Research and Distance Education

What is Research?

In this lesson, we will explore distance education research. According to the dictionary, research is:

> 1. systematic inquiry into a subject in order to discover or revise facts, theories, etc.
> 2. to make an extensive investigation into
> 3. study, inquire, examine, scrutinize

The term research will be used in the broadest sense within this lesson. We will include survey research and evaluative research studies about distance education. We will also review how distance education is changing how research is conducted in higher education, from both the student and faculty perspective.

Because distance education research often includes an evaluation of distance learning, we will focus on both research & evaluation in this lesson. There has been a wealth of research studies about distance education in the last decade, as the popularity of distance learning has increased with the advent of the Internet and WWW.

Common Distance Education Research Questions

- Is distance learning as effective as traditional on-campus courses?
- What are the characteristics of distance learning students?
- What is the cost comparison between distance learning and on-campus courses?
- How do you evaluate distance education?
- What media is most effective in delivering distance education courses or programs?
- What is the origin and current definition of distance education?

The American Journal of Distance Education recently included research articles with the following titles in their November 2, 2002 volume:

- Persistence of Adult Learners in Distance Education
- Comparing Student Satisfaction with Distance Education to Traditional Classrooms in Higher Education: A Meta Analysis
- Learning Style and Effectiveness of Online and Face-to-Face Instruction

The No Significant Difference Phenomenon

One common question in many distance education research studies focuses on differences between classes delivered via distance learning compared to classes delivered in a traditional face-to-face classroom?

One well-known study on this issue is entitled, "The No Significant Difference Phenomenon." The purpose of this study is to dispute critics who argue that education delivered at a distance is inferior to classes delivered on-campus. The study explored 355 research reports, summaries and paper on technology for distance education.

This study cites several published research that suggest that supports the position that there is no significant difference in student satisfaction and learning outcomes in distance education courses compared to face-to-face courses.

Below are a few examples of some of the results of studies published/discovered after the 1999 publication of the book, The No Significant Difference Phenomenon:

- "…no differences in test scores of college classroom and correspondence study students enrolled in the same subjects." Crump, R.E. Correspondence and Class Extension Work in Oklahoma, 1928.

- "...students learn as well in distance education programs as they do in regular programs..." Bates, A. W. & Couell, R. N. Distance Education: An Overview, 1986.

- "... online students had a slightly higher final grade than students in the other two formats... students can do at least as well as they do in standard classes." Carlisle, R. A Four Year Study Comparing English Classes Online, via Television, and Face-to-Face, 2002.

Profile of Participation in Distance Education: 1999–2000

The National Education Association (NEA) most recent annual report on Distance Education based on data gathered from students responding to the 1999-2000 National Postsecondary Student Aid Study (NPSAS:2000). The report is entitled, Profile of Participation in Distance Education and focuses on student participation in distance education.

The report uses the survey data to address several research questions:

- Which students participated in distance education in 1999-2000? Were any student characteristics related to participation in distance education?
- Which types of technology did students use to take their distance education courses?
- How satisfied were students with their distance education courses?
- Below is a very brief summary of the findings from the most recent NCES study on distance education.

Student Participation in Distance Education

The findings suggested clear patterns of participation in distance education for both undergraduate and graduate students. The study found that students who participated in distance education tended to be those with family responsibilities and limited time. Within the undergraduate respondents, females were more likely than males to participate in distance education courses.

Distance Education Delivery

Both graduate and undergraduate students who took distance education courses were more likely to do so via the Internet than via either live or prerecorded TV or audio.

Satisfaction with Distance Education

About one-half of both undergraduates and graduates reported being equally satisfied with their distance education courses compared to their regular classroom courses. Both graduate and undergraduates reported being less satisfied with distance education courses than reported being more satisfied.

The Third Shift: Women Learning Online (2001)

Student characteristics of distance learning students have been the focus of much distance education research. As the NCES study reported, females constitute a large proportion of distance students. The American Association of University Women (AAUW) Educational Foundation reports that women make up the majority of nontraditional online learners over the age of 25.

According to their study, the online education boom is leading to "The Third Shift" for working women. The Third Shift is an extension of the "Second Shift," a term coined by Arlene Hochschild in her 1989 book entitled, The Second Shift. According to Hochschild, many working women face a second shift when they come home from work because women shoulder most of the family and household responsibilities.

The AAUW study contends that working mothers enjoy the flexibility of distance education courses, however, continuing their education online is adding a third shift to their responsibilities as mothers and employees.

Other findings in the AAUW study dispute the reputation of online students as just taking one or two courses to improve their job prospects. The majority of distance learning students surveyed reported that they were taking online courses in pursuit of a degree and for the sense of accomplishment, similar to traditional-age students' educational goals.

Distance Education Media

The media used to deliver education has changed over time and has been a common premise of distance education research. New and improved communication technologies, which enable more interactivity in distance courses, have had a major impact on the growth and the resurgence of distance learning.

"Distance Learning: The Shift to Interactivity," the title of a 1997 CAUSE Paper series, summarizes the evolution of media used to deliver distance education. The authors differentiated between distance learning communication technologies based on whether they provide one-way, two-way, or multiple-way communication. The research outlines four different generations of distance learning technologies:

First Generation - Predominately one technology characterized by no interaction (ex: print, radio, television).

Second Generation - Multiple technologies without computers (ex: audiocassettes, television, videocassettes).

Third Generation - Multiple technologies including computers (ex: e-mail, chat, listservs, discussion boards, Internet, CD-ROMs).

Fourth Generation - Multiple technologies including the beginning of high-bandwidth and wireless communication technologies (ex: desktop videoconferencing via terrestrial, satellite, cable and phone technologies, wireless networks and devices).

Although third and fourth generation technologies are rapidly being adopted by distance educators, first and second generation technologies are still being utilized alone, or in conjunction with newer communication technologies. For example, Telecourses (PBS courses) are now being supplemented by companion web sites that include opportunities for increased interaction.

The third and fourth generation media's capacity to offer increased opportunities for interactivity is the primary differentiating feature between distance learning today and those of previous generations. The authors of this paper believe that the shift to interactivity is forging a new teaching and learning paradigm.

Conclusion

A single lesson cannot possibly cover all areas of distance education research. There are entire courses devoted to this subject alone. We will continue to explore additional distance education research throughout this course through our readings, upcoming lessons and assignments.

Lesson Two Links:

Readings Summary Slideshow
Self-assessment Quiz
Lesson Two Assignments

Supplemental Research Resources:

- THE Journal
- The International Review of Research in Open and Distance Learning
- Syllabus Magazine
- Chronicle of Higher Education
- WCET - Technology Costing Methodology (TCM) Project
- http://www.nea.org/he/abouthe/distance.html
- Constructivism Online: A Survey Of Freshman Writing Distance Learning Courses