Distance Learning Issues in Higher Education

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Abstract

This paper compares traditional vs. distance learning after examining the academic literature affecting distance learning in higher education. The review centers on the following issues: (1) viability of distance higher education by age grouping; (2) evaluation of types of distance higher education; (3) gender issues and their impact on distance learning; (4) viability of key respondents accurately representing the higher education institution’s position when using a survey; and (5) other integral variables related to the study of this topic.

Introduction

Distance education (DE) is nearly 150 years old and has been identified with distance learners and textual, mail correspondence in nineteenth century Europe (England, Germany, Sweden, France) and the United States (New York, Pennsylvania, Illinois). These early, print-based, correspondence delivery methods evolved into today’s multi-presentational models through technological advances in modes of communication. Within the last 30 years, explosive advances in communication technology have forced a reconfiguration of DE thought and perspective (Simonson, Schlosser, & Anderson, 1998). Technological advances that affect instructional delivery methods impact DE. Radio communications (1920s), experimental television (1930s), television courses (1950s), satellite technology (1970s-80s), and, most recently, computer technology are benchmarks in technological communications.

Viability of Distance Higher Education by Age Grouping
Distance learning (DL) was a popular and practical choice for many students and institutions long before the emergence of the Internet, but the popularity of the World Wide Web at nearly all levels of society and education has accelerated interest in DL to an unprecedented degree. Evidence is accumulating that DL is becoming a mainstream instructional delivery system for post-secondary courses and degree programs (Blumenstyk, 2003; Selingo, 2003). Student recruitment (age range from teenagers to older adults) often depends on the availability of DL options (Belcher, 2001; Martin, 2001), and many post-secondary institutions fear extinction if they do not offer DL courses and degree programs (Healy, 2002; Kiernan, 2003; Mangan, 2006). Young (2003) reports that universities have come under increasing pressure in recent years to cut costs and reform teaching methods, often through collaborative efforts with business and industry. Thus, distance technology has become a way to reduce costs, form partnerships with companies, and inject new life into instruction.

According to the two-year study of DL use in post-secondary institutions released in February 2003 by the U.S. Department of Education (DOE), more than half of all post-secondary schools are offering DL courses (Lucas, 2003). This trend is projected to continue and accelerate. Though more prevalent in post-secondary institutions, the popularity of Internet-based DL is not limited to this level. A flourishing virtual high school movement is another reflection of the Internet's increasing dominance as an alternative instructional delivery system (Berman & Tinker, 2002; Elbaum, 2003). The rationale for K-12 institutions to offer online alternatives to traditional campus programs is less urgent, but still significant. According to Berman and Tinker, schools' primary motivations seem to center around offering effective, affordable course options to high ability, at-risk, home-schooled, rural, and disabled students.
Recent studies demonstrate that more students are choosing DL formats than ever before, at least at the post-secondary level, and that the demographics of distance learners are changing to reflect that of the typical college student. Results indicated that enjoyment has not been an important factor to students in choosing DL, but students may be less satisfied with their learning experiences when they do not have a choice. Hoffman and Novak's (2003) study is of special interest in relation to demographic issues related to choice. Their findings show that the need to know much more about the impact of race and culture on students' preferences for and ability to use online formats. If lack of technology experience and cultural factors play a role in students' preferences for a learning environment, then African Americans and other minorities could be among those affected most if there is no choice of delivery systems. Finally, it is clear that some students do not do as well with DL formats as others. However, because technology use in K-12 schools is accelerating and students are becoming increasingly comfortable using technology resources, it does not seem prudent to conclude that the level of ability students have now with distance formats will stay the same in the future.

Furthermore, there is evidence that distance programs are expanding. A 2002 survey over 1200 two-year and four-year colleges and universities by the US National Center for Education Statistics found that while only about a third of the institutions offered distance programs in 1999, another quarter planned to launch new programs by 2003 (NCES, 2002). One market forecast recently predicted that the number of students (age range from teenagers to older adults) participating in distance education programs will increase to 2.2 on millions by 2002 – accounting for 15 percent of all US college students (Rochester et al., 2006).
Evaluation of Types of Distance Higher Education

The range and variety of applications is too extensive to review in any detail. However, a few examples of current usage may serve to illustrate the approaches adopted and their relevance to traditional university teaching.

Teaching based on video conferencing is pedagogically close, although not identical, to traditional university teaching; at least in so far as lectures, tutorials and seminars can follow more or less the same format. The Center for Continuing Education at the University of Oulu in Finland is an interesting example, which incorporates the delivery of lectures by regular faculty (via video conferencing) coupled with the use of the WWW by students for communication and interactive learning (Kapyla & Wahlstrom, 2000). The courses provided by the Center include a 15-credit 'virtual' course in educational technology aimed at teachers and provided through 15 local centers throughout Finland. Some 70 hours of lectures are provided through multi-point video conferencing and a similar number of hours of face-to-face tutorial support at local centers. The program also involves the use of an interactive facility based on the World Wide Web. Using specially developed Web-based software; students develop their projects online, generating their own material and drawing down resources from the Web. In this way, each student develops a personal portfolio of Web-based materials. Communication between students and their tutors and between groups of students is also provided through the medium of the WWW. Students can access the Web either from home or from their local centers.

Satellite television also is pedagogically close to the traditional lecture, at least as commonly practiced. Satellite-based higher education is well established in the US where a number of universities use this technology to reach students off-campus. The National
Technological University (NTU) in Fort Collins, Colorado, is an interesting example of a successful approach to using satellite television in university degree programs. NTU is a private, non-profit institution founded in 1984, which, with the cooperation with 46 other universities, presents a wide range of graduate and professional courses via satellite. Each of the universities has an uplink to the satellite transponder through which lectures are presented directly from the appropriate campus. The programs focus on engineering and related disciplines (NTU, 1999) include short courses, workshops, research seminars, undergraduate bridging courses, and master degrees. The scale of operation is impressive: in 1996-99, some 115,000 (NTU) individuals participated in courses and workshops and 4,400 students were registered on 13 master degrees. The 1,000 or so reception sites for the NTU program are located in high-tech companies, government agencies and other universities. At each site a local coordinator is responsible for the delivery of programs and helps to resolve any technical or communication problems. Each student is assigned an academic advisor who assists the student in planning the course work required for graduation and helps to resolve any academic problems. Students can communicate with the instructors through electronic mail, fax, telephone, or the regular mail services; computer conferencing is also available and the Internet is seen as a potential means of further enhancing interactivity.

The designation 'virtual' is increasingly used to describe a relatively recent development in distance teaching, usually based on computer groupware, or which operates over the Internet. While the details vary from one program to another, in general the student uses a local computer (usually from home or office) to access a range of services and facilities analogous to those provided to regular on-campus students. These facilities may include provision for enrollment;
the dissemination of prepared course materials, access to on-line bibliographic and video
materials, communication with tutors and with other students, and assessment and examination
(Elbaum, 2003).

The pedagogical functions of virtual communities are arguably closest to the spirit of
traditional teaching. The Virtual College at New York University provides a useful illustration of
the general approach. The College commenced operation in the spring of 1992 by presenting
university courses to off-campus students through a program developed around Windows,
NetWare and Lotus Notes and delivered over Integrated Digital Service Network (ISDN).
Students were required to have access to a personal computer (PC) and modem through which
they received their course materials (i.e., core readings and multimedia presentations). The
network linking the students' and instructors' PCs created, in effect, a virtual workgroup
(Vigilante, 2000) through which students could communicate with their tutors and with other
students through e-mail. The system supported staff-student discussions and case-study analyses,
together with access to supportive guides and to a virtual cafe for informal discussion. A library
database provided access to electronic copies of specially licensed books, articles, hypertexts and
case studies, and to digital audio and video materials.

Students worked in-groups of four to five; the level of interaction was high: an average of
some 200 discussions, analyses, questions and assignments per student in the 1999 program. A
later course introduced digital video, which allowed students to draw down video from the
central server over the ISDN network. The video, presented as a small 'poster' image, was used to
present a demonstration, illustrate a process, present a simulated case study, or provide a graphic
explanation of complex phenomena. Students could also conduct analyses from their PCs using software tools on the central server.

As can be seen, these approaches, each in their own way, adopt some of the processes of traditional university teaching. In the case of the University of Oulu, direct access to lectures by regular faculty, together with the facility to access resource materials and to interact with peers are aspects close to the experience of traditional students. The NTU approach provides an arrangement through which leading specialists in universities throughout the US can deliver lectures directly to students. The Virtual College at NYU is particularly interesting in that, from the outset it was perceived as the electronic equivalent of a traditional college. A particular strength of this approach is the potential to support interactive collaborative working, arguably, an important dimension of university education and one, which was very difficult to achieve in earlier modes of distance teaching. Most of the interaction is asynchronous, which affords students time for reflection and qualitative assessment. In addition, the ease with which text, audio and video materials can be located and retrieved can go a long way to solve the long-standing problem of library access for remote or busy students.

Gender Issues and Their Impact on Distance Learning

One of the more interesting areas of research has begun to explore issues relating to women and distance education. Distance education provides women with multiple roles the opportunity to study in their off or crevice time, that is in their spare moments between the tasks of paid employment and household and childcare responsibilities.
Research has found that women are much more likely to stop studying once they have started than men and this is largely due to the many demands placed upon them. Women's participation in and performance in distance education programs are very much related to the local cultural conditions and the availability of higher education to those who have not been traditionally prepared (Ferris, 2001). Thus, for example, research at the University of Papua has shown that only one in five of the students in the distance education program are women. On the other hand in parts of Australia, over 42 percent of the external students were women (Murphy & Wotring, 2003).

Yet, despite the appeal of distance education for women, there have been some feminist critiques of the approach. The arguments are that this kind of education only adds to women's isolation. It also encourages the perception of education as an individualistic asocial process while limiting the possibility for transformation. Others have pointed out that the very act of gaining an education can empower women (or any other disenfranchised group), but that the educational program must be constructed in such a way that it is not simply a consumer item but rather allows for growth and development (Phipps & Merisotis, 2006). Much of the process is tied to the kinds of support offered to students and the possibilities for dialogue and engagement presented by the course and the instructor.

Viability of Key Respondents Representing Institution’s Position When Using a Survey

In the international arena, the Open University in the United Kingdom, a well-known leader in distance learning, planned to have an online component to all of its courses (Rowntree,
Hutchinson (1999) reported that a European Union (EU) initiative that has resulted in the creation of ERASMUS ICP Online, a transnational university that serves ten countries. At a meeting of the Western Governor's Association in December of 1999, eleven western states endorsed the notion of a virtual university to serve their region and permit interstate sharing of teaching resources (Davies, 2002; Johnstone & Krauth, 2001). The National Technological University, University of Phoenix and the Graduate School of America are a few examples of institutions serving as alternate providers of education (Davies, 2002).

Distance learning programs in most universities are employing the web as a delivery mechanism. Additionally, increasingly universities are providing web-based educational experiences for their on-campus students (Erazo & Derlin, 1999; Hanna, 2003; Oblinger, 2002; Mayadas, 2002). The State University of New York (SUNY) Learning Network has a growing list of 19 campuses that offer graduate and undergraduate courses in a variety of subjects (SUNY, 2002). The American Council on Higher Education indicated that a number of options are available to students who want to gain a degree through online distance learning (Spille, Stewart & Sullivan, 2002).

Moreover, statistical evidence provides information to predict a strong likelihood that this trend will continue in the future. Beaudoin (2003) cited the National Center for Educational Statistics (NCES), which indicated that 40% of post-secondary students are working adults over the age of 30, and are choosing to study part-time. These numbers are projected to increase to 60% this year. It is also likely that a majority of these students will choose distance-learning options. E-mail is used in one-third of all college courses. In 1990, 100 institutions had some
distance offerings and by 1999, 75 more were offering entirely on-line programs. By fall 2003, it was reported that at least 85% of all institutions with enrollments of 3000 or more were offering distance education courses. A number of groups have already developed standards and principles, to provide a framework and create a standard language to enable dialogue, and address the quality of electronically offered programs. Likewise, increasingly key respondents are providing accurate information, which represents the higher education institution’s position when using a survey (Johnstone & Krauth, 2001).

Other Integral Variables related to the Study of this Topic

Institutions implementing distance programs do not pursue the same student population as traditional campus-based. Hence, institution size, tuition cost, and reputation have become very significant variables when classifying distance-learning programs. For example, the U.S. News & World Report's annual rankings group schools according to mission as well as region and compare data from each institution on 16 indicators of academic quality. Among the evaluative components are academic reputation, retention rates, student selectivity, financial resources, and graduation rates. These indicators mirror the data found in popular college guides, Barron's Profiles of American Colleges, another example, provides data on more than 1,500 North American colleges and universities; variables include size, costs, geographic recruitment, and selectivity (Bates, 2002).

Institution sizes range from small to large. Small institutions typically focus on personalized student attention, limited class sizes, and the community-based advantages of smallness, albeit often at the expense of program and activity diversity. Large institutions
typically focus on advantages of scale such as a greater number of programs and activities. They usually offer less of an in loco parentis environment, albeit with structures and orientations geared toward mass outputs and efficiency (Belcher, 2001).

Institutions can also be categorized by their tuition structures. At one end of the spectrum are publicly funded institutions where students frequently pay less than 20% of their actual educational expenses. On the other end are private institutions where students typically cover 80% or more of their educational expenses. The universities' operating cost structures also typically mirror their overall tuition structures (Landauer, 1999).

Finally, institutions can be classified based on the scope of their reputation. Reputation factors (scope, prestige, and exclusivity) refer to an institution's overall perceived quality, which translates into the size of its potential market. Institutions with national reputations typically pursue selective or targeted enrollment programs, whereas regional institutions often seek to serve a specific geographic area. Although regional institutions may be larger than national institutions, their overall potential markets are not (Simonson, 2002).

Conclusion

Will the application of the new technologies bridge the dichotomy between distance and traditional university teaching? Will the two become one? It is still too early to answer these questions. The traditional view of the university as a community of scholars dedicated to the pursuit of research, the generation of knowledge, and the teaching of students is still a powerful ideal.
Technology creates an opportunity to build the very real advances on second phase
distance teaching, not least by facilitating communication and peer discourse, and by providing
easy access to bibliographic and other materials, so providing students with enhanced
opportunities analogous to traditional on-campus teaching. A key test of the new technologies,
however, will be their capacity to support the emergence of real communities, which by
facilitating academic discourse will allow the university to maintain the best of its traditions, but
with less exclusivity than in the past. This surely is a challenge appropriate to this new
millennium.

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