

Distance Education

Final Project Report

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1. Statement of Problem

Considering the rapid growth of technology in recent years as an active part of many aspects of everyday life, distance education has become an interesting topic of research. The goal of our project was to research and analyze the benefits/drawbacks of distance education. How do they compare to traditional "face-to-face" classroom environments? How can distance education be improved to become more widely accepted? Are there aspects of distance education that are an improvement over traditional practices? We hoped to be able to decide whether distance education is a practical method of education for all students. Can it work as a replacement for traditional, higher-level education? If a lack of effectiveness is present in distance education, do the practicality factors (convenience, flexibility) out-weigh these drawbacks?

The approach we pursued involved interviews with students of distance education, instructors of distance education, and instructors of traditional education. In doing this, we hoped to get a balanced, all-encompassing perspective. It must also be noted that all the distance education instructors we interviewed also have experience teaching in a standard classroom environment, making their opinions even more invaluable to our research. Our questions focused on how learning is achieved most effectively. Using these informed opinions, we expect to determine whether distance education can address these issues. We also used the Internet for our research. With this, we hope to analyze existing examples of distance learning. For instance, the University of Colorado's CAETE and the widely-scrutinized Fathom project.

2. Rationale

Currently, distance education has become useful for people already working in the industry. This method of education allows the students to maintain their careers while also pursuing further education. It is a time-effective method of education for these types of students since work schedules prevent them from attending traditional classes.

By doing this project, we have gained in-depth knowledge of learning in general. We've seen first-hand the dynamics of education that are effective and those that are not. Furthermore, we've been able to study the impact of collaboration and design on learning. For instance, collaboration done in-person in traditional educational institutions will be absent. Collaboration must be mediated with technology (email, instant messaging, teleconference, etc.). As for design, standard course design would not be appropriate and must be modified to accommodate physical distance factors. Software and technology must be designed to meet the needs of distance education students, providing an unobtrusive learning environment.

3. Method of Research

In order to pursue our research, we had to decide which approach would be most effective. In doing so, we determined that aside from Internet research, we would do interviews with individuals directly involved in distance education (distance education

instructors and students) as well as those who are involved with education in general (traditional instructors). We felt these interviews would be the most vital sources for our research because these individuals could first-hand feedback from their own experiences rather than research papers/articles that present information from a second-hand point-of-view. Their feedback allowed for low-level, detailed accounts and opinions from people deeply associated with the educational system. As expected, the Internet research was useful from the sense that it was very accessible and also provided a higher level overview of our topic.

4. Background on the Interview Questions

We designed 3 distinct, focused questionnaires, aimed at distance education instructors, distance education students, and traditional instructors, respectively. The questions were written in a broad manner because we hoped that this would invoke our participants' most honest and meaningful answers. In addition, we feared that if we designed overly-specific questions, we would unintentionally bias our participants' answers to what we expected rather than their honest answers.

The origins of our questions were derived from the University of Idaho's distance education program web site. There, they included a feature about the most common research questions regarding distance education. For instance, "What are the characteristics of effective distant students and teachers?" It was these types of questions that effectively highlighted the intricacies of distance education and we hoped to model our questions in a similar manner.

Our interview participants include the following:

- Dan Connors (Distance Education Instructor)
- Sanjay Gajendra (Distance Education Student)
- Michael Main (Traditional Instructor)
- Shivakaht Mishra (Distance Education Instructor)
- Ashok Nagaraj (Distance Education Student)
- Tammy Sumner (Distance Education Instructor)

5. Background on Distance Education

The following quote is the clearest definition we found in our research:

"Distance education is now defined as "the acquisition of knowledge and skills through mediated information and instruction, encompassing all technologies and other forms of learning at a distance" (United States Distance Learning Association,1998)" (<http://www.westga.edu/~distance/ojdl/fall33/rockwell33.html>).

6. Traditional vs. Distance

The most important aspect of our research is the direct comparison between traditional practices and distance education. According to the University of Idaho, “achievement on various tests administered by course instructors tends to be higher for distant as opposed to traditional students (Souder, 1993), yet no significant difference in positive attitudes toward course material is apparent between distant and traditional education (Martin & Rainey, 1993).” It goes on to say, “Conventional instruction is perceived to be better organized and more clearly presented than distance education (Egan, et al., 1991).” (<http://www.uidaho.edu/eo/dist9.html>).

One the other had, in a 2002 article by NEA Higher Education Research Center, titled “The Promise and the Reality of Distance Education,” the point is raised that, “for students, the lack of enthusiasm [for distance education] could be a result of the missing social structure. Students may complain about boring classes, tests, and arbitrary schedules, but these attributes may account for the success of traditional programs. A lack of interaction with both faculty and other students can decrease motivation and responsibility in distance education courses.” (<http://www.uidaho.edu/eo/dist9.html>). This lack of interaction also affects the instructors. As traditional professor Michael Main said in his interview, “For me, the problem is that I couldn't get to know the students individually. There would be little individual feedback, little chance to tailor work to students, little chance for feedback.” Distance education professor Shivakaht Mishra added, “I think collaboration/interaction amongst instructor/student and student/student is completely lacking.”

These conflicting opinions will be more clearly defined in the following subtopics.

7. Successful Distance Education Students

Research has shown certain characteristics that make for successful students in the distance education system. Most of these students are voluntarily seeking further education, have had post-secondary education goals with expectations for higher grades, are highly motivated and self-disciplined. In addition, these students are willing to initiate contact with instructors for assistance, possess a serious attitude towards the courses, and are employed in an industry where career advances are related to higher education. Oftentimes, this higher education is most easily achieved via distance education due to its scheduling flexibility. Lastly, these students tend to be more mature (average: 25 years old) and have had previous college experience.

8. Successful Distance Education Instructors

Since distance education requires a structure that is organized and well-planned, this often improves an instructor's traditional teaching. Furthermore, while technologies are in place to supplement the education materials, instructors must be able to customize the tools to the needs of the students. Teachers must be properly trained both in the use of equipment and teaching techniques unique to distance education. “Learners get more

from the courses when the instructor seems comfortable with the technology, maintains eye contact with the camera, repeats questions, and possesses a sense of humor (Egan, et al., 1991).” (<http://www.uidaho.edu/eo/dist9.html>).

9. Importance of Interaction

As is true for traditional students, students of distance education need support and guidance to make the most of their educational experiences. Timely feedback from the instructor is important to students for their assignments and they tend to be more motivated if they have frequent interaction with their instructor. “More structured contact might be utilized as a motivational tool (Coldeway, et al., 1980)” (<http://www.uidaho.edu/eo/dist9.html>). Students also benefit from interaction amongst other students. “These groups provide support and encouragement along with extra feedback on course assignments. Most importantly, the groups foster the feeling that if help is needed it is readily available” (<http://www.uidaho.edu/eo/dist9.html>).

Another aspect to consider is the fact that an on-site support system may still be necessary even though student will ordinarily be off-site. “Utilization of on-site facilitators who develop a personal rapport with students and who are familiar with equipment and other course materials increases student satisfaction with courses (Burge & Howard, 1990)” (<http://www.uidaho.edu/eo/dist9.html>).

10. Cost vs. Benefits

Contrary to initial beliefs, distance learning is not cheaper than traditional education. Two major providers of distance education technology platforms, Blackboard and WebCT, have raised prices of new software options as complexity and demands have increased. To make matters worse, it has been difficult for upstart distance education programs to determine an appropriate way to estimate costs. “Studies conducted by the Alfred T. Sloan Foundation found that when everything is taken into account, universities aren’t losing or making much money on distance education. Sorting out the capital costs, direct costs, and shared costs in any higher education venture is difficult. Because of the opaque accounting rules, most studies can only speculate about the real costs of distance education” (<http://www2.nea.org/he/heupdate/vol8no3.pdf>).

Institutions are beginning to understand that distance education is not an easy, extra source of revenue or a cost-cutting measure. This is a major factor that separates success and failure. Successful institutions tend to take a slower, thought-out approach. Failures can be analogized to the flashy dot-com boom. These institutions are looking for a “quick buck” and their downfall is caused by underestimating the unseen costs associated with a distance education program.

Costs include hardware, software, transmission (T-1, satellite), maintenance (repairs, upgrades), network infrastructure, production (support required to develop and adapt teaching materials), administrative support and the associated personnel costs.

While the costs may be large, the benefits gained may be equally significant. Through distance education, students in rural areas can have access to training, students with careers and families can complete studies without relocating, and all students can have access to the most qualified faculty since “classroom size” is less of a factor. Distance education student Ashok Nagaraj said, “I work full time and I am married. Distance education is the best option because I can view/listen to classes at my own convenience in the comfort of my home or office.”

Another benefit was suggested by Professor Dan Connors, who said that archived library of lectures are a useful feature in a distance education environment.

In the end, the decision between cost and benefit can be summarized by the following quote: “Perhaps the question institutions must answer is whether it is part of their mission as educators to offer programs to those who might not be reached without distance education. The primary benefit to educational institutions through distance education may be the increased number of non-traditional students they are able to attract and serve. Research also suggests that as programs become more efficient, program costs should decrease (Ludlow, 1994)” (<http://www.uidaho.edu/eo/dist9.html>)

11. Distance Education Failures

Overall, it has been agreed that distance education has largely been a failure. Reasons for this include lack of student acceptance/enrollment, higher costs, and more faculty time than expected.

In Arizona, a community college distance education program enrolled only 118 students during one and a half years of operation. Arizona Learning Systems was created in 1996 with \$3.8 million in legislative funding, but could not come up with a plan to increase enrollment and felt that it was better to quit before losing more money. The Executive Director of Arizona Learning Systems speculated that the project failed because of lack of enthusiasm for distance learning, and because the project “underestimated the amount of effort and support” necessary to attract more students (<http://www2.nea.org/he/heupdate/vol8no3.pdf>).

Another issue faced by distance education institutions is that for-profit distance arms are finding that it is hard to run like a business while being run by a university at the same time. Many other failures have also been for-profit arms, such as Virtual Temple and California Virtual University (<http://www2.nea.org/he/heupdate/vol8no3.pdf>).

Lastly, faculty concerns also hinder prospects of distance education. Since many distance education programs compensate for the absence of in-person contact with the instructor with promises of 24-hour feedback, instructors are actually working harder than they would in a traditional setting.

The primary example of a distance education institution’s failure is the Fathom project. Started in 1999 as a for-profit business by Columbia University, its goal was to provide

high quality educational resources to a worldwide audience via the Internet in addition to corporate training services. At its peak, over 65,000 visitors enrolled in Fathom's courses/seminars from over 52 countries. It received honors from Yahoo and Forbes.

Fathom's website ceased operations in March 2003. According to the *NewsBreak* article, "the prestigious brands weren't able to draw the numbers of paying online learners needed to make this dot com venture succeed during the economic downturn in the years 2002-2003. In April 2002, a senate committee looking into the university online learning and digital media initiatives recommended that the university continue to fund Fathom "but at the minimum level to keep basic operations going, and that, in the long term," Fathom should rethink its business model" (<http://www.infotoday.com/newsbreaks/nb030113-2.htm>).

The Washington Post (Shea, 2001) reported that by 2001, Fathom had borrowed \$30 million since its opening two years earlier. Fathom felt that it had to be aggressive to prevent for-profit companies from taking their place in education online. Columbia's faculty senate recommended that Fathom cut back on spending and develop content through Columbia and other Fathom schools rather than create its own (<http://www2.nea.org/he/heupdate/vol8no3.pdf>).

Perhaps the most significant blow came with recent studies that said students who take a distance education course online do not do as well as student taking the same course in a classroom. This is clearly a contradiction to earlier claims (mentioned in this paper) that said achievement was higher for distance education students than traditional students. "The *Chronicle of Higher Education* reported on a study that found that students who took an economics class online did not do as well and studied less than those who took the same course in a traditional classroom" (<http://www2.nea.org/he/heupdate/vol8no3.pdf>).

12. Conclusion

From our research, we have learned that ordinarily, for a distance education institution to succeed, it must "serve a specific need, such as enhancing technical skills of employees or serving students who would not otherwise be able to enroll in college. Distance programs that are consistent with the practices of the entire institution, whether pure for-profit or non-profit, seem to fare better than those that create financial and philosophical conflicts between non-profit and for-profit branches" (<http://www2.nea.org/he/heupdate/vol8no3.pdf>).

"Those traditional colleges and universities that developed distance programs to create opportunity for nontraditional students and supplement the education of traditional students have succeeded. Many of those institutions that intended simply to make big profits or save the most money are suffering the biggest losses" (<http://www2.nea.org/he/heupdate/vol8no3.pdf>).

As for our null hypothesis, we have found that our initial beliefs were correct: at this point in time, distance education is not an appropriate replacement for traditional methods of education. As mentioned in this paper, the system is too costly and communication barriers are substantial enough to hinder effective learning.

However, this does not mean that distance education does not have positive aspects and will not make an impact in the educational system in the future. At the current rate of growth of technology, eventually the communication barriers mentioned will be minimized and perhaps a successful middle-ground can be reached between distance education and traditional education. More importantly, the lessons learned from the success/failure of various distance education institutions will be useful to improve teaching/learning techniques in general and can be applied to all educational systems.

The future of distance education is bright. Whether or not distance education will become popular as technology improves will remain to be seen. There is a high chance that it will not remain in the same form as we see it today, but rather in a new form, one that better conforms to the learning needs of students as well as financially profitable for the institutions themselves. That will be the true measure of success.