

A Survey Of Distance Education Programs

A Survey Of Distance Education Programs

Offered By Post-Secondary Schools

Within a 150 Mile Radius

Of Chattanooga, Tennessee

Thomas J. Brown

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Introduction

Long distance education has been a part of instructional delivery for more than one hundred years. Beginning as correspondence study accompanying the establishment of national postal systems, distance education has undergone dramatic change fueled by the rapid and recent explosion of technology. This exponential growth in technology has provided educators with new delivery methods for instruction, allowing post-secondary schools to reach greater numbers of students through the enrollment of individuals who would ordinarily be unable to attend traditional on-site classes. Some distance education programs are best characterized as traditional correspondence courses, while others utilize the vast array of available technological delivery methods, such as audio/video cassettes, videoconferencing, broadcast television, and on-line classes.

Background

On-line education is the fastest growing delivery method for distance education. The advent of the World Wide Web in the early 1990s established the technological foundation for on-line instruction delivery methods. In less than a decade virtual colleges were being established by accredited university systems including: the California Virtual University, a consortium of about 100 colleges and universities offering over 1500 courses (Public Broadcasting System [PBS], n.d.); the Governors Open University System; and Jones International University (Loane, 2001). The emerging of learning portals in the late 1990s such as Blackboard, eCollege, and Hungry Minds also facilitated the rapid expansion of Web-based instruction (PBS, n.d.).

This boom in programs and courses provided via distance education was revealed in a 1999 United States Department of Education Report. The report revealed that in

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1998 there were 1,680 institutions offering 1,190 distance education programs. These programs involved 1.6 million students enrolled in approximately 54,000 courses.

According to Carnevale there was an 11% increase in the number of post-secondary institutions offering distance education courses from 1995 to 1998 (Carnevale, 2000).

Within the southeastern states similar trends have occurred. State of Georgia technical schools have participated in the Georgia Virtual Technical College since 1998. During this time both course offerings and student enrollment have mushroomed. With an initial enrollment of 138 students, this program boasted a total enrollment over 8000 by mid 2002. In 2002 course offerings exceeded 800 and there were a multitude of different programs available completely online. Most programs are certificate awarding, but there were also degree and diploma options available (C. Brock, personal conversation, June 6, 2002).

Post-secondary schools within the University of Georgia system are involved in distance education as well. In 1999 the University System of Georgia (USG) established a project called Georgia Global Learning Online for Business and Education (GLOBE). Formed to market and promote a variety of distance education courses, GLOBE according to Senior Vice Chancellor Dan Papp has been successful in accomplishing its intended objectives. The USG member institutions have increased course offerings by 177% and student enrollment has swelled 136%, mirroring national trends (University System of Georgia, 2003).

The Tennessee Board of Regents (TBR) governs a system of universities, community colleges, and technical schools. TBR post-secondary institutions participate in the Regents Online Degree Program. Twenty-seven technology centers, thirteen

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community colleges, and six TBR universities offer a wide array of technical certificates, associate degrees, bachelor degrees, and a Master of Education. All courses are offered entirely online and credits are transferable among the participating post-secondary schools (Tennessee Board of Regents Online Degree Program, 2003). In 2002 enrollment was estimated at 3000 and represented students from all over the United States and nine different foreign nations (S. Hasnian, personal communication, June 4, 2002).

The Alabama College System has also reflected similar trends in the growth of distance education programs. Dr. William Meehan president of Jacksonville State University, Jacksonville, Alabama, stated in a newspaper interview that much of the recent growth in enrollment was attributed to the increased number of distant learners (Anniston Star, 2002).

Fifteen of the post-secondary institutions in the 150 mile radius survey area are affiliated with the National Technological University (NTU). The NTU is an alliance of more than 50 universities offering over 1,400 courses. Founded in 1984 as an accredited "virtual" university, NTU began offering degree programs through the use of a satellite network. From its early alliance of seven universities, NTU has grown into a provider of graduate level degree programs and non-credit professional degree programs (National Technological University, n.d.).

Purpose Statement

The purpose of this study was to gather data regarding the current status of long distance learning programs offered by post-secondary schools within a 150 mile radius

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of Chattanooga, Tennessee. The study intended to report what programs of study and courses were being offered by post-secondary institutions within the specified geographic area. The survey area included post-secondary institutions in Alabama, Georgia, and Tennessee.

Significance of the Project

The results of this study can be used to evaluate the long distance learning programs that are currently offered by post-secondary schools within a 150-mile radius of Chattanooga, Tennessee. Distance education is relatively young in the history of education and has experienced rapid growth during the past several decades, particularly with regard to the online delivery of instruction. Distance education provides educational opportunities to individuals that are separated by distance and/or time, allowing instruction in remote locations. Distance education can offer instruction when there are concerns about cost-effectiveness. A handful of students wanting to take a foreign language could not justify the costs associated with hiring an additional instructor, but online or broadcast classes might be a realistic alternative. Distance education can also allow individuals to take classes when their work schedules prohibit attendance to traditional classes. If distance education is successful it should be extended to impact more students and program offerings of post-secondary schools.

Limitations

The limitations of the project included interviewing persons often perhaps unknowledgeable about long distance education and subjective responses reflecting a bias

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for or against distance education. The study is limited in scope to the interpretations of only those contacted which may or may not represent the intentions of an institution to expand or contract a distance education program.

This project was limited to accredited or well established post-secondary institutions and did not include distance education courses offered by high schools, unaccredited institutions, or degree granting institutions which may be deemed as "diploma mills."

Assumptions

It was assumed that respondents would be knowledgeable about long distance education programs offered through their respective post-secondary institution. It was also assumed that persons interviewed responded truthfully.

Definitions

ACS: The Alabama College System, which is composed of 21 two-year community colleges, 5 technical colleges, and one two-year university.

Asynchronous: Communication in which interaction between parties does not take place simultaneously.

Continuing education: Education that is usually not for credit, but which can be delivered on campus or at-a-distance.

Correspondence Study: Print-based coursework that is completed by a learner at home at their own convenience, but usually within a set timeframe. All assignments reading, class notes, written assignments, research, and some examinations—are completed independently. Students correspond with a school through the mail.

Digital: An electrical signal that varies in discrete steps in voltage, frequency, amplitude, locations, etc. Digital signals can be transmitted faster and more accurately than analog signals.

Distance Education: The concept of a student and instructor, separated by time and distance, using technology to complete instruction. See also distance learning.

Distance Learning: The desired outcome of distance education. See also distance education.

eCore: Online course offerings in core curriculum available to students through post-secondary institutions that are a part of the University System of Georgia.

Electronic Mail (E-mail): The transmission of messages from one computer user to another.

GLOBE: the Georgia Global Learning Online for Business and Education, formed

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in 1999 to market and promote a variety of distance education courses. The organization ceased to exist and its functions were assumed by the University System of Georgia in 2003.

Georgia DTAE: The Georgia Department of Technical and Adult Education. There are 35 technical colleges within the state of Georgia, which are a part of Georgia's system of technical colleges.

GVTC: the Georgia Virtual Technical College, a consortium of Georgia's Department of Technical and Adult Education post secondary educational institutions which offer fully accredited and transferable online courses for numerous degree, diploma, and certificate programs.

Instructional Television Fixed Service (ITFS): A band of 20 microwave-based, high-frequency television channels licensed through the Federal Communications Commission limited in range to 20 to 25 miles

Internet: A global information network connecting millions of computers. Also called the Net.

Multimedia: Any document that uses multiple forms of communication, such as text, audio, and/or video.

Real-time: Communication in which interaction between parties takes place simultaneously. Also referred to as synchronous.

Satellite TV: Video and audio signals are relayed via a communication device that orbits around the earth.

Senior university: A two-year post-secondary institution offering only the final two years of a degree program. Students all transfer from either two-year community

colleges or from other four-year institutions.

Synchronous: Communication in which interaction between parties takes place simultaneously. Also called real-time.

RODP: Regent's Online Degree Program, an accredited degree program offered by Tennessee Board of Regents' post-secondary institutions.

TBR: The Tennessee Board of Regents, a governing body for 27 technology center, 14 community colleges and technical institutes, and six universities in Tennessee.

Teleconferencing: Two-way electronic communication between two or more groups in separate locations via audio, video, and/or computer systems.

Telecourse: Fully accredited, video-based courses delivered via television. Telecourses are complete and integrated instructional systems that generally include the television programs, a textbook, study guide, faculty manual, and other instructional materials.

UAS: The University of Alabama System composed of 9 state universities.

USG: the University System of Georgia, which consists of 34 colleges and universities, governed by the Board of Regents.

Videoconferencing: Two-way electronic communication between two or more groups in separate locations via telephone lines.

Virtual University: A higher education institution that has no physical classrooms. Instruction at a virtual university is delivered to students at-a-distance.

Web: A term short for World Wide Web.

Webcasting: Uses push technologies to simultaneously broadcast live video and/or audio via the Internet to multiple computers. .

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World Wide Web (WWW): A global, networked system that serves data images, documents, multimedia, via the Internet.

Nature and Sources of Data

The data gathered for this project included the number of degree/diploma/certificate programs offered by institutions in the survey area, and total number of course offerings. Data were also gathered as to the number of students served by distance education programs and types of instruction delivery modes. Information was also collected that pertained to institutional plans for expansion, contraction, or elimination of distance education.

Data were obtained through the following methods: Interviews conducted through telephone conversations and email with individuals associated with long distance learning programs. Information was also gathered from web sites of the post-secondary institution within the geographic survey area.

Chapter 2.

Related Research and Literature

A History of Distance Education

Distance education has provided learning opportunities for more than 150 years. The definition of distance education lacks uniformity among educators and researchers. The term has been used to describe a wide variety of educational situations and has referred to instruction that utilizes correspondence, radio, television, computer, and off-campus classrooms (Valentine, 2002). One writer defined distance education as “a method of learning in which the learner is physically separated from the teacher and the institution sponsoring the instruction” (Mielke, 1999, p. 2). Increasingly, however, distance education has come to refer to any instruction that takes place “when teacher and student(s) are separated by physical distance and technology...is used to bridge the instructional gap” (University of Idaho, guide no. 13). This view is shared by others, who viewed distance learning systems as remote sites receiving instruction via satellite, cable, or telephone lines (Berg & Kearsley, 2003; Hancock and Betts, 1994). The 1999-2000 National Post Secondary Student Aid Study in its student survey questionnaire stated that distance education was instruction “delivered off campus using live interactive TV or audio; prerecorded TV or audio; CD-ROM or a computer based system such as the Internet, email, or chat rooms” (United States Department of Education, 2003, p. 2).

According to the California Distance Learning Project (CDLP) there are five elements that often define distance education:

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- the separation of teacher and learner during at least a majority of each instructional process,
- separation of teacher and learner in space and time
- the use of educational media to unite teacher and learner and carry course content,
- the provision of two-way communication between teacher, tutor, or educational agency and learner, and
- volitional control of learning by student rather than distance instructor (p.2)

Definitions of distance learning or education can affect survey results. Some researchers may include traditional correspondence coursework in their working definition which will result in different survey results of distance education programs. The California Distance Learning Project's definition is (n.d.):

Distance Learning (DL) is an instructional delivery system which connects learners with educational resources. DL provides educational access to learners not enrolled in educational institutions and can augment the learning opportunities of current students. The implementation of DL is a process which uses available resources and will evolve to incorporate emerging technologies (p. 1).

From an initial correspondence course instructing British students in Isaac Pitman's shorthand system, distance education has provided millions of individuals with an opportunity to take courses in virtually any discipline imaginable. It has been

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estimated that approximately 130 million Americans have been enrolled in distance courses since 1890 (Distance Education Training Council [DETC], n.d.). The growth and development in distance education has accompanied the growth of the increasingly industrialized economies of the United States and Europe during the 19th and twentieth centuries. The National Center for Educational Statistics estimated distance education enrollment at 3,077,000 in approximately 127,400 different courses for all two-year and four-year post-secondary institutions during the 2000-2001 academic year (National Center for Educational Statistics [NCES], 2003).

In its original print form distance education developed alongside Britain's public postal system during the mid 1800s. Isaac Pitman's students would submit their shorthand assignments through the penny post system. Within a few years shorthand and language courses were being marketed throughout most of Europe. In 1852 Isaac's brother Benn brought the Pitman Shorthand System to the United States. More growth in this delivery method occurred in the late 19th century as Anna Ticknor formed the Society to Encourage Studies at Home with an estimated enrollment of 10,000, the Chautaugua Institute utilized correspondence study to train Sunday school teachers. Additional impetus resulted from with the awarding of bachelor and graduate degrees to students in absentia by Illinois Wesleyan University. In 1890 the Collier Engineer School of Mines, later becoming the International School of Correspondence (ICS), offered home study in the area of mine safety. By 1923 ICS boasted over 2.5 million enrollments in home study courses (Public Broadcasting System [PBS], n.d.). Efforts by William Harper Rainey resulted in the University of Chicago offering college level courses, perhaps the first real

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distance education college program ever offered (McIsaac & Gunawardena, 1996; Kerka, 1996).

The armed services have long been involved in distance education. In the 1920s the United States Marine Corps developed correspondence courses offered through the Marine Corps Institute. The Institute has continued to exist and has grown to offer approximately 150 courses post-secondary by 2003 (PBS, n.d.). Other armed services have also been instrumental in promoting distance education programs. The Department of Defense created the Defense Activity for Non Traditional Education Support (DANTES) to provide a "wide range of nontraditional education programs critical for Service members who need alternatives to degree requirements when classroom courses are unavailable or when work schedules or duty locations do not permit class attendance" (Defense Activity for Non Traditional Education Support [DANTES], n.d. p. 1). Approximately 300,000 servicemembers are enrolled annually in post-secondary courses, many of which are delivered by non-traditional means. The Department of Defense also established the Servicemembers Opportunity College (SOC) in 1972.

(The SOC) is a network of approximately 1,550 member colleges and universities that subscribe to criteria designed to meet the higher education needs of members of a mobile military population. Member schools have minimum residency requirements, award credits for military training and experience, readily award credit for learning demonstrated through nationally recognized testing programs, and accept credit transferred from other member institutions (Department of Defense [DOD], n.d.).

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During the early portion of the twentieth century, significant growth in distance education aroused concerns about the quality of instruction and the need for established standards. There were no accreditation agencies for distance programs and there were increasingly questionable (if not unethical) practices being promulgated by some correspondence schools. These concerns led to the formation of organizations, which served in various capacities including that of coordinator, accreditation body, watchdog, and clearinghouse of information. The National Continuing Education Association (NUCEA) was established in 1915 to "coordinate the correspondence and extension courses of its member schools" (PBS, n.d. p. 1). The NUCEA dealt with such issues as the acceptance and transfer of credits, the establishment of standards, and the development of new pedagogical models. The National University Extension Association began to accredit college and university programs in 1916 (PBS, n.d.).

The National Home Study Council (NHSC) was formed in 1926 by sixteen institutions under the sponsorship of the National Better Business Bureau. Bates (2000) stated that correspondence schools in the United States had such a bad reputation in the 1920s and 1930s, that many universities offering distance education programs changed the name of their programs to "guided independent study" in an attempt to distance themselves from the unscrupulous marketers of education. The NHSC organization, with its focus on concerns about quality and unethical practices, helped persuade the United States Fair Trade Commission to establish the "Fair Trade Practice Rules for the Private Home Schools" in 1927 (California Distance Learning Project [CDLP], n.d.; PBS, n.d.). These rules have affected primarily private for-profit schools offering correspondence training programs rather than regionally accredited post-secondary public and private

colleges and universities. The NHSC, eventually renamed the Distance Education and Training Council, established its accreditation commission in 1955. The Accrediting Commission of the DETC received approval by the United States Department of Education as the "nationally recognized accrediting agency" in the late 1950s. As of December 2003, 79 institutions were accredited by DETC's Accrediting Commission. The DETC's mission statement "is to promote, by means of standard setting, evaluation, and consultation process, the development and maintenance of high educational and ethical standards in education and training programs delivered through distance learning" (DETC, n.d. p. 1).

For many years print was the only available method of instructional delivery; however, this changed as new methods were developed in the wake of the transforming technologies of the 19th and 20th century (Valentine, 2002). Bell's development of the telephone and the advent of radio broadcasting opened up new channels of distribution for instruction. During the early twentieth century, the airways were utilized for instructional delivery with the development of instructional radio. Broadcasting over the airways began noncommercial and a number of the early pioneers in radio were educational institutions (PBS, n.d.). By the year 1923 over 600 radio stations were issued licenses and there were approximately one million homes with receivers (Gross, 1989).

In 1917 the broadcasting facilities owned by the University of Wisconsin provided programming to the agricultural community around Madison. The interest in radio among educational institutions sparked a flurry of activity in the early 1920s, resulting in the establishment of 74 stations by the end of 1922. Many colleges and universities initially used these facilities to broadcast news, music, and weather.

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Additionally radio was used to establish broadcasting schools, to support extension services and to provide educational programming (Gross, 1989). Between 1918 and 1946 there were 202 licenses granted to universities, colleges, and school boards (PBS, n.d.).

The use of radio as a delivery system was greatly enhanced following World War II. United States soldiers discovered German radio stations during the war which were automated and operated without personnel. The Germans had developed audio recording tape which was far superior to the sound quality afforded by the wire recorders used in the United States at the time. Audiotape could also be easily spliced in contrast to recording wire, which required the wire to be tied and then fused with heat (Gross, 1989). Quality audio recordings enabled institutions to develop programs for use at times other than at airtime. Educational materials could be produced in small segments and then later assembled into the proper sequence. Audiotapes in time led to the development of audiocassettes and the subsequent creation of correspondence courses that were still print based but supplemented with audio. Distance language courses were greatly enhanced and traditional lecture courses could be heard outside the classroom (Cyr, 1997; Gross, 1989; Valentine, 2002).

The telephone, although invented in 1876, was not utilized widely for distance learning until the 1980s and 1990s with the maturing of teleconferencing technologies. Teleconferencing or audioconferencing provides two-way voice communication using a simple telephone amplifier and telephone service. The framework for teleconferencing was laid in the 1950s and 1960s with the development of the transistor and the launching of communications satellites (CDLP, n.d.; Gross, 1989). There have been institutions utilizing traditional telephone service for instructional delivery since the 1930s.

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Telephone service was the primary method of distance education delivery throughout the state of Wisconsin well into the 1980s (Cyrus, 1997).

The growth of telephone service for distance education delivery has accompanied the greater standardization of the telecommunications industry and the increase in capacity resulting from the adoption of fiber optics, microwave transmission, and the widespread availability of communications satellites (Rominszowski, 1993).

Teleconferencing or audioconferencing utilizes telephones and audio bridges to link students across the world. Teleconferencing has included the use of dedicated lines or public lines (Cyrus, 1997; Schamber, 1988). Graphics have also been transmitted along with audio signals over telephone lines. Audiographic delivery, as this method has been dubbed, involves the conversion of a written or drawn object into an audible tone, which is converted back into a graphic by a decoding device at the reception site. The audio portion is received over a second telephone line and two-way audio allows the instructor to interact with the students (Picciano, 2002; Schamber, 1998).

During the 1920s researchers and inventors had been able to construct working models of televisions, but another thirty years would pass before a television industry developed. The first commercial broadcast occurred on April 30, 1939 in conjunction with the opening of the World's Fair in New York City (World Book Encyclopedia, 1960). The early years of the television industry were overshadowed by commercial concerns, resulting in very little educational use (Gross, 1989). One of the first instructional uses of television dates back to 1934 when the State University of Iowa began broadcasting courses (PBS, n.d.). During World War II television entered a phase of inactivity, with only six stations remaining on the air. Following the end of the war,

resumption of the television industry was slow due to material shortages (Gross, 1989). In 1946 there were approximately twelve television stations and only several thousand receivers. By the mid 1950s, the number of stations had mushroomed to 450 with an estimated 100,000,000 viewers (World Book Encyclopedia, 1960).

In the early 1950s several universities began broadcasting college credit courses utilizing commercial television stations. Iowa State University constructed a broadcasting facility in 1950 that the university "...ran partially as a commercial venture" (Gross, 1989, p. 114). In 1953 KUHT, a station operated by the University of Houston was granted the very first educational television license. By the mid 1950s there were only nine educational television stations, increasing to a total of forty-five stations by 1960 (Gross, 1989). The Ford Foundation provided a good deal of funding for educational television in the early years. Funding by this organization helped to establish one of the first degree programs available through at-home viewing. This program, known as Chicago TV, College was a fully accredited two-year degree program (Gross, 1989).

However, the real impetus to broadcast television instructional delivery did not come until 1960s with the passing of the Educational Broadcasting Facilities Act, the creation of Instructional Television Fixed Service (ITFS), and the Public Broadcasting Act (Gross, 1989; PBS, n.d., p. 5). The Educational Facilities Broadcasting Act funneled approximately \$32 million dollars worth of matching funds into the development and construction of educational television at a state level. This act nearly doubled the number of educational television stations within a few years (Gross, 1989). Within the South, state ownership became commonplace with other states following "Alabama's lead of owning one or more stations" (Gross, 1989, p. 116).

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ITFS was the result of a resolution by the Federal Communications Commission that reserved "selected transmission frequencies to be licensed to local credit-granting institutions for educational purposes" (PBS, n.d. p. 5). The selected frequencies, or channels, could be used for the transmission of instructional or entertainment programming (PBS, n.d.).

Television as a mode of instructional delivery has taken many forms. Low power television (LPTV), popular in rural areas, is a low cost broadcast system that covers approximately ten to twenty square miles. The Federal Communications Commission in 1980 first authorized LPTV (Gross, 1989). ITFS is a one or two-way system that utilizes microwave transmitters, with a range of approximately twenty-five miles. Allocated channels are usually available to colleges and universities for educational programming (PBS, n.d.) Closed circuit television (CCTV) traditionally popular on campuses is a "private hard-wired system" (Schamber, 1998, p. 1). Other types of television transmission include satellite systems and cable television.

According to the National Survey on Distance Education, in 1992 broadcast television accounted for most of distance instruction among post-secondary institutions. In 1990 community college respondents reported that public television broadcasting made up approximately 63% of the instructional delivery for their distance learning programs (Parrott, 1995). However, developments in fiber optics and satellite systems provided greater interactive capabilities that resulted in the development of many other successful televised instructional programs (Mielke, 1999).

The personal computer that has seemingly become commonplace in the office and classroom is a relatively new device compared to radio, telephone, and television.

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The roots of the modern computer can be traced back to a vacuum tube device created at Iowa State University. This bulky machine stored and computed data for doctoral students. During World War II, computers were employed by the armed forces to calculate ballistic tables for bombing. Following the war these devices were sometimes used by universities and government (Gross, 1988).

In 1947 the development of the transistor revolutionized the future of electronics. The replacing of vacuum tubes which were bulky and generated a lot of heat, with dramatically smaller and ultimately cheaper transistors, allowed engineers to design and create smaller and more efficient electronic devices (Ramos, Shroder, & Beheler, 1996) In 1958, International Business Machines (IBM) began manufacturing computers that utilized transistors instead of vacuum tubes. Sales figures were promising as businesses purchased the devices (Gross, 1988).

Populations Served by Distance Education

Long distance education courses and programs have typically been designed to serve the needs of the individual learner. Whether delivered by the postal service or the Internet, distance learners typically share several characteristics. Distance education has traditionally attracted students requiring time and place flexibility. Students unable to attend traditional classes at a college or university campus because of time constraints or work schedules have typically filled the ranks of distance learners. Service members have also been represented in distance education programs as the nature of military service often prevents the completion of a typical course of study (Bates, 2000; Distance Learning Resource Network [DLRN], 2003; Kerka, 1996; Loane, 2001). In some instances off campus learning opportunities have discovered a "hidden market" of older

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adults and recent high school graduates in smaller communities that are unwilling to go to larger cities for educational opportunities (Valentine, 2002). A majority (70%) of higher education members of the National Education Association (NEA) who teach distance courses reported they believe distance education reaches many students who cannot take traditional college courses (National Education Association [NEA], 2000).

The students most likely to be enrolled in distance education programs or courses are, according to Diaz (as cited by Howell, Williams, & Lindsay, 2003), "generally older, have completed more college credit hours and more degree programs, and have a higher all-college GPA than their traditional counterparts" (p. 2). The 1999-2000 National Postsecondary Student Aid Study revealed that "being independent, older, married, having dependents,..." were associated with "higher rates of participation in distance education" (United States Department of Education [USDOE], 2003). Other factors identified with higher rates of participation in distance education were being an undergraduate student age twenty-four or older, and income levels greater than \$50,000. There were no apparent differences in the participation rates of students with disabilities and without disabilities (USDOE, 2003).

Picciano (2002) stated that many long distance programs in the United States have targeted older students, patterned in part after the British Open University model designed primary for adult learners. In contrast to Picciano a NEA study reported that higher education members teach as many older as younger students. The survey revealed that the "largest percentage of courses (38%) had an equal mix of students over and under 25 years of age. The remainder are evenly divided between mostly under 25 years of age (27%) and above 25 years of age (27%)" (NEA, 2000, p. 7). Distance learners have also

been characterized as being "more intelligent, emotionally stable, trusting, compulsive, passive, and conforming than traditional college students" (Summers, 1997, p. 2).

According to Bates (2000), the college students of today are interested "in learning that can be done at home and fitted around work, family, and social obligations" (p. 5).

Surprisingly, many students that enroll in distance courses are also enrolled in traditional classes. According to Pelz, the coordinator of online courses at Herkimer Community College, approximately 60% of the students enrolled in online courses are also taking traditional college courses (Young, 2002). The National Education Association reported in its year 2000 study of higher education members, approximately 63% of distance learning students were enrolled at "another campus of the same institution" (NEA, 2000, p. 8).

A study by the National Education Association (2000) revealed that among the NEA members teaching online courses, 56% "reported that most of their distance learning students live within one hour of campus... 32% report that their distance learning students live mostly in the state but more than an hour's drive away...(and) only 4% of the distance learning faculty report that most of their students are from out of state" (NEA, 2000, p. 8).

There has been a growing trend in the numbers of females enrolled in post-secondary institutions. Currently more women (57%) are enrolled in college than men (Howell, et al., 2003). Distance education has also attracted greater numbers of women than men (National Center for Education Statistics [NCES], 2002; Picciano, 2002; Summers, 1997; United States Department of Education, 2003). Department of Education statistics released in 1997 revealed that typical distance learners were between the ages of

25 and 50, married and female (Picciano, 2002). D. Harrison, Dean of Instruction/Distance Education at Northwestern Technical College, Rock Spring, Georgia, has also reported a higher enrollment of females in distance education courses. According to Harrison the majority of distance learners are female, approximately 30 years of age, with one or two small children (personal communication, June 7, 2002).

The California Distance Learning Project (CDLP, n.d.) has offered several reasons for the popularity and growth of its distance education including: the accommodation of various learning styles; providing opportunities for those that fear classrooms; the lack of public transportation in many areas; concerns about safety in many communities; and distance education can "can attract and serve lower level learners" (p. 3).

Reasons cited by the Distance Learning Resource Network (DLNR) for distance learning included the following: a need for access to certain courses which may not be available; a need for flexibility and choice; and flexible access to ongoing professional development (Distance Learning Resource Network [DLNR], 2003). The need for professional development and lifelong learning has been considered as one of the most significant factors in the growth of distance education. According to Bates (2000) the typical lifelong learner is employed in the high-tech or service industry and has a family. These individuals typically are trying to stay abreast of recent developments within their fields and balance the demands of family and work simultaneously (Bates, 2000; Wonacott, 2001). Employers are often willing to help fund employees' continuing education in order to have a well trained and knowledgeable work force (Bates, 2000).

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The need for ongoing education in the workplace is evidenced by the establishment of institutions marketing noncredit continuing education courses. Post-secondary institutions have created for-profit divisions to "develop and market noncredit, non degree products and courses globally" (National Governors Association [NGA], 2001, p. 3). The formation of the independent virtual college, the National Technical University (1984), has allowed a consortium of 51 schools to offer masters degree courses to subscribing corporations. The formation of a for-profit NTU corporation in 1999, resulted in the development and marketing of noncredit non-degree courses. The NTU offers a over 1400 academic courses and hundreds of professional development courses with a customer base of more than 200 corporations and government organizations (NGA, 2001).

It has been estimated that Fortune 500 companies spend excess of 40 billion dollars a year for distance education programs (McIsaac & Gunawardena, 1996). Other developers and marketers of courses such as ed2go™ often partner with two and four-year colleges to provide noncredit non-degree courses online (C. Cameron, personal communication, June 11, 2002). For example, Floyd College in Rome, Georgia contracts with ed2go™ to provide approximately 200 continuing education courses. Floyd College then 'resells' the classes to students (M. Welch, personal communication, June 4, 2002).

Pennsylvania State University, which has long been involved in distance education, has also entered the ranks of institutions marketing courses of study to corporations, associations, and other organizations. Pennsylvania State University utilizes a combination of Internet, satellite, interactive videoconferencing, and streamed video to provide instruction to students at off campus Pennsylvania State University locations and

globally. Penn State offers custom programs, promotion of the programs to employees, and "coordinated direct billing arrangements." The university states that "This one-to-one relationship assures that your customer satisfaction is our highest priority" (Pennsylvania State University, n.d., p. 1).

Customized continuing education programs have also been developed and marketed by state colleges and technical schools. Tailored to meet the specific needs of a corporation, customized distance education courses have become increasingly common. The Georgia Virtual Technical College, a consortium of Georgia's technical colleges, has partnered with Bell South Corporation to provide continuing education courses aimed specifically at Bell South Employees. Bell South has an arrangement with six post-secondary institutions for online instructional delivery at no cost to employees (Bell South Academy, n.d.; Georgia Virtual Technical College [GVTC], n.d.).

Delivery Methods of Distance Education

The delivery of distance education can take many forms ranging from traditional correspondence courses consisting solely of printed materials to interactive two-way television. Each delivery system possesses particular strengths and weaknesses, which should be considered when designing a long distance learning program (Hancock & Betts, 1994; University of Texas Telecampus, 1998).

Perhaps the most familiar type of long distance education delivery has traditionally been correspondence study. Print-based correspondence study was the predominant delivery method for nearly 100 years until radio and television became popular. Correspondence distance learning has relied primarily on print as the delivery medium, but increasingly printed materials are being accompanied by audio and

videotapes (Valentine, 2002). At the post-secondary level, students traditionally enroll, receive course syllabus, texts, lesson submission forms and other materials via the mail. The majority of accredited colleges and universities have required proctored exams for college level for-credit courses (Cyr, 1997; Kerka, 1996; McIsaac & Gunawardena, 1996; Mielke, 1999).

Print-only delivery is not technology dependent, which allows access by learners lacking computers, video/audio equipment, and/or television. Printed materials can be low cost and provide for self-paced study virtually anywhere. However, print-only learning neglects the differences in learning style which may exist among students (Cyr, 1997; Kerka, 1996).

Some of the advantages that have been associated with print-based distance education are: cost effectiveness (Picciano 2002; University of Idaho [UI], 2003); ease of use (Picciano 2002; UI, 2003); time-effectiveness (UI, 2003); non-threatening (UI, 2003); familiarity (Picciano 2002; UI, 2003); and self paced (Picciano 2002). On the other hand, negative aspects that have been associated with print-based distance learning include: limited view of reality (UI, 2003); passive and self directed requiring greater motivation (Picciano 2002; UI, 2003); lack of feedback/noninteractive (Picciano 2002; UI, 2003); and reading skills dependency (Picciano 2002; UI, 2003).

Print "is the foundational element of distance education programs and the basis from which all other delivery systems have evolved" (CDLP, n.d., p. 1). In its various forms, print has continued to be a component of other forms of distance learning including: course syllabi, textbooks, case studies, study guides, supplemental resources, and workbooks (CDLP, n.d.; Picciano, 2002; UI, 2003).

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The proliferation of new and cheaper technological delivery systems has expanded the options available to long distance learning programs. Audiotapes have become a popular form of instruction for long distance learning. Initially, audiotapes found a niche in foreign language instruction and have been widely utilized with the delivery of courses traditionally considered to be traditional on-campus lecture courses. Audiotapes can be produced inexpensively and have been very effective in combination with printed materials (Cyrus, 1997; Picciano, 2002). Audiotapes have declined in use as other technologies such as videocassettes and web-based modes have become more popular. However, audiocassettes are still used often in conjunction with correspondence course delivery according to J. Chastain at Tennessee Temple University (personal communication, May 31, 2002).

Advantages attributed to the use of audiocassettes include: ease of use; portability; low cost; and self-pacing (Picciano, 2002). Audiocassettes, it has been pointed out, do not provide for interaction between student and teacher, are passive, and require printed materials in the form of study guides or explanatory materials (Picciano, 2002).

Other types of audio transmission include radio, shortwave radio, telephone and telephone conferencing, and voice mail. According to the Agency for International Development radio has been more cost-effective than textbooks or teacher delivered instruction (*Summary of Research on Radio*, n.d.). Radio delivery can be a low cost provider of instruction, both on a per pupil basis when many are served and on a total cost basis if a low-power broadcasting unit is utilized. For instance a low cost FM broadcasting unit which could serve a small Caribbean island can be purchased for less

than \$500. There currently exist a great number of radio broadcast towers. Most households in first world countries as well as many in the third world already own radios. Broadcast instruction generally relies heavily on printed materials such as study guides and textbooks. Though non-interactive when used alone, radio can easily be combined with other delivery systems such as telephone and shortwave to provide interactive capabilities (Cyrs, 1997; McIsaac & Gunawardena, 1988; Picciano, 2002).

McIsaac & Gunawardena (1988) stated that radio "remains an underutilized medium" (p. 1) in the United States but in many developing countries radio has proven to be a very effective means of delivery for instruction. Valentine (2002) reported that in China traditional education methods have been unable to keep pace with demand, which led to the development of a radio and television delivery system that serves "1.5 million students, two-thirds of which are in a degree program" (p. 2). Radio has also been employed by Johns Hopkins University for its Neighbourhood Health Committee program in Zambia and the Radio Distance Learning Program for Community Health Workers in Senegal. Radio broadcasts have provided health education programming to community based health workers, thus improving their skills and awareness of health issues affecting their populations. Topics have included STDs, HIV/AIDS, transmission of diseases, and prenatal health (Johns Hopkins University, n.d.). Siaciwena (2000) mentioned that the Zambian Radio Farm Programme has reached "rural households never visited by agricultural extension officers" (p. 1) and has helped an estimated 21,000 farmers improve their farming practices.

In addition to cost and instructional effectiveness, other advantages have been attributed to the educational uses of radio. Radio is a familiar technology to most people.

Millions of people across the globe own radio receivers. Live broadcast radio has easily been combined with print, and with interactive shortwave and telephone (Cyrus, 1997).

Audioconferencing or interactive audio is a relatively inexpensive method of instruction delivery which has been used successfully. Audioconferencing provides interactive capabilities by connecting students' telephones to a central telephone bridge that allows for discussions and presentations. Additionally, interactive audio has also been a very cost-effective way to utilize guest speakers and experts in content (University of Idaho, 2003). Audioconferencing which is non-graphic and typically requires development time, does require printed materials or handouts to be sent prior to presentations. However, it has been viewed as very cost effective and perhaps the least expensive delivery option when compared to other teleconferencing technologies (Picciano, 2002).

The technology used for audioconferencing can also be applied to video conferencing (Cyrus, 1997; Mielke, 1999; Picciano, 2002). Schamber (1988) has described video conferencing as "a full motion, full color system" (p. 1). Video conferencing utilizes various delivery technologies, including telephone, satellite, cable, dedicated fiber optics, and computer/Internet (Picciano, 2002). In the 2000-2001 academic year, 51 percent of post-secondary institutions offering distance education utilized two-way video combined with two-way audio for instructional delivery (National Center for Education Statistics, 2002). Videoconferencing or video teleconferencing according to McIsaac and Gunawardena (1996) can "create a 'social presence' that closely approximates face-to-face interaction"(p. 3). Picciano wrote (2002) that videoconferencing "provides all the

benefits of television and in addition allows the audience to interact in real time with the instructor and other students" (p. 176).

In the past, video conferencing has been utilized by two and four-year colleges in Georgia to keep medical professionals abreast of new developments, to provide general course requirements to off-site locations, and to serve the continuing education needs of the local communities. All University of Georgia System schools have been equipped with interactive classrooms known as Georgia Statewide Academic and Medical System sites, or GSAMS, funded by state grant monies. Through this network of two-way audio/video interactive classrooms, up to sixteen sites can be linked (K. Darnell, personal communication, June 5, 2002). There were more than 370 GSAMS sites in 1999.

GSAMS was at that time and remains the largest distance learning and healthcare network in the world. The GSAMS system links medical providers, post-secondary institutions, technical institutes, prisons, Georgia Public Television, Zoo Atlanta, and some school districts (McKenzie, Chester, Kirby, Guarino, Davidson, & Ekhaml, 1999).

The GSAMS program, as originally envisioned, was seen as a way to provide regular updates about new techniques and practices to medical professionals (Picciano, 2002), but this network now serves a variety of continuing education needs (K. Darnell, personal communication, June 5, 2002). Other states that have developed extensive video conferencing networks include Oklahoma, Iowa, Wisconsin, Maryland, and Florida (Picciano, 2002). The state of Alabama developed their Intercampus Interactive Telecommunication System in 1990. This interactive video network connects "universities, community colleges, area high schools, and other agencies" (University of Alabama, 2001, p. 1).

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Several colleges and universities have established video conferencing degree programs. According to B. Dodd, Director of Continuing Education, the use of video conferencing as a mode of instructional delivery began in 1993 at the University of Tennessee at Chattanooga. As of the year 2002, both the Criminal Justice program and the Master of Business Education could be completed entirely through interactive video (B. Dodd, personal communication, June 13, 2002). The University of Alabama has also developed degree programs available through interactive delivery. Degree programs have included post-graduate degrees in taxation law, rehabilitation counseling, health studies, and a specialist degree in educational leadership (University of Alabama, 2001).

There have also been college level for-credit courses provided to high schools via video conferencing. Cleveland State Community College in Cleveland, TN, for example, has begun offering college courses to area high schools (S. Hasnain, personal communication, June 4, 2002), as have some post-secondary institutions within the Alabama system through the Early Scholars Program (University of North Alabama, n.d.).

As a synchronous delivery mode, video conferencing offers the benefits of interaction and the use of graphics, but it is one of the more expensive forms of distance education and requires complex technology (McIsaac & Gunawardena, 1996; Picciano, 2002). Some institutions, according to S. McDowell of the Center for Distributed Learning at Chattanooga State, are moving away from interactive television or video conferencing for two main reasons: other technologies have improved and student prefer other delivery methods (personal communication, May 31, 2003).

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The delivery of instruction can also be accomplished via video technologies, such as videocassettes, compact disks (CDs), digital versatile disks (DVDs), and television transmission. Many instructional programs either rely primarily on video or use it to enhance other delivery methods. Prerecorded video instruction delivery allows for self-pacing and is easy for the student to use, but videocassettes, CDs, and DVDs do not provide for interaction between the student and instructor. Moreover, like audio technologies, video requires the use of printed materials (Cyrs, 1997; Picciano 2002).

Trends and Preferences in Methods of Delivery

Of post-secondary institutions offering distance education in the 12-month school year 2000-2001, 41 percent utilized videocassettes as the primary delivery of instruction. CD-ROM technology was the primary delivery mode of 29 percent, and multi-mode approaches of 19 percent (National Center for Education Statistics, 2002). Videocassette or one-way prerecorded video was one of the more popular modes for instructional delivery in 1995, but it has since been surpassed by newer technologies, most notably Internet and computer based delivery methods (Wonacott, 2001). Tennessee Tech offers undergraduate and graduate electrical and computer engineering courses in either videocassette or digital forms such as PowerPoint viewed over the Internet (Tennessee Tech, n.d). Some institutions have begun transferring videocassette material to CD-ROM form in keeping with growing use of computer technology (S. McDowell, personal communication, May 31, 2002).

Video delivery of instruction has grown in use along with new developments in technology. Satellite uplinks and digital technology in conjunction with traditional television have revolutionized long distance learning programs. Television technologies

provide for mass distribution of instruction and this mode of delivery is learner friendly. One type of instructional television is Fixed Service or ITFS. This non-interactive medium utilizing microwave transmission is limited to short range (25 miles) and is subject to interference from weather conditions. ITFS also referred to as "narrowcast" can also be coupled with cable systems and satellite downlinks and be used to broadcast live and recorded teleclasses (Picciano, 2002). ITFS has utilized both live and videotape instruction. When a "live" class is being transmitted, instructors and students can interact using telephone systems (Cyrus, 1997). ITFS is expensive and requires special transmitters and receiving devices. However, this delivery mode has proven to be effective in rural areas and regions where interference from weather conditions is minimal (Picciano, 2002).

Many post-secondary institutions have utilized cable delivery for "live" and video recorded classes. Typically, special access channels are used on the existing cable system to distribute courses to the community (Schamber, 1988). Often times, a companion program develops in the form of courses offered on videocassette (L. Haney, personal communication, June 4, 2002). Shortcomings that have been associated with cable transmitted instruction include the need for print materials, a lack of interaction opportunities, and the need to have support systems in place (CLDP, n.d.; Picciano, 2002).

Computer technology is a rapidly growing alternative delivery method for long distance instruction. Computer-based instruction includes software programs, email, Web based courses, and videoconferencing. The dramatic improvements in personal computers (University of Idaho [UI], 2003), the creation of the World Wide Web in the

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1990s, and the subsequent development of software support programs such as Blackboard, WebCT, and Lotus Notes have resulted in the exponential growth of web based instructional delivery (Bates, 2000). The National Education Association reported in its June 2000 "Survey of Traditional and Distance Learning Higher Education Members" that nearly one half of distance learning courses taught by members surveyed were web-based (NEA, 2000). Increasingly the Internet has become the preferred mode of distance instructional delivery. Wood (2001) reported an increase from 22 percent to 55 percent of asynchronous web-based courses among institutions offering distance education from 1995 to 1990. In accord with these findings, are figures from the National Center For Education Statistics (NCES). In 2002, the NCES revealed that more students used the Internet than other instructional delivery modes for distance learning (NCES, 2002).

The growth of web-based instruction is also confirmed by enrollment statistics of post-secondary institutions. The Georgia Virtual Technical College, an online technical institution, has grown from an initial enrollment of 132 in the fall quarter of 1998 to more than 4,000 during the winter quarter of 2001. Similarly, the number of course offerings has mushroomed, increasing from 17 to 352 over the same time period (Georgia Virtual Technical College [GVTC], 2001). C. Brock, director of GVTC reported in 2002 that course offerings exceeded 800 (personal communication, June 6, 2002). Tennessee State post-secondary schools governed by the Board of Regents participate in the Regents Online Degree Program. As in Georgia, this online distance learning program has experienced rapid growth. Estimated enrollment for 2002 exceeded 3,000, representing students from all over the United States and nine different foreign countries according to

S. Hasnain at Cleveland State Community College (personal communication, June 4, 2002).

The number of institutions and households with computers and Internet access is ever increasing. It has been estimated that there are more than four million computers linked to the Internet (University of Idaho [UI], 2003). This trend was reflected in the 2002 Digest of Education Statistics, which reported that computers have increased in the workplace, the public schools, and post-secondary institutions (National Center for Education Statistics [NCES], 2002). Student access to computers has also increased dramatically. In 1993, there was approximately one computer per twelve students. By 1998 this ratio was one to six. This rapid growth in computer usage has help facilitate the adoption of computer technology for instructional delivery (Kerka, 1996).

Computer instruction incorporates print, audio, and video and may be synchronous or asynchronous. Computer-based instruction can provide opportunities for interaction, self-pacing, and multimedia applications. Computer based instruction is expensive, involves complex technology, and requires development time (Kerka, 1996). Internet instruction typically relies heavily on written communication. "People who have poor writing skills may be at a disadvantage in an online environment" (California Distance Learning Program, n.d., p.3).

The growth in online distance learning has been fueled in part by the formation of consortia and educational partnerships among colleges, universities, and corporations. The NCES, in its report entitled Distance Education at Degree-Granting Postsecondary Institutions: 2000-2001, reported that 60% of the institutions offering distance education "participated in some type of distance education consortium (United States Department of

Education [USDOE], 2003, p. 5). Consortia provide post-secondary institutions with an opportunity to pool resources, which has resulted in greater course and program offerings. Among the institutions with higher rates of participation in consortia are two-year public colleges (83%), followed by four-year public universities and colleges (68%), and then four-year private institutions (25%) (USDOE, 2003).

Examples of consortia include: the Georgia Virtual Technology College composed of all thirty four of Georgia's Department of Technical and Adult Education technical colleges (GVTC, n.d.); the Alabama Distance Learning Consortium (ADLC) which combines the resources of six technical colleges, twenty community and junior colleges, and one university (Alabama Distance Learning Consortium, n.d.); and the Tennessee Board of Regents Online Degree Program (RODP), consisting of twenty-seven technology centers, thirteen two year community colleges, and six Tennessee Board of Regents universities (Tennessee Board of Regents, 2003).

Regional partnerships have also been established to support distance education. The Southern Regional Education Board (SREB) and its 300 plus member schools provide a network of easily transferred for-credit college level courses (Southern Regional Education Board, 2003). Established in 1998, there are now 8,000 courses and 250 degree programs provided by colleges and universities in sixteen states (Mingle & Chaloux, 2002; National Governors Association). The Associated Colleges of the South (ACS) collaborative program 'SUNOIKIS', is an initiative funded by the Mellon Foundation. This virtual classics department is supported by the combined efforts of the fifteen member private colleges. The ACS program provides students with the resources available from each member institution (SUNOIKISIS, 2002).

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National collaborations include the National Technical University, (NTU). This accredited virtual institution has granted more than 1,600 master's degrees in engineering and computer related fields since its establishment in 1984. There is no resident campus and coursework is provided by an alliance of more than fifty universities. Approximately 15 universities in the South are participating in this endeavor (National Technological University [NTU], n.d.).

Other cooperative organizations that have facilitated the growth of distance education include the American TelEd Communications Alliance and the Pew Learning Technology Program. The American TelEd Communications Alliance has impacted distance education by working to obtain favorable contracts for basic and advanced telecommunications. Founded by the SREB and other regional organizations, the American TelEd Communications Alliance has aided institutions in accessing improved telecommunications "at more affordable prices" (Mingle & Chaloux, 2002, p. 1). The Pew Learning and Technology Program has helped reduce instructional costs through its support of projects to redesign courses through technology. Projects have been funded at the University of Alabama for algebra and for Spanish at the University of Tennessee (Mingle & Chaloux, 2002).

Summary of Distance Learning

Long distance education has been around for more than 150 years but technology has dramatically impacted instructional delivery during the past twenty years. The explosion of technology has fueled the growth of program and course offerings. Distance learning has been growing in popularity as new technologies are being developed which can be blended with traditional delivery modes.

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Many post-secondary institutions are finding that new methods of distributing education result in the enrollment of students who would ordinarily not be able to attend on-site classes. Distance education course offerings and degree programs have continued to grow at a very fast pace, as have enrollment figures. During the 2000-2001 academic year approximately 90% of all public post-secondary institutions offered distance education (NCES, 2002).

Distance education currently serves a vast number of learners. Estimates for enrollment nationwide numbered in excess of 3 million for the 2000-2001 academic year (NCES, 2002). Growth trends for distance education are likely to continue because of convenience for the learners and as post-secondary institutions increase the size of their course and program offerings.

Chapter 3.

Methodology

Description of Participants

The target population was composed of post-secondary schools in the states of Alabama, Georgia, and Tennessee within a 150-mile radius of Chattanooga, Tennessee offering long distance education during the 2003-2004 academic year. Post-secondary institutions included in the study were categorized as either: two-year private colleges; four-year private colleges and universities; two-year community and technical colleges; two-year public universities; or four-year public colleges and universities (see table 1). The survey was limited to accredited or well established post-secondary institutions and did not include distance education courses offered by high schools, unaccredited institutions, or degree granting institutions which may be deemed as "diploma mills."

There were 104 post-secondary institutions in the survey area. The greatest number (48) in the survey area were classified as four-year private colleges and universities. Thirty-two of the institutions were two-year public community or technical colleges. There were 20 four-year colleges and universities and one two-year public senior university. In the survey area, there were only two colleges classified as two-year private (see table 1).

Table 1. *Number of Post-Secondary Institutions by Category*

Categories	Number per category
Two-year private colleges	2
Four year private colleges and universities	48
Two-year public community and technical colleges	32
Two-year public senior colleges and universities	1
Four year public colleges and universities	21

In the Alabama survey area, there were no private two-year colleges and eight four-year private colleges and universities. There were eight two-year community or technical colleges and one two-year senior university that were a part of the Alabama College System (ACS). The category comprised of Alabama University System (AUS) and other public four-year universities included 19 institutions (see table 2).

There was only one private two-year college in the Georgia survey area. The most numerous category (22) was four-year private colleges and universities. There were 13 public two-year colleges within the Georgia survey area, which were a part of the Georgia Department of Adult and Technical Education DTAE. Also within the Georgia survey area were four two-year colleges and seven four-year colleges and universities that were a part of the University System of Georgia (USG) (see table 2).

The Tennessee survey area contained only one two-year private college. There were 18 private colleges and universities, seven Tennessee Board of Regents' two-year community or technical colleges, four Tennessee Board of Regents' four-year colleges

and universities, and three institutions that were a part of the University of Tennessee system (UT) (see table 2).

Table 2. *Number of Post-Secondary Institutions by Category and State*

Categories	Number per category
AL two-year private colleges	0
AL four-year private colleges	8
ACS two-year community or technical college	8
ACS two-year senior university	1
AUS and other public four-year universities	6
GA two-year private colleges	1
GA four-year private colleges and universities	22
GA DTAE two-year colleges	13
USG two-year colleges	4
USG four-year colleges and universities	8
TN two-year private colleges	1
TN four-year private colleges and universities	18
TBR two-year colleges	7
TBR four-year colleges and universities	4
UT system	3

Description of Instruments

The distance education surveys were specifically constructed for the purpose of gathering data on long distance education courses and programs. The surveys requested information about the number of course offerings, program offerings, and certificates/diplomas/degrees offered. The survey consisted of 11 items (appendix A).

Item 1. Is distance education offered?

Item 2. How long?

Item 3. What type of delivery system is used?

Item 4. How many students are being served?

Item 5. Does distance education provide degree/diploma/certificate programs?

Item 6. Approximate number of courses?

Item 7. Approximate number of degree programs?

Item 8. Approximate number of diploma programs?

Item 9. Approximate number of certificate programs?

Item 10. Do plans exist for the: expansion, contraction, or elimination of distance education?

Item 11. Additional comments?

Description of Design and Procedure

Data collection was accomplished using surveys completed through telephone interviews, email inquiries, and information available at web site hosted by institutions in the target population. Initial information about the post-secondary institutions in the survey area was first obtained through state education department sources or Internet

sources. This information included the type of school (two-year private colleges, four-year private colleges and universities, two-year community and technical colleges, two-year public senior colleges and universities, or four-year public colleges and universities), address, telephone number, email address, etc. Next the post-secondary institutions were contacted via email or telephone and the survey was administered. When telephone contact was made the receptionist was told the nature of the call and then asked to transfer the call to a knowledgeable person. When telephone calls were answered by automated voice message centers, a selection would be made from the available choices. The registrar's office or admissions were usually starting points. In many cases the name and telephone number of the coordinator for distance education had been gleaned from institution hosted web sites, making contact easier.

There were also unsuccessful attempts to reach the knowledgeable person by telephone when a message stating the purpose of the call and a request to contact by email was left. In some instances both a combination of email and telephone were used to gather data. There were several individuals who were willing to complete the survey at a more convenient time and submit via email. Data were collected from institution hosted web sites for those schools which did not respond to emails or attempts to contact by telephone were unsuccessful.

Timeline and Cost of Study

The timeframe for completing the collection of data for the study is outlined below.

- January, 2004: Develop topic. Complete IRB forms and submit for approval. Begin research following IRB approval. Begin rough draft of chapter one.
- February, 2004: Continue research. Continue working on rough draft of chapter one and two. Revise chapters one and two. Begin rough draft of chapter three.
- March, 2004: Complete chapters one and two. Begin gathering data. Revise chapter three.
- April, 2004: Submission of chapters one, two, and three. Continue gathering of data.
- May, 2004: Begin rough draft of chapter four. Develop tables with survey results. Revise chapters one, two, and three as required.
- June, 2004: Final draft of all chapters, including appendices if any and references. Begin preparation of Capstone defense.
- July, 2004: Defense of Capstone and final revisions.

Costs incurred for this study include expenses for the reproduction of the survey form, long distance telephone calls, and printing costs associated with the rough drafts

and finished project. The costs associated with computer online access would be present with or without the conducting of the survey.

Nature and Sources of Data

Data were obtained through the following methods: Interviews conducted through telephone conversations and email with individuals associated with or knowledgeable about long distance learning programs. Information gathered from web sites of the post-secondary institutions in the survey area was also included in the survey. Individuals providing information regarding distance learning ranged from receptionists to department heads and academic deans.

Chapter 4

Findings, Conclusions, and Recommendations

Response Rates and Respondents

The post-secondary schools within the survey area included public and private two-year and four-year institutions in Alabama, Georgia, and Tennessee that are within a 150-mile radius of Chattanooga, Tennessee. Of the 104 institutions in the survey area, 23 were located in Alabama, 48 in Georgia, and 33 in Tennessee.

Information from post-secondary schools within the survey was gathered from school sponsored websites, email correspondence, and through telephone conversations. During the weeks of April 4, 2004 through the week of May 24, 2004, post-secondary institutions were contacted by telephone or email. Of the 104 schools within the survey area 75 were contacted by telephone and 24 by email. Many of the attempts to contact persons knowledgeable about distance education via telephone and email were not successful and subsequent attempts were made to contact knowledgeable persons. Data were gathered for 96 post-secondary institutions which made up the survey. The number of schools responding via email were 11. Institutions surveyed by telephone numbered 72 and data for 13 schools were obtained from their websites. There were five institutions for which no data were gathered (see appendix B for a further breakdown of data).

Respondents Offering Distance Education by Category and State

In Alabama, eight of the schools were four-year private colleges or universities, nine were schools within the Alabama College System (ACS), and six were classified as public four-year institutions that were either state universities or a part of the Alabama

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University System (UAS). There were no two-year private schools in the Alabama survey region. Institutions within the Alabama College System were two-year community colleges or technical colleges, with the exception of one two-year senior university. The four-year public universities included three state universities and three institutions within the University of Alabama System (UAS) (see table 3).

Information was gathered by telephone survey from all eight (100%) private schools within the Alabama survey region. Three of the eight (37.5 %) four-year private post-secondary institutions in the Alabama survey region offered some form of distance education. Of the eight ACS two-year community colleges and technical colleges within the survey area, data were obtained for four of the schools from their web pages.

Telephone and email attempts to contact individuals knowledgeable about distance education at the others were repeatedly unsuccessful. Data were gathered from two of the ACS institutions by telephone and two via email. Every two-year ACS institution within the survey area offered some form of distance education. Four of the four-year public state or UAS universities were contacted by telephone and one by email correspondence. All offered distance education (see table 3).

Within the Georgia survey region, there was one two-year private school, 22 four-year private colleges or universities, 13 two-year schools within the Georgia Department of Technical and Adult Education (DTAE), 4 institutions were classified as two-year colleges within the University System of Georgia (USG), and eight were USG four year colleges and universities.

The single private two-year school in Georgia reported no distance education being offered. Among the four-year private post-secondary institutions 19 surveys were

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completed by telephone and one from data retrieved from the school's web site. Three of the four-year private schools did not respond to emails and telephone attempts to contact persons knowledgeable about distance education were unsuccessful. Of the respondents classified as private four-year institutions, six reported offering distance education (see table 3).

There were 13 Georgia Department of Technical and Adult Education (DTAE) institutions. Data were gathered from six DTAE schools by telephone and one by email. Attempts to contact knowledgeable persons at the remaining six schools were unsuccessful and data were retrieved from institution hosted websites. All DTAE colleges provided distance education.

Among the four public two-year institutions within the University System of Georgia (USG), three responded by telephone. Data were gathered from the fourth from a school hosted web page after unsuccessful attempts to contact by telephone and email. There were five four-year USG colleges and universities from which data was obtained by telephone and one from the institution's web page. All USG institutions in the survey offered distance education (see table 3).

In the Tennessee survey area, there were 18 four-year private post-secondary institutions, one two-year private college, seven two-year Tennessee Board of Regents (TBR) community or technical colleges, four TBR four-year public universities, and three institutions within the University of Tennessee System (UT).

Data were gathered from 17 of the private four-year institutions in the Tennessee survey area by telephone and one via email. Data were obtained from the one two-year college by telephone. There were no distance education programs at the private two-year

college. Seven of the four-year private institutions reported distance education offerings (see table 3).

Table 3. *Number of Post-Secondary Institutions by Category and State*

Categories	No. per category	No. responding	No. offering dist.ed.
AL two-year private colleges	0	0	0
AL four-year private colleges	8	8	3
ACS two-year community or technical college	8	8	8
ACS two-year senior university	1	1	1
UAS and other public four-year universities	6	5	5
GA two-year private colleges	1	1	0
GA four-year private colleges and universities	22	19	6
GA DTAE two-year colleges	13	13	13
USG two-year colleges	4	3	3
USG four-year colleges and universities	8	6	6
TN two-year private colleges	1	1	0
TN four-year private colleges and universities	18	18	7
TBR two-year colleges	7	7	7
TBR four-year colleges and universities	4	4	4
UT system	3	2	2

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The data from the seven two-year TBR colleges was obtained through the following methods: three by telephone, three through email correspondence, and one from the institution's web page. Two TBR four-year universities provided data through email correspondence and two through telephone surveys. All TBR two and four-year institutions (table 3) offered distance education.

Of the three University of Tennessee (UT) system institutions in the survey area, one was contacted by email and one by telephone. One UT system institution did not respond. Attempts to contact a knowledgeable person via telephone were not successful and email requests were ignored. Both successfully contacted UT institutions had distance education programs (see table 3).

During the 2003-2004 academic year 67 % (64) of all post-secondary institutions included in the survey offered some form of distance education. A greater percentage of public post-secondary institutions offered distance education courses than private institutions. Findings revealed that 100% of all public institutions participating in the survey offered some form of distance education in comparison to 33% (16) of private four-year schools (table 3). Distance education also was provided by 100% percent of the institutions which were classified as two-year community colleges or technical schools. There were no two-year private colleges offering distance education courses (table 4).

Table 4.

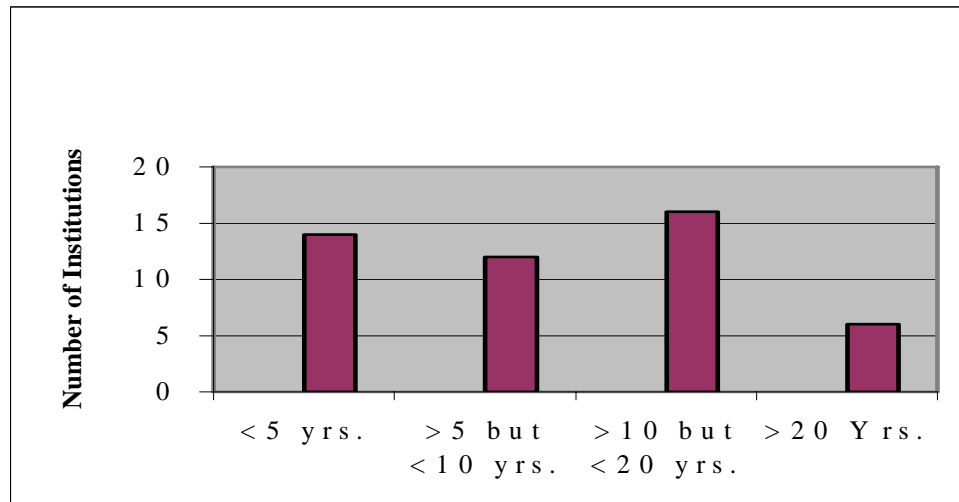
Numbers of Post-Secondary Institutions by Category

Categories	No. per category	No. responding	No. offering dist. ed.
Two-year private colleges	2	2	0
Four year private colleges and universities	48	45	16
Two-year public community and technical colleges	32	31	31
Two-year public senior colleges and universities	1	1	1
Four year public colleges and universities	21	17	17

Length of time that distance education has been offered

Among the 48 institutions reporting how long their distance learning programs had been in existence, 29% (14) reported that their programs had existed 5 years or less. Twenty-five percent of the institutions (12) reported that their programs had been offered for more than 5 but fewer than 10 years, 33% (16) for more than 10 but fewer than 20 years, and 13% (6) institutions had distance programs for more than 20 years (see figure 1).

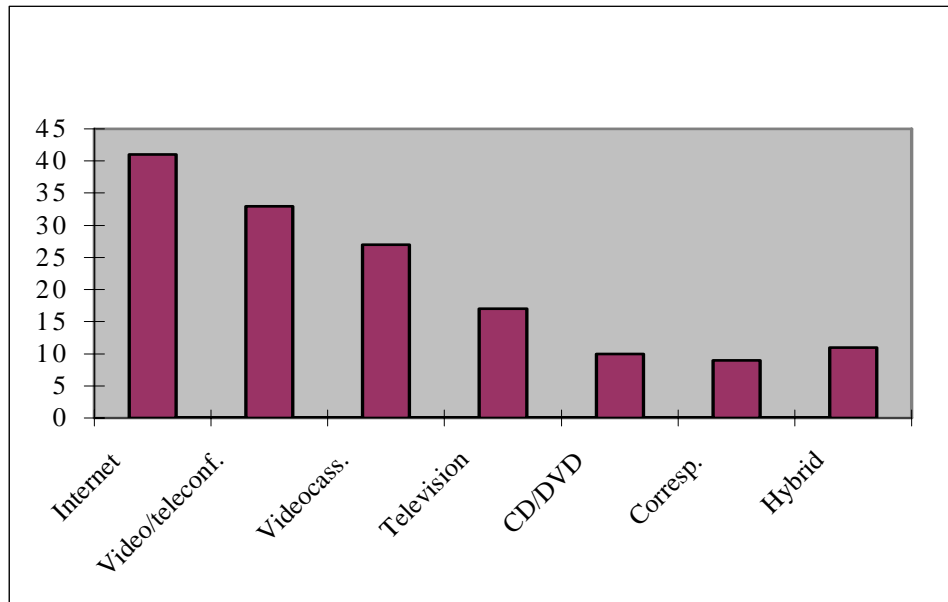
Figure 1. Numbers of institutions by length of time (years) that distance education has been offered.



Methods of delivery

The preferred method of delivery for distance education was Internet technology. Internet based delivery was used by 75% (41) of the institutions, followed by interactive video or teleconferencing (60% or 33). Videocassette or videotape was used by 49% (27), broadcast, satellite, or cablecast television 31% (17), and 18% (10) utilized CD ROM or DVD as a method of delivery. Print-based correspondence study was used by 16% (9) of the institutions and 20% (11) of the courses were classified as hybrid, incorporating several technologies or requiring minimal on-campus attendance (See figure 2). Many of the institutions offering distance education utilized a variety of delivery methods, resulting in a sum exceeding 100% when all percentages for delivery methods are totaled.

Figure 2. Numbers of institutions offering distance education by methods of delivery.



Why Delivery Methods Were Chosen

This open-ended survey item had a wide variety of responses. A reason typically given for the choice of a delivery method was student convenience. Other responses which were student centered included: meeting the academic needs of non-traditional students; improved student access; providing learning opportunities to adults who are unable to attend on-campus classes; and providing degree completion opportunities to working adults.

Several respondents indicated that decisions for a particular delivery method were the result of system-level decisions, statewide initiatives, or consortia adoption of a particular technology. All of the state community and technical schools in the survey area belonged to at least one system level consortium, as did all public colleges and universities which were part of a university system.

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Decisions about delivery modes had also been made on the basis of cost and technological developments. Most of the colleges in Georgia reported that there had been a shift towards online delivery because it was less expensive than videoconferencing. Several respondents reported a move towards newer technologies. Examples were the reformatting of videocassette courses to CD-ROM or DVD format and the use of streaming video to replace videoconferencing. One college reported that the use of videocassettes for distance education had begun with a professor who began videotaping his lectures 20 years ago, and that similarly many early entrances into Internet delivery were the results of individual instructors. Other responses to this survey item included: the president of the college had a vision; as well as many respondents that were not sure why.

Enrollment for Distance Education

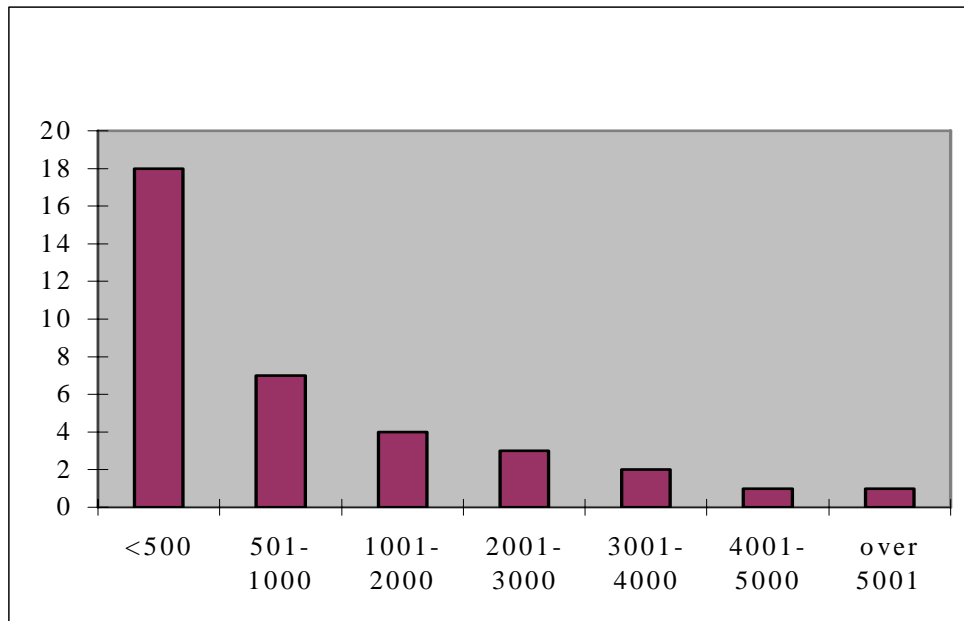
Data on student enrollment for the 2003-04 academic year were gathered from 37% (36) of the institutions in the survey. Total enrollment figures for distance education were unable to be obtained from many colleges and universities because there was no differentiation between on-campus and distance education enrollment. Other colleges and universities that lacked centralized distance education coordination were unable to provide enrollment figures for each department.

The enrollment figures were categorized as follows: a). less than 500; b). 501 to 1,000; c). 1,001 to 2,000; d). 2,001 to 3,000; e). 3,001 to 4,000; f). 4,001 to 5,000; and g). 5,001 and up. The majority of the institutions 50% (18) reported an enrollment of less than 500. Nineteen percent (7) had distance education enrollment of 501 to 1000,

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followed by 11% (4) 1,001 to 2,000, 8% (3) 2,001 to 3,000, 5% (2) 3,001 to 4,000, 3 % (1) 4,001 to 5,000, and 3% (1) reported an enrollment of more than 5,000 (see figure 3).

Figure 3. Numbers of institutions offering distance education by size reporting student enrollment figures for the 2003-04 academic year.

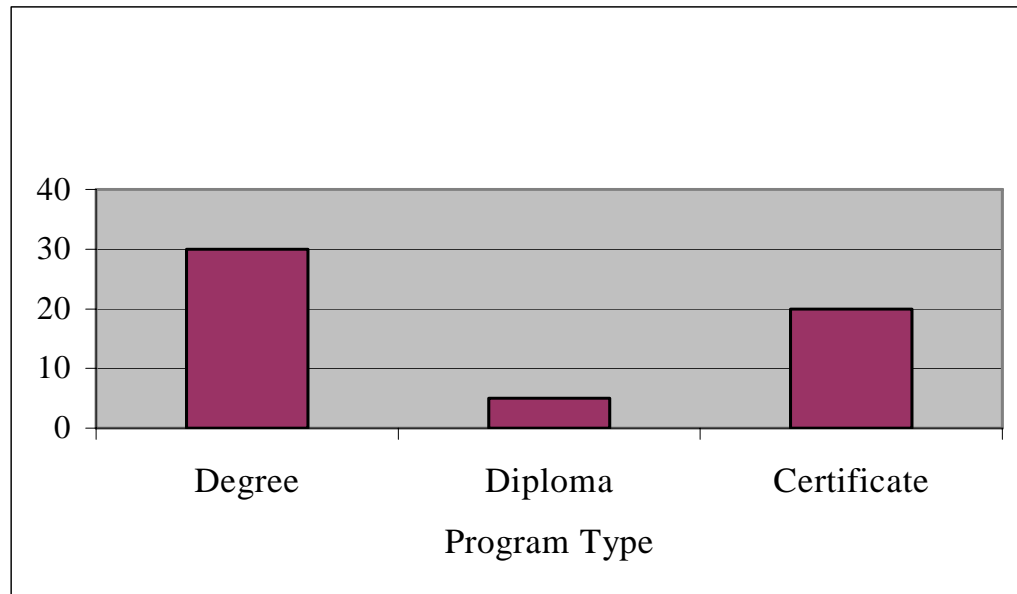


Degree, Diploma, and Certificate Programs

Many of the institutions provided coursework leading to degree, diploma, or certificate programs. Of the 60 institutions with distance education programs responding to this survey item, 50% (30) indicated that they offered degree programs, 8% (5) offered diploma programs, and 33% (20) had certificate programs (see figure 4).

There were a wide variety of degree programs available, which included Master of Business Administration, Master of Education, Bachelor of Arts/Science, Bachelor of Science Nursing, Associate of Science/Arts, and opportunities for degree completion (see Appendix B).

Figure 4. Numbers of institutions offering degree, diploma, or certificate programs by category during the 2003-2004 academic year.



Among the 16 private four-year colleges and universities offering distance education, 44% (7) had distance education programs leading to a degree. Of the 31 two-year public community and technical colleges responding, 29% (9) offered degree programs through distance education. Seventy percent (13) of four-year public institutions responding to this survey item provided distance education degree programs.

All of the institutions offering distance education diploma programs were concentrated in Georgia. Georgia Department of Technical and Adult Education (DTAE) two-year institutions offered a variety of technical diploma programs which typically involve 18 to 36 semester hours of coursework. There was only one four-year private college in Georgia offering a diploma through distance education (see table 5).

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The certificate programs were most often offered by public two and four-year colleges and universities (33%). Only 2% of the private colleges and universities provided certificate programs. Most of the certificate programs would be described as personal enrichment, technical, vocational, or professional continuing education (see table 5).

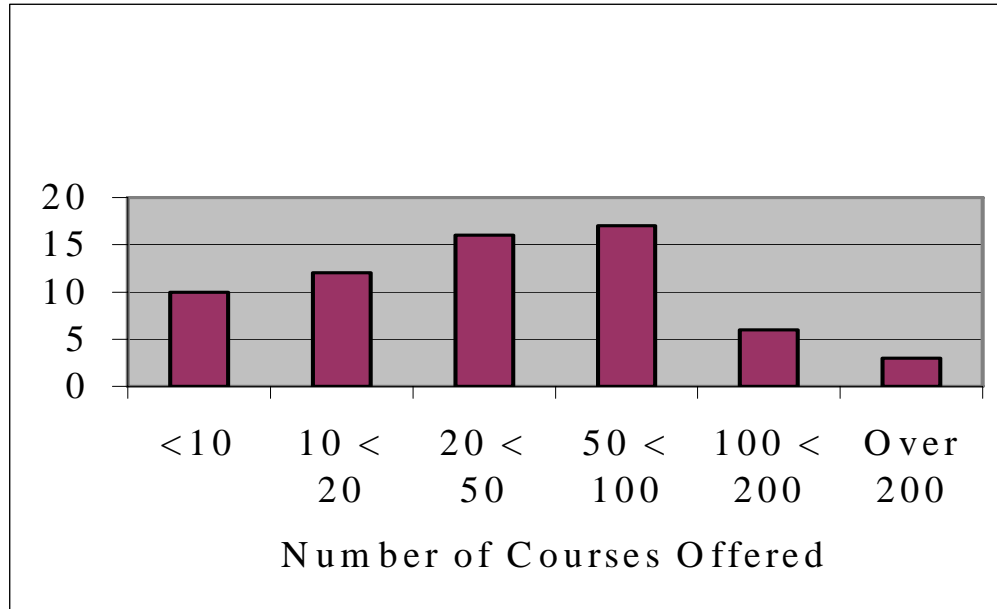
Table 5. Numbers and Classification of Institutions Offering Degree, Diploma, or Certificate Programs During the 2003-2004 Academic Year.

Categories	No. degree	No. diploma	No. certificate
Two-year private colleges	0	0	0
Four year private colleges and universities	7	1	1
Two-year public community and technical colleges	11	4	9
Two-year public senior colleges and universities	1	1	1
Four year public colleges and universities	12	0	11

Number of Course Offerings

Post-secondary course offerings for distance education ranged from 1 to over 200. Of the 64 institutions responding to this survey item, 16% (10) offered less than 10 courses, 20% (12) offered 10 or more but less than 20 courses, 27% (16) offered twenty or more but less than 50 courses, 28% (17) offered 50 or more but less than 100, 10% (6) offered 100 or more but less than 200, and 5% (3) offered 200 or more courses (See figure 5). Courses from third party vendors such as Ed2go™ or Gatlin were not included in this data.

Figure 5. Numbers of institutions offering distance education by courses offered during the 2003-2004 academic year.



Plans for Expansion, Contraction, or Elimination of Distance Education

Two of the private schools in the Alabama survey area reported that there were plans for expansion of their distance education programs. One of the private colleges stated that their institution was considering offering online coursework and one reported plans to offer distance education courses during the fall semester 2004.

All of the ACS respondents to the survey indicated that there were plans for expansion of their distance education programs. All five universities classified as four-year public institutions also stated that there are plans for the expansion of their distance education programs. Two indicated that their institutions were intending to provide additional degree programs. Two of the four-year public universities reported that plans had been made to eliminate videocassette courses, gradually replacing them with DVD.

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One Alabama University System (AUS) indicated that print-based correspondence would be transitioned to online delivery.

Three of Georgia's four-year private schools offering distance education indicated that there were plans for expansion. One private university in Georgia reported that it had discontinued offering online classes approximately two years ago, and four stated that there were no plans to offer distance education. Seven of the two-year institutions in Georgia that offered some form of distance education had plans for expansion of their programs. Four reported that there would be a discontinuation of video-conferencing delivery, citing its cost as a main reason.

Four of the four-year public colleges and universities in Georgia planned to expand their distance education programs. One college indicated that their online course offerings were under review, because there was a significantly higher failure rate for online courses than for traditional face-to-face classes. One four-year college also reported the planned elimination of instructional delivery through videoconferencing.

Of the four-year private institutions in the Tennessee survey responding to this survey item, four reported that there were plans for the expansion. One institution which provided no distance education program during the time of the survey had plans to offer online courses in the fall of 2005. A private university reported that it would be phasing out CD-ROM delivery in favor of online delivery and that videoconferencing had already been eliminated.

Five of the two-year Tennessee Board of Regents (TBR) community or technical colleges reported plans for expansion. Of these three institutions specifically anticipated more courses online during the fall of the 2005-2006 academic year. A spokesperson for

one community college stated that during the next academic year 2005-2006, there will be for the first time courses delivered online will outnumber those available through videocassettes. One institution reported that videocassette courses were gradually being reformatted in CD-ROM or being redesigned for online delivery. Two of the two-year TBR institutions reported that there had been declines in the use of videoconferencing for instructional delivery. Of these, one stated that many videoconferencing courses were being replaced by online streaming video.

Of the three TBR four-year universities responding to this survey item, two reported that there were plans for expansion and one indicated that no expansion was being considered.

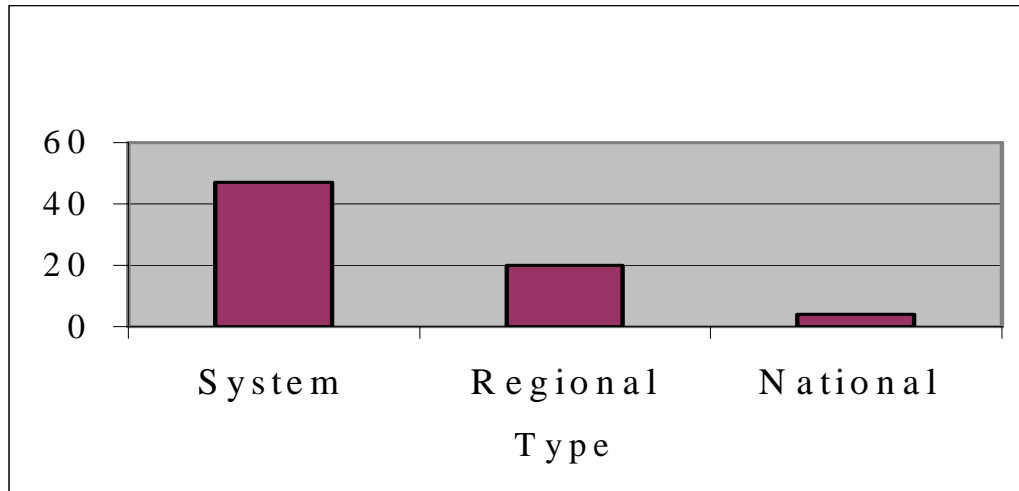
The two University of Tennessee (UT) system institutions indicated that expansion was planned for online course offerings. One reported a decline in the use of videoconferencing and the other stated that some print-based correspondence courses were being shifted to internet delivery.

Other Findings

Involvement in Distance Education Consortia

Many of the institutions within the survey area were involved in some type of distance education consortium. Of those 63 institutions that offered distance education, 75% (47) reported that they participated in a system consortium (a university-wide system or community/technical college-wide system), 30% (20) in a regional system, and 6% (4) in a national consortium (See figure 6).

Figure 6. Numbers of institutions with distance education by types of consortia.



Private colleges and universities were the least likely to participate in some type of distance education consortium. Only 4% of private post-secondary institutions responding to this survey item reported participation in some type of a consortium. Data revealed that all responding public two- and four-year colleges and universities participated in some type of consortium (100%). All institutions within the survey area classified as two-year public community or technical colleges participated in a system-wide consortium. Similarly, all post-secondary institutions that were part of University system participated in a system consortium. There were 25% (9) of the two-year public technical and community colleges participating in a regional consortium and 3% (1) that were associated with a national consortium. Among the public four-year institutions in the survey, 61% (11) participated in a regional consortium and 22% (4) were members of a national consortium (see table 6).

Table 6. *Numbers of Institutions Participating in Consortia by Institution Classification and type of Consortia.*

Categories	Consortia Type		
	System	Regional	National
Two-year private colleges	0	0	0
Four year private colleges and universities	0	2	0
Two-year public community and technical colleges	32	9	1
Two-year public senior colleges and universities	1	1	1
Four year public colleges and universities	21	11	4

None of the institutions in the Alabama survey area that were classified as four-year private colleges and universities participated in any type of distance education consortium. All eight (100%) of the ACS two-year schools participated in the Alabama Distance Learning Consortium (ADLC), a statewide distance education consortium. Fifty-percent (4) were affiliated with the Electronic Campus of the Southern Regional Education Board (SREB), a regional consortium. Five (62.5%) were participants in the Videoconferencing in Alabama Network (VIANET) that connects more than 100 video sites in Alabama.

Three of the five institutions classified as state universities or UAS schools were affiliated with the Electronic Campus of the SREB, and two institutions (33%) were associated with the National Technology University (NTU), a virtual university composed of consortium of universities throughout the United States. All five of the respondents in this category were a part of the VIANET and three of the UAS institutions were linked via the system's Intercampus Interactive Telecommunications System (IITS).

Only one of the Georgia institutions classified as a four-year private college or university participated in the Electronic Campus of the SREB. One DTAE school was associated with the SREB's Electronic Campus and all DTAE institutions were a part of the Georgia Virtual Technology College, a state-wide consortium of all DTAE schools.

One of the USG colleges in the survey area participated in eCore, a system consortium which provides students an opportunity to take core classes online from participating institutions. In 2000, five regional institutions in the University System of Georgia formed a *colloquium* to develop and implement an accredited MBA distance education program. Permanent status for the WebMBA™ was approved in 2002 (p.2 Georgia WebMBA™, 2002).

In the Tennessee survey area only one private university was affiliated with a regional consortium. All of the TBR two-year technical or community colleges were associated with a system consortium and one was associated with the SREB. Among the TBR four-year universities, all were in a system consortium and two were participants in the SREB. The institutions within the University of Tennessee system were a part of a system consortium. Two were affiliated with the SREB, and one associated itself with the NTU.

Use of Third Party Vendor Distance Education Courses

Two of the ACS colleges indicated that they offered online continuing education courses from Ed2go™, a third party vendor of distance education. Only one four-year private university in Georgia reported offering online continuing education courses from Ed2go™. Four of the Georgia DTAE schools marketed third party courses from Ed2go™. Of the USG two and four-year institutions, four utilized Ed2go, three offered

courses from Gatlin Educational Services™, one from McGraw-Hill Corpedia™, and one from Sabre Learning™. Among respondents in the Tennessee survey area, two TBR community or technical colleges reported the offering of Ed2go™ courses. Of the four-year TBR and UT system institutions, 3 provided Ed2go™ courses and 4 offered courses from Gatlin Educational Services™.

Contraction of Georgia's Statewide Videoconferencing System (GSAMS)

Four of the DTAE respondents reported that there had been contraction and/or elimination of the two-way videoconferencing classrooms known as the Georgia Statewide Academic and Medical System sites or GSAMS. According to the respondents online courses are gaining in popularity and GSAMS facilities are expensive to maintain and operate.

GSAMS was once regarded as the world's largest distance learning and healthcare network with a total of 370 videoconferencing sites in 1999. GSAMS sites linked together "K-12 public schools, colleges, universities, technical institutes, hospitals, prisons, Georgia Public Television, and Zoo Atlanta" (p.1, McKenzie et al., 1999). GSAMS sites have been used for college courses, medical educational conferences, continuing education training, and for international corporate meetings (K. Darnell, personal communication, June 5, 2002).

The Georgia Virtual Technology College (GVTC)

The Georgia Virtual Technology College (GVTC) has experienced exponential growth since its inception in 1998. A statewide virtual college, the GVTC is a consortium of 35 two-year Georgia Department of Technical and Adult Education colleges. From an initial offering of 40 courses, GVTC for the 2003 financial year

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provided access to over 3,670 online courses, and there were 15 degree, 22 diploma, and 68 certificate programs. The enrollment reported for this period was 26,000 (C. Brock, personal communication, May 26, 2004).

The Tennessee Board of Regents Online Degree Program (RODP)

Tennessee Board of Regents (TBR) post-secondary institutions participate in the Regents Online Degree Program (RDOP). Since the fall of 2001, this distance education has experienced rapid growth. This online degree program has provided students with the opportunity to earn a two-year associates degree from any of Tennessee's state technical colleges, or a four-year degree through the Regent's program. An online master of education (MEd.) and a master of science in nursing (MSN) degrees have been made available through all six TBR universities.

Conclusions, and Recommendations

This research answered questions concerning long distance education in the designated geographical survey area. The data collected presented an accurate representation of the state of distance education within a 150-mile radius of Chattanooga. The survey included all categories of post-secondary institutions, which varied in enrollment, degree programs, and demographics. Excluding the schools that did not offer distance education, all of the personal communications by telephone and email revealed a perception that distance education was needed and growing steadily as new technologies are developed. The demand for distance education has been strong as evidenced by the figures for enrollment, the course offerings, and the ever-increasing number of degree programs. The wide spread availability of courses from third party vendors such as Ed2go™ and Gatlin Educational Services™ are also a witness to the popularity of distance education for personal enrichment.

Different approaches in using technology for instruction have evolved at each of the institutions in this survey. Some of the post-secondary institutions surveyed have found the types of learning distribution effective for their community of learners, which may not be successful at other schools.

The delivery of instruction can take many forms, ranging from print-based correspondence courses to two-way interactive television and web-based streaming video. Web-based instruction has surpassed other delivery modes. Many of the desired features of other instructional delivery modes have been incorporated into computer technology. Many institutions have begun phasing out videocassette courses in favor of

CD ROM, DVD, and streaming video, and several reported that their print-based correspondence courses are being moved to online delivery. Post-secondary institutions should continue to take advantage of the proliferation of new and cheaper technological delivery systems.

Survey findings suggest that in Georgia there is a great exodus from the use of videoconferencing. However, videoconferencing seemed to be well established in the other states and there were no findings to suggest that the trend in Georgia was applicable to other states.

The majority of the private post-secondary institutions offering distance education, the majority stated that there were plans for expansion. Many of the private colleges and universities indicated that distance education was not in keeping with their goals. The desire to remain traditional four-year liberal arts institutions providing an on-campus educational experience was a fairly common reply among four-year colleges and universities. Among the private four-year institutions it could be assumed that one reason for the lack of distance education could be financial or institution size. However, several of the largest private four-year universities have no distance education offerings and indicated that distance education was not being considered.

From the survey results it was clear that the institutions that offer distance education were largely public and associated with consortia. Public post-secondary institutions offering long distance education have benefited from their participation in consortia. Statewide systems have provided more numerous course and degree offerings than would be possible if each institution was acting solo in its efforts to provide distance education. Distance education has benefited smaller public institutions providing them

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with a greater array of courses from system consortia. Consortia have helped to allocate instructional resources, and boost enrollment figures. Conversely, the majority of private institutions within the survey area were not involved in any type of consortium. Several were associated with mainline religious denominations, which could possibly serve some of the same functions as a consortium, but by and large there were no affiliations with consortia established for the purpose of instructional delivery.

The establishment of online degree programs by system level consortia has been well received by the public as evidenced by enrollment figures and program offerings. Degree and diploma programs such as those offered by the Tennessee Regents Online Degree Program, eCore, and the Georgia Virtual Technology College, have opened new opportunities to thousands of individuals that typically have been unable to attend traditional on-campus classes. Courses taken through system level consortia also are easily transferred among system institutions. Students have also been provided with an opportunity to earn degrees through system level degree-granting consortia.

State public colleges and universities have also benefited tremendously through the establishment of technology networks. Networks such as Alabama's VIANET and GSAMS in Georgia have allowed more rural populations to access instruction and have promoted the sharing of instructional resources among institutions that are a part of the network.

Distance education at most public institutions in the survey area has gone through the experimentation phase and is an established instructional arm. Distance education with its flexibility of time, place, and programs has provided new opportunities for students. Many private institutions will require a paradigm shift in their instructional

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practices before successful adoption of distance education will occur. Distance education is not a threat to traditional education, but rather an alternative or a supplement. The growth in distance education should continue as more programs are developed and provided, particularly among public colleges and universities.

The data gathered concerning the offering of distance education programs suggests that strong demand will continue to occur. It is recommended that state colleges and universities continue to develop instructional programs to meet the growing demand for distance learning. Findings indicate that the demand for distance education is strong and many of the students would not be enrolled in traditional on-campus programs of study. Extending this study to other states within the southeast could provide a larger picture of the extent of distance education. Institutions might profit from discovering how other post-secondary schools deliver instruction and types of programs offered.

Public post-secondary institutions should continue to take advantages of newer and less expensive technologies to deliver education. Many institutions have transitioned print-based correspondence courses to online or CD-ROM format and others are planning to shift from videocassette to online streaming video or DVD format. Institutions should examine their current delivery methods and determine if they are the most cost effective and preferred by the students.

The use of consortia, particularly at a system level, should be continued. Consortia have allowed a pooling of instructional resources that have in most cases provided opportunities for developing degree programs quickly and efficiently. The current spate of budget trimmings in most public education systems may halt the growth

of course offerings. Consortia may provide the only realistic way to provide students at more rural campuses with additional courses or programs.

Those private post-secondary institutions within the survey area may wish to reconsider their decisions not to offer distance education. The majority of private four-year institutions in the survey that offered distance education had plans for the expansion of their programs. Several offered degree completion programs and graduate level degree programs that did not appear to significantly impact their traditional undergraduate programs. Distance education does not have to be a competing method of instructional delivery, it can serve as way to reach learners that are unable to attend traditional on-campus programs.

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Appendix A.

Long Distance Learning Survey

Name of Institution: _____ Type _____

Contact Person: _____

Telephone: _____ Ext.: _____

Is distance education offered? _____ How long? _____

What type of delivery system is used, and why was it chosen?

How many students are being served?

Does distance education provide degree/diploma/certificate programs?

Approximate number of courses? _____

Approximate number of degree programs? _____

Approximate number of diploma programs? _____

Approximate number of certificate programs? _____

Do plans exist for the: expansion contraction or elimination of distance education?

Additional comments?

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Appendix B.

Numbers of Post-Secondary Institutions by Data Collection Method.

Categories	Collection Method			
	telephone	email	website	no response
AL two-year private colleges	0	0	0	0
AL four-year private colleges	8	0	0	0
ACS two-year comm. or technical college	2	2	4	0
ACS two-year senior university	1	0	0	0
AUS and other public four-year univ.	4	1	0	1
GA two-year priv. colleges	1	0	0	0
GA four-year priv. colleges and univ.	19	0	1	2
GA DTAE two-year colleges	6	1	6	0
USG two-year colleges	3	0	1	0
USG four-year colleges and univ.	5	0	1	2
TN two-year private colleges	1	0	0	0
TN four-year private colleges and univ.	17	1	0	0
TBR two-year colleges	3	3	1	0
TBR four-year colleges and universities	2	2	0	0
UT system	1	1	0	0

Appendix C..

Types of Degree Programs Offered Through Distance Education in the Survey Area

Associate of Arts

Associate of Applied Technology

Associate of Applied Science in Nursing

Associate of Applied Science in Professional Studies

Associate of Arts in General Studies

Associate in General Studies

Associate in Business Administration

Associate of Science

Associate of Science in Biblical Studies

Associate of Science in Business Management

Associate of Science in General Studies

Batchelor of Arts

Bachelor of Arts in Interdisciplinary Studies (degree completion)

Bachelor of Business Administration

Bachelor of Fine Arts

Batchelor of Interdisciplinary Studies

Batchelor of Professional Studies

Bachelor of Science in Biblical Studies

Bachelor of Science in Nursing

Batchelor of University Studies

Types of Degree Programs Offered Through Distance Education in the Survey Area

Master of Arts in Biblical Studies

Master of Arts in Ministry

Master of Business Administration

Master of Education

Master of Electrical Engineering

Master of Environmental Engineering

Master of Health Physics/Radiological Engineering

Master of Industrial and Systems Engineering

Master of Mechanical Engineering

Master of Science in Applied Computer Science

Nontraditional Doctor of Pharmacy

Vita

Thomas J. Brown is a teacher of the visually impaired with Whitfield County Schools. Prior to his current position, Mr. Brown served as a middle grades' science and technology explorations teacher. He is the author of several articles that have appeared in the Georgia Educational Technology Online Journal as well as co-writer of the musical *Fat Shirleys: A Trailer Park Opera*. His educational background includes a Bachelor of Arts, Presbyterian College, an Associate of Applied Science in Technology, Dalton State College, and a Master of Arts in Education from Tusculum College. Thomas is currently working towards an Educational Specialist Degree in Instructional Technology at the University of Tennessee at Chattanooga and he is also enrolled in a masters degree program for the visually impaired at the University of Alabama at Birmingham.