

Gender in Distance Education Technology

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INTRODUCTION

Distance education is defined by six pedagogical elements: (1) physical separation of teacher and learner; (2) regulatory function or influence of an educational organization; (3) media to connect teacher and learner; (4) two-way communication exchange between teacher and learner; (5) individualized pedagogy instead of group focus; and (6) "industrialized" facilitators, entailing less individuated instructors (Keegan, 1980). Distance education technologies include video (videotape, satellite delivery, microwave delivery, broadcast video, and desktop video), computers (e-mail, Web-based courses, video conferences, DVD, and CD-ROM), collaborative activity software (chat, discussion rooms, and white boards), voice /audio technology (telephone, voice mail, audio conferences, audiotapes, and radio), supplemental print material (books, study guides, workbooks, and FAX), mobile technology (laptop computers, PDAs, tablet PCs, and cell phones), and blended-learning combining one or more of these delivery methods together, including face-to face instruction.

Distance education technologies as tools are situated in the larger context of technological and scientific knowledge, economic institutions, including the property and market institutions of capitalism, and social institutions, such as education, which historically has been unequal and exclusionary due to class structure and the system of gender and racial power relationships (Carroll & Noble, 2001). People barred or deterred from regular access to education in various ways have always been users of distance education technologies, starting with its inception as correspondence course education in the 19th century and continuing today in high tech distance education classes with women comprising the majority of enrolled students (Hansen, 2001; Ossian, Christensen, & Rigby, 1968).

The promise of distance education technologies in the 21st century is for empowerment of students

through democratization of knowledge, personalized pedagogy, and convenient access. Despite the promise and the current high enrollments in distance education courses, attrition rate is high in North America and Europe (Carr & Ledwith, 2000; Serwatka, 2005), and this is a concern to educators and social policy makers, who search for reasons to account for the discrepancy between promise and practice. While recognizing men students have high attrition in distance education courses, too, the fact is women comprise the majority of distance technology users. If educators and policy makers hope to use distance education technology to reach female students (and garner the interest of more male students as well), then issues of gender in distance education technology need to be addressed. A female gendered perspective on distance education technology reveals a number of variables that explain women's disengagement and dissatisfaction with online educational delivery systems. Educators, secondary education institutions, and instructional software designers are some of the groups working to create and implement inclusive, constructivist, and rich multi-media instructional design (McLoughlin, 2001) that will accommodate a wide range of learner needs.

BACKGROUND

Educational technology associated with distance education reflects the evolution of human institutions and inventions, starting from mail delivery and evolving to CD-ROMs and PDAs. From its beginning in the 19th century, distance education stemmed from a scarcity of educational resources in an era with more rigid class and gender definitions than in the 21st century (Carroll & Noble, 2001; Gandle & Katz, 2004). Distance education, first known as *correspondence education* because course materials and lessons were conducted using the postal service, was directed toward nontraditional, under-privileged

and disadvantaged groups who did not have economic, geographical, or social access to education. Correspondence course users included people who were poor, rural, intellectually gifted, and female. In the U.S., distance education was modeled after European correspondence education, such as the program started by Isaac Pitman in Great Britain offering shorthand instruction. In 1892, the University of Chicago established a school of correspondence study that raised the reputation of distance education as an institution in the U.S. Most distance education schools in the United States in this time period were not the caliber of the University of Chicago, however. Often advertising their educational programs on matchbook covers, hence the derogatory appellation *matchbook colleges*, these schools were considered inferior to traditional education and often were second-rate and even charlatan. With the 20th century advent of new technologies, such as radio and television, however, correspondence education in general took on other forms and its respectability began to improve. As technology continued to evolve, using audio cassettes, video cassettes, cable television, and tapes, so, too, did correspondence education. The modern stage in correspondence education began in the 1970s with the creation of Open University in Great Britain, where print instruction was supplemented with audio-visual technology. Within this time frame, teleconferencing and computers began to be used as instructional mediums. In 1982, the International Council for Correspondence Education evolved into the International Council for Distance Education, and the term *correspondence course* dissolved.

Today distance education is a legitimate and mainstream pedagogical practice in K-16 education and employee training. Many educators, business leaders, and policy makers are firm in the view that, there is no significant difference in asynchronous learning networks (ALNs) from university (*brick and mortar*) settings in terms of learning outcomes (Allen & Seaman, 2003). Currently, in the early 21st century, distance education, along with its various technologies, is an integral part of education, specifically, higher education services, which are projected to reach 160 million students by 2025 (Hansen, 2001).

WOMEN AND DISTANCE EDUCATION TECHNOLOGY

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Women have taken advantage of distance education from the 19th century, when, in an era of educational rationing, depending on class, sex, and race, people were denied access to higher education and professional education. (Carroll & Noble, 2001). Now in the 21st century, women are the dominant user group of distance education, although they no longer depend on the postal system for delivery of course material. Instead, the computer is the major distance education technology with instructors utilizing various ALNs or course management systems (CMS), such as WebCT, Desire2Learn, and Blackboard, which allow students to access classes anywhere and any time they have Internet connection. Some instructors create their own CMS by placing material on their own individually designed Web sites, often with *a la carte* features added, such as discussion boards and chat rooms. The computer skills students need to engage with any of these courses are minimal. Orientation to the online environment is a major requirement, but once this is accomplished, a good deal of activity on the computer entails keying in text and handling the mouse. Although technical difficulties may intrude from time to time, most CMS are user friendly and designed to be problem free.

Despite women's long history as distance education students and user-friendly CMS, female interaction with distance education technology, specifically computers, is problematic. Generally, women lack confidence with computers and are anxious about encountering technical difficulties, although, ironically, they are more successful in completing online course than men, who tend to have greater confidence and proficiency with computers (Parker, 2003; Serwatka, 2005; Taplin & Jegede, 2001). Attrition in online education is high for women, and many express dissatisfaction with their online learning experience. Men students also experience high levels of attrition and dissatisfaction when it comes to distance education; however, given that the majority of distance education students are women, educators, cognitive scientists, and educational software designers are especially interested in deter-

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