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distance Learning

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ABSTRACT

OVER THE PAST 30 YEARS millions of people worldwide have used education at a distance because it can provide a useful alternative to conventional classroom-based education. Distance Education programs assume two basic criteria: students and teachers are separated by distance (geographical, temporal, and contextual) and technology is used to lessen or eliminate the distance barrier. 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) student performance; (2) scholarly equivalency; (3) key success factors; (4) key failure factors; (5) faculty issues and distance higher education; (6) gender issues and their impact on distance learning; and (7) viability of key respondents accurately representing the higher education institution's position when using a survey.

Key words: distance learning, technology, higher education

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INTRODUCTION

Over the past 30 years millions of people worldwide have used education at a distance because it can provide a useful alternative to conventional classroom-based education¹. Distance Education (DE) programs assume two basic criteria: students and teachers are separated by distance (geographical, temporal, and contextual) and technology is used to lessen or eliminate the distance barrier. DE courses allow students to take courses not available on campus, to advance to high levels of learning, to benefit from cost-effective learning environments, and to utilize a manageable and appropriate means of instruction while meeting their individual, distance learning needs².

This paper compares traditional vs. distance learning after examining the academic literature affecting distance learning in higher education.

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STUDENT PERFORMANCE

Studies comparing DE to traditional instruction investigated (a) the level of student satisfaction with DE courses, (b) how communication technologies affect learners and teaching, (c) effective teaching behaviors, and (d) ways DE courses foster change³.

Student characteristics such as study habits, attitudes, perceptions, motivation, educational level, goals, time management, preferences and individual variables (learning style, marital status, GPA, age, and gender) have been examined. Most of these characteristics have shown no statistically significant effect on achievement or success in DE courses. However, individual variables such as learning styles and ethnicity, background, and gender were found to have a limited effect on the success of distance students⁴. In addition, Bernt and Bugbee found that adult learners might need more evaluative feedback than younger students because they may have lower educational levels or may not have been in school recently⁵. Ross and Powell found that women have a higher success rate in DE courses than men⁶.

Other variables, such as student goal-centeredness, procrastination levels, and intrinsic motivation, were found to be significant determiners of persistence and achievement⁷. Students who are goal-oriented, non-procrastinators, and intrinsically motivated have higher success rates.

The method of media presentation does not seem to affect achievement or student satisfaction. It appears that the instruction, not the media, is important⁸. Coldeway concluded that DE approaches, when applied with effective instructional techniques, are successful⁹. Extensive pre-planning, an instructional tool such as study guides and structured note taking, visuals and graphics, and instructors training enhance instruction¹⁰.

Clark offered an extensive list of teaching and presentational behaviors that enhance DE courses¹¹. A partial list includes (a) strategies for reinforcement; (b) realistic assessment; (c) diversification of pace and activities; (d) a strong print component; (e) personal instructor involvement; (f) concise, cohesive verbal presentations; and (g) case studies or examples. Clark recommended teaching at least one session on-site. Haaland and Newby also recognized aspects of teacher behavior that positively influenced presentation: using student names, well-defined statements of purpose, utilization of printed material, discussion, and voice inflection¹². DE is not designed to replace face-to-face teaching, but is developed as an alternative for students with distance considerations. Blanchard drew the following conclusions¹³:

•Based on pretest-posttest designs, telecourses or teleteaching have been as effective as traditional classrooms.

- Telecourses are more effective than correspondence courses.
 - Telecourses enhance the opportunity for student access.
 - Telecourses are improved when instructors have been trained in DE instruction.
 - Telecourses are successful when planning, organization, and pedagogy are used skillfully.
- In general, other reviews of research support Blanchard's conclusions.

SCHOLARLY EQUIVALENCY

The question then becomes, is the mode of instruction the only important factor for students in the modern university? Perhaps the best way to examine this would be by asking what education would look like if we eliminated the traditional university entirely and were left with only distance education. G.Casper, President of Stanford University, speaks of nine roles that universities play in modern society¹⁴. These roles are (a) education and professional training; (b) credentialling; (c) social integration; (d) providing a rite of passage; (e) networking; (f) knowledge assessment and creation; (g) the selection of academic elites and peer review; (h) fostering a worldwide community of scholars; and (i) the transfer of knowledge.

Clearly, distance education can augment or replace many of these roles, but several cannot be adequately replaced. In particular, distance education is not likely to replace social integration, rite of passage, and networking, which are primarily social events experienced through long-term on-campus group interactions. In fact, recent studies -like those published by Hallowell, Kraut, Sarbaugh-Thompson & Feldman in 1998- indicate that use of the Internet and e-mail as social tools lead to a variety of psychological and communication problems. Yet, distance education can replace, to some extent, training, credentialling, knowledge assessment and creation, selection of academic elites, fostering a scholarly community, and knowledge transfer, which can be partially defined as roles that rely on delivery systems or communications technologies.

A further distinctive trend relates to the perceived dichotomy between distance and traditional teaching. For the most part, the dichotomy is one of degree rather than of kind (but nonetheless real for that). In those countries where a dual-mode approach to distance teaching is the norm, many universities view their distance teaching as an extension of their on-campus programs, often perceiving the close similarity as an implicit guarantor of equivalence of standards. Often, course curricula and examinations are closely related, if not identical, to those provided for on-campus students, and regular full-time academics teach both students on-campus and external students. Consequently, it is now generally accepted that distance teaching, where appropriately managed and well equipped, is effective in delivering

high quality courses to students¹⁵.

KEY SUCCESS FACTORS

Looking back over the century or so since the establishment of the first university department of correspondence teaching, some broad trends are evident with respect to the evolution of online distance learning (ODL) and its relationship to the traditional university.

The first and most obvious trend relates to widening access to university education. Even the most cursory appraisal shows that distance teaching has provided such access for many millions of students and that enrollment has grown to become a substantive part of the university student population in many countries. In a number of countries, distance education students comprise some 10-14% of the total undergraduate student population and in a few cases the proportion is as high as 39-40%¹⁶.

The capability to virtually connect anywhere at anytime eliminates distance and time as barriers to accessing information, thus creating enormous potential for students and teachers to rethink the resources available to them for their information needs and their learning preferences. Additionally, eliminating physical space and time considerations creates learning alternatives that were not here-to-fore possible. These alternatives make it possible for students to take a course anytime from anywhere according to their convenience and schedule and thus eliminate the synchronicity as an issue¹⁷. Individuals can communicate either synchronously or asynchronously, exchange ideas, cultivate discussion groups about specialized areas, and research a topic that interests them.

Moreover, these environments provide a set of new opportunities, challenges, and result in a set of dynamics that can greatly differ from traditional classrooms¹⁸. Higher education institutions are offering online programs in addition to or in lieu of traditional classroom environments. Virtual universities, which emerged as mere theoretical concepts and innovative proposals a few years ago are now viable and functional entities in a competitive higher education market¹⁹.

A related trend concerns scale of operation. In a number of cases, particular open universities have a student population, which is bigger than that of the median-size university in the same country, and in few cases bigger than the largest traditional university²⁰. The substantive growth of the last few decades suggests that distance education now enjoy a relatively high status.

Harasim, Hiltz, Teles and Turoff reported on the results of Harasim and Yung's 1993 study that surveyed 240 teachers and learners that used the Internet for education²¹. Of the 176 responses to the question regarding differences between learning in a computer mediated communication (CMC)

and a traditional classroom, 90% reported that there were differences, and the responses are reported as follows:

- The role of the teacher changes to that of facilitator and mentor.
- Students become active participants; discussions become more detailed and deeper.
- Access to resources is expanded significantly.
- Learners become more independent.
- Access to teachers becomes equal and direct.
- Interactions among teachers are encouraged significantly.
- Education becomes learner centered; learning becomes self-paced.
- Learning opportunities for all students are more equal; learner-learner group interactions are significantly increased.
- Personal communications among participants is increased.
- Teaching and learning is collaborative.
- There is more time to reflect on ideas; students can explore on the networks; exchange of ideas and thoughts is expanded; the classroom becomes global.
- The teacher-learner hierarchy is broken down. Teachers become learners and learners become teachers.

The success of distance teaching is, no doubt, the primary reason for its enhanced status. This success is evident not just in the scale of distance teaching or in the academic and instructional quality of many of the courses provided. But also in the acknowledged satisfaction of students with their experience of distance learning and with the benefits accruing to graduates in later life²².

KEY FAILURE FACTORS

Firstly, there is the question of cost. Viewed from the perspective of comparative costs, the argument in favor of using technology is clear. Productivity in conventional education, so the argument goes, is effectively static, being based on a student-teacher ratio fixed within a relatively narrow band; an increase in student numbers, therefore, effectively triggers a concomitant increase in staff. Since staff costs are a high proportion of teaching costs (typically some 60% to 80%) the potential for increased productivity is low. This view, however, is at best only partly true. In practice, many stratagems are adopted to get around these apparent rigidities and so reduce the unit cost of traditional teaching, increasing student/teacher ratios²³. Moreover, there is a growing volume of research which suggests that the new information technologies have failed to deliver on the promised increase in productivity in other sectors of the economy, perhaps because of

our failure to use them in truly innovative ways.

The application of the new technologies can itself be costly²⁴. The required investment in computers, video production facilities, virtual libraries, central servers, and data networks can be considerable. The often short and unpredictable life of these facilities and the need to provide on-going technical support for their effective operation and maintenance are additional factors, which increase costs. Nor are all of these technologies labor saving. Asynchronous online networks, which allow students to interact freely and directly with their tutors, are effectively open-ended in their demands on tutor time, with concomitant resource implications. In general, it seems fair to say that the case for productivity gain from using technology in university teaching is as yet unproved.

FACULTY ISSUES AND DISTANCE HIGHER EDUCATION

Although students may love the new teaching method, many faculty members say that distance education is a demanding proposition for professors. That is mostly because of the large volume of student-teacher contacts required. Some professors find teaching distance learning courses to be an enormous amount of work much more than teaching in a classroom. Moreover, the workload is not their only worry over distance learning. Among the others: some professors say they remain unconvinced of the method's effectiveness for some students –particularly younger, less motivated ones²⁵.

According to some faculty, some classes may be inappropriate for distance learning. For example, health care classes that require hands-on training. Some professors also worry distance learning may be stealing their control and ownership of their courses. In a traditional class, the syllabus and lecture notes often are largely the professor's domains. But in distance learning, the software used is jointly produced by the professors and university software designers. Such intermingling of talents –particularly on university time– could mean that the resulting product belongs to the institution.

Nonetheless, distance learning is becoming more of a reality for many schools where the majority of the student population is non-traditional and remote. The World Wide Web (WWW) and other Internet-based tools have significantly enhanced an educator's ability to educate electronically. Whether the materials are standalone, computer-based tutorial, or part of a graduate college course designed and presented on-line, introduction of the WWW significantly enhances the educator's ability to transmit information to the student and provided a formerly unavailable medium for forums and information exchange²⁶.

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 and performance in distance education programs are very much related to cultural conditions and the availability of higher education to those who have not been traditionally prepared²⁷. 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 women²⁸.

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 development²⁹. 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 for all of its courses³⁰. Hutchinson reported that a European Union (EU) initiative that has resulted in the creation of ERASMUS ICP Online, a transnational university that serves ten countries³¹. At a meeting of the Western Governor's Association in December of 1995, eleven western states endorsed the notion of a virtual university to serve their region and permit interstate sharing of teaching resources. 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.

Distance learning programs in most universities are employing the web as a delivery mechanism. Additionally, universities are increasingly providing web-based educational experiences for their on-campus students³².

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. 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.

Moreover, statistical evidence provides information to predict a strong likelihood that this trend will continue in the future. Beaudoin 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-time³³. 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 1995, 75 more were offering entirely on-line programs. By fall 1998, 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.

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 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, thus 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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