#### DOCUMENT RESUME

ED 451 015 RC 022 881

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TITLE Distance Education: Taking Classes to the Students.

INSTITUTION Southern Rural Development Center, Mississippi State, MS.

SPONS AGENCY Economic Research Service (USDA), Washington, DC.; Farm

Foundation, Chicago, IL.

PUB DATE 2001-02-00

NOTE 8p.; Also sponsored by the TVA Rural Studies Program at the

University of Kentucky, and 29 Southern land grant

institutions.

AVAILABLE FROM Full text at Web site:

 $\verb|http://ext.msstate.edu/srdc/publications/millennium.htm|.$ 

PUB TYPE Collected Works - Serials (022) -- Reports - Evaluative

(142)

JOURNAL CIT Rural South: Preparing for the Challenges of the 21st

Century; n17 Feb 2001

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS \*Access to Education; \*Distance Education; Educational

Change; \*Educational Cooperation; Geographic Isolation; Higher Education; Information Technology; \*Internet; \*Rural

Areas; Rural Education; Shared Resources and Services;

\*Telecommunications

IDENTIFIERS \*Technology Utilization; Telecommunications Infrastructure;

United States (South); Virtual Universities

#### ABSTRACT

Technological advances have equipped educational institutions with the capability to take classes to the student. Higher education institutions throughout the South are upgrading existing wide-area networks connecting buildings and campuses to create statewide "backbones" that will serve primary and secondary schools, libraries, offices, and homes. Such technology will overcome geographic barriers to access. Challenges involved with implementing distance education include the need to handle organizational, management, and educational changes over the short and long term; limited access to quality programming among certain populations defined by race, social class, or geography; the need for teachers to learn new approaches to teaching, monitoring, and mentoring to adequately serve their students; and the need for standards of quality for new programs. Success factors for effective use of wide-area networks include support from educational institutions and governments that facilitates sustained interest and funding; development of new organizations to handle technology's rapid change; planning and management processes that are open and participatory so that affected parties, including the private sector, have input; effective leadership by education agencies; concentration of telecommunications investments on new technologies, especially Internet technologies; and dealing with funding issues. (Contains 14 references.) (TD)



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## Distance education: Taking classes to the students

Timothy Collins, private consultant and Sarah Dewees, John Hopkins University Center for Civil Society Studies

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#### Introduction

Distance education is gradually turning higher education inside-out. Across the South, colleges and universities are reshaping the way they reach out to students. The physical campus still remains the intellectual and emotional seat of learning, but increasingly, technology is helping to take classes to the students [4].

The range of distance-education technologies is wide and includes television broadcasts, digital satellite, mailed videotapes, two-way interactive video, telephone, fiber-optic cable and wireless transmission. These facets vastly expand the amount of transmittable data. Some of the latest technologies, such as ATM (asynchronous transfer mode), have the capacity and speed to handle multimedia data transmission simultaneously. Also, recent years have seen a major increase in the use of two-way interactive video for instruction across the South [6].

This policy brief will discuss several issues related to distance education in the South, including implications and challenges, as well as issues pertaining to quality and success factors, associated with this educational resource.

#### **Possible Worlds**

The implications of distance education are staggering. Higher-education institutions throughout the South are upgrading existing wide-area networks (WANs) that already electronically connect buildings and campuses, to create statewide "backbones" that will serve primary and secondary schools, as well as public libraries, offices and homes [6].

The World Wide Web and telecommunications technology and services have increased the potential for an expanded array of new and improved educational offerings [7]. For example, there have been virtual high schools in the South for some time, but Kentucky reportedly became the first state in the country to set up a statewide virtual high school in October 1999 [5].

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No. 17, February 2001



Games of the new distance-learning technologies offer educational institutions the opportunity to reach into relatively isolated areas.

States are also working to overcome geographic barriers to access. Some, including Georgia and Kentucky, have set up remote access allowing students, teachers and staff to be connected to the educational data network from almost anywhere in the state without long-distance toll charges [6].

Higher education in the region is undergoing profound changes. The Southern Regional Education Board's (SREB) 16-state Southern Regional Electronic Campus provides a marketplace of college programs and courses to residents across the South. This virtual network lets colleges and universities in the region share electronic courses for transferable credit. It allows potential students to identify programs and courses that are available electronically and to connect directly to the institution to learn about registration, enrollment and cost. Also, it enables students to search by college or university, discipline, level of studies, and request information regarding course descriptions and how courses and programs are delivered. The institution then provides information related to selected courses, allowing students to decide if they would like to enroll [10]. A few Southern states, including Oklahoma and Kentucky, already have virtual universities in place, using the Internet to provide classes and programs to students. The number of state-sponsored virtual universities is expanding nationwide as more states utilize this new educational model. It can provide a centralized information resource for all distance education services in a state [13]. Citing the benefits of providing a central source for distance-education courses, as well as the financial benefits associated with pooling resources to support one central distance education program, Tennessee announced its intention to open a virtual university that was to begin offering classes fall of 2000.

The new distance-learning technologies—if supported by adequate backbone capacity (bandwidth) and equal access to the telecommunications backbone by rural and urban localities—offer educational institutions the opportunity to reach into relatively isolated areas. This enables them to serve high school and college students with credit and noncredit courses. They can also provide staff and professional development to various agencies, groups and educators and allow for individual self-instruction through virtual libraries and World Wide Web portals [9]. Several states, including Virginia, Kentucky and Alabama, have virtual libraries that offer on-line access to research tools for state residents interested in individual learning.

#### **Evaluating Potential Risks**

The possible world of new distance-education technology also has its risks and potential downside. The rapidly changing technology of distance education will require Southern states be prepared to cope with organizational, management and educational changes over a short and long term. SREB has been active in promoting technology across its member states and providing leadership for this new technology. Its Educational Technology Cooperative helps more than 3,300 school districts and about 800 colleges and universities keep up with technological change. The cooperative also develops and implements projects designed to improve technology use and student achievement [9, 10].



Other possible problems related to distance education include the potential for the widely discussed "digital divide" of technology haves and havenots, where access to quality programming may be limited to certain populations. Access problems related to race, social class or geography require attention. Another challenge is the potential concentration of teaching and curriculum development in relatively few centers, with the deskilling and loss of faculty and professional staff at the local level. The proliferation of distance-education programs also raises the possibility of the distribution of poor-quality programs, inadequate supervision of students and insufficient chances for student contact with faculty members

There are challenges of keeping students in the pro-

The Issues

- Technological advances have equipped educational institutions with the capability to take classes to the student.
- Distance education can provide various groups and individuals with developmental, educational and instructional opportunities.

The Potential Challenges

- The South will have to be prepared to handle organizational, management and educational changes over a short and long term.
- The "digital divide" continues to plague certain populations in the South and could in turn, restrict their access to distance education.
- Teachers will have to learn a new approach to their trade in order to adequately serve their students. They could also face challenges in monitoring and mentoring students throughout a course.
- Quality assurance of new programs offered by distance education will need to follow a set standard.

Summary

- Distance education is both a reality and a vision for the future.
- If implemented properly, rural Southerners will benefit from distance education by attaining high-quality education from around the region and the world.

grams and assessing the effectiveness of the technology as a learning tool. Distance education—as we are now coming to know it—is so new that there are no reliable statistics available for how many students complete courses or programs. Anecdotal evidence and studies by individual institutions suggest that students are less likely to finish distance-education courses and programs, compared to conventional classroom programs [3]. Those close to the issue provide many reasons for the problem, but these reasons may be contradictory [3].

Given the understanding that has developed so far, it seems crucial that students be able to work independently with time demands and changes in their lives, while taking distance education courses. A possible solution might be to construct a delivery system that combines elements of traditional instruction with distance [8]. Apparently, the most successful distance-education professors keep in touch with their students via e-mail, closely monitor their progress, hold regular office hours on-line or in person, and develop personal touches to make contact with students [3, 14].

Teachers also face new challenges with distance education. This new technology requires teachers to approach their craft from a different perspective. They have to be able to effectively integrate their teaching styles with the new technology. There are also great demands for high-quality professional development as teachers learn how to use new instructional tools and how to approach their trade in an entirely different setting. This investment in the human dimension of instructional technologies is just as important as upgrading its physical and telecommunications infrastructure [7].

Distance education also may become highly competitive as existing higher-education institutions jockey for position with newer and often privately operated virtual institutions. Recently, Southern educators have been considering a plan to charge out-of-state students lower tuition for on-line courses in-class courses; however, the rate would probably be higher than normal in-state tuition [2].





distance education has been around for some time, the growing popularity of the World Wide Web has brought a proliferation of new programs among established universities and newcomers.

#### The Challenge of Quality

Although distance education has been around for some time, the growing popularity of the World Wide Web has brought an increase of new programs among established universities and newcomers. The rapid change has been relatively unregulated, but in recent months there has been considerable discussion about the quality of offerings. For example, the new Congressional Web-Based Education Commission's earliest discussions focused on quality. Members expressed concern about issues such as the quality of educational software and working with new for-profit universities to adopt high standards for their Web-based courses [1]. Established institutions across the South have already subscribed to *Principles of Good Practice* through SREB's Electronic Campus [11]. Participating colleges and universities use a common standard to assure quality.

The bottom line of distance-education quality includes student achievement; effective learning so students can apply what they have learned to improve their quality of life and employment marketability; effective use of technology by teachers; covering costs of the program; and equity. This raises some important questions: Does distance-education technology support or improve effective student learning? Do teachers use the technology effectively in their virtual classrooms? Is the technology cost effective? Does the technology effectively extend the reach of higher education institutions into previously unserved areas? These questions remain unanswered, but need to be considered as distance education becomes more commonplace in the South.

#### Success Factors

Southern states' commitment to using WANs as a strategic tool for improving educational access and the quality of resources was evident by the mid 1990s. The expansion of WANs to primary and secondary schools, as well as libraries and homes, has been occurring at a rapid pace since then, but the handling of the expansion has been different in various states. Despite these differences, a recent SREB report has identified a common core of success factors for the effective use of WANs, including:

- Top-level support from the education entity and other agencies in state government that will facilitate sustained interest and funding, as well as the development of new organizations needed to handle the technology's rapid change and new applications.
- A planning and management process that is both open and participatory so all affected parties will have ongoing input in order that their needs will be met with special provisions for private-sector input and participation in planning, installing and operating the network.
- Effective leadership by education agencies so their specific needs and priorities are met by the system.
- Concentration of new telecommunications investments on new technologies, especially Internet-styled technologies.



• Dealing with funding issues, including revenue sources; methods of charging; initial and ongoing costs; special pricing for education; responsiveness of funding sources to changing needs and technology, as well as increased demand; and economies of scale [11].

The SREB report concluded that collaboration and sharing, along with the resulting economies of scale, are important for the success of WANs. The decisions regarding the existence and application of economies of scale, however, are not easy in practice [11]. With this in mind, it becomes extremely important for education and telecommunication leaders to hone their planning and management skills to deal with collaboration, economic issues and the opportunities that may be brought about by rapidly changing distance-education technology.

#### Conclusion

The possible world of distance education is both a reality and a vision for the future. The rapidity of technological change in recent years has vastly broadened opportunities to take education directly to students. Distance education's considerable potential will increase as educators learn how to handle the new technology. Yet, the unknown has its risks as well, especially the "digital divide" and the ability of individuals and institutions to deal with the constant changes demanded by technology. If properly implemented, however, distance education promises to bridge spatial barriers, providing residents of the rural South tremendous opportunities for a wide variety of high-quality educational offerings from around the region and beyond.

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Published by
Southern Rural Development Center
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Mississippi State, MS 39762
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