education will lead to individualized accreditation or certification of learning achieved.
- There will be a greatly increased need for, and acceptance of, competency based certifications rather than traditional grades on transcripts. Historically, universities have held the position that “the only learning that counts is the learning you do here.”

Learning is measured in credit hours, and the degree of learning is measured by attendance, class work, assignments, and tests, which are created and assessed by instructors and reflected in grades.

Although this system will continue to be used with traditional campus-based students, it is inappropriate for the new models of online learning. Where learning may have been done anywhere, and in a variety of ways, the measurement of learning will move to measuring outputs—what one knows and can do—rather than activity.

- In the end, if students can define, obtain, and validate their own learning, and employers find the validation reliable, then the meaning and value of a college degree is redefined. Although accredited universities and colleges largely control access to higher education today because they control the credentialing of learning, the higher education landscape of the future will be more open with different kinds of acceptable credentials and different forms of

important because these tools will be key to all kinds of learning.

- *Support financial aid eligibility rules to support study in qualified e-learning programs.* To promote online learning, local education department can advocate for changes to two of credit based educational system policies. The first is the "12 hour" rule, which says a student must be enrolled for 12 credits. The other is the "50 percent" rule, which says if more than half of an institution's instruction is conducted "at a distance" the institution is ineligible for national financial aid. The Republic of Kazakhstan's Ministry of Education is currently involved in a demonstration program to explore changes to these and other rules to facilitate online learning, and states should actively support these changes.

- *Recommend that local education institute and industry tuition reimbursement provisions include e-learning*. States should actively utilize e-learning for the ongoing training and development of state employees. Local institute should also include and even encourage e-learning solutions in their requests for proposals for workforce development programs.

- *Support the development and acceptance of alternative measures for assuring quality education.* Historically, both government and industry have relied on traditional accreditation for assuring quality in education. As a result, only courses from accredited institutions are eligible for tuition reimbursement, accreditation is a requirement for national financial aid, and accreditation is a requirement to bid on many government education and training jobs.

Both government and industry need to measure quality by measuring the knowledge and skills acquired by their employees; such measurements will enable new and innovative programs, as well as technologies, to demonstrate their practical worth without a lengthy formal accreditation process. Republic of Kazakhstan need new processes to license alternative providers that can demonstrate the effectiveness of their programs, rather than leaving this task have the opportunity to truly have anytime, anyplace learning. Although the source of knowledge and learning has traditionally been the professor, knowledge and learning is now available over the Internet.

3.4 Completion Rates and Collaboration

The major challenges to distance education are low student completion rates and the lack of collaboration one would experience in a campus environment with both faculty and other students. However, Internet-based education can potentially address both of these issues. Collaboration over the Internet, using chat rooms, threaded discussion groups, message boards, and other tools, may be even richer than the interactions on campus. Increased collaboration leads to a sense of a learning community, and as a result, higher completion rates. The addition of faculty mentors to work with and encourage students has a further positive effect on completion rates. Nevertheless, these elements of e-learning are not present in many models and require thoughtful implementation.

4. New Models for Assuring Quality

Postsecondary education has long been self-regulated, through regional accrediting bodies, and more recently, through various national accrediting groups. Accreditation is required for national financial aid, for government and corporate tuition reimbursement, and generally to attract students to institutions of higher education. Traditionally, accreditation has looked at the quality of institutions and the qualifications of their people and processes. More frequently, quality assurance processes are beginning to assess the quality of learning at an institution.

Although institutional quality assurance is moving toward recognition of skills and knowledge obtained, technology-based education will enable learning to take place in many ways and many places outside of traditional higher education institutions. If accreditation and validation of learning.

In addition to calling for new models of assuring quality and credentialing learning, peoples who are responsible for education technology can help articulate the need for swifter quality assurance processes. Regional accreditation is typically a five- to seven-year process, which is a huge barrier to entry for new participants in the education market. Even after accreditation, new degrees must be individually approved, which can take three to six months after the degree is developed.

Although appropriate in past societies of limited change, the slow pace of traditional accreditation is not responsive to the New Economy requirements for education. For example, because of changes in technology, many programs of technology instruction have an effective life of only two to three years. Essentially, new programs in postsecondary education must circumvent traditional accreditation, as is the case with the burgeoning demand for technology certifications.

5. Implications for Regional Educational Policy

Ministry of education and industry leaders should support online education as an alternative to traditional campus-based education, particularly for working adults, but also for rural students who may be unable to attend a traditional college or university. Online education has the potential to make a significant difference in workforce development and economic competitiveness. To make this happen, ministry of education can take the following actions.

- *Ensure that Internet access is widely available*. This includes ensuring access to computers and infrastructure (wires) among those who might otherwise not have such access. It also includes giving all individuals the basic knowledge to use the access provided. Knowledge of computers and the Internet is essential in the New Economy, but this knowledge is made exponentially more

to traditional accrediting processes.

- *Shift public postsecondary education funds from institutions to individuals.* While continuing support for existing local universities and colleges, Ministry of education should carefully assess the need for more campus buildings in a learning environment that may increasingly be online. Over time, the funding of higher education should shift to financial support of individuals rather than institutions. Financial support will then flow to educational providers that best meet student needs, encouraging and increasing competition in higher education and empowering students to choose learning experiences that are most relevant to them.

Conclusion

This paper has tried to apply the concept of online education in postsecondary education and solve some potential problems in online distance education that hinder knowledge creation and sharing among the members of an online learning community. It has argued that the major problem in online distance education is potentially can lead to the lack of face-to-face contact and the issues of trust, which make collaboration in an online learning community less efficient.

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