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ABSTRACT

The purpose of this study was to examine the extent to which Florida's 28 public community colleges are implementing and using distance delivery of instruction. Research questions addressed the mission, the delivery organization, the content areas and modes of delivery, the faculty, and the support services involved in the delivery of distance courses. Although 70% of the country's 2-year and 4-year colleges are offering online courses, the method of delivery is receiving mixed reviews. National accrediting bodies consider the method of delivery to be less than adequate. Florida's community colleges enroll nearly one million students and graduate nearly 50,000 associate degree and certificate completers annually. The author argues for distance education as a way to address increasing demand with little funding to back that demand, and as a way to increase access for those who live too far from an institution of higher learning. For Spring 2001, 22 of the 28 Florida community colleges offered a total of 1,133 Web-based classes, representing less than 10% of total course offerings statewide. The Florida Community College Distance Learning Consortium is responsible for coordinating the establishment of a technology-enhanced community college delivery system. Reports on some of the projects in development. (Contains 21 references.) (NB)

The business of teaching and learning with technology in Florida's community colleges

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A prevalent topic within higher education today surrounds the use of technology in the delivery of instruction. According to the National Center for Education Statistics (NCES), 33% of all higher education institutions offered distance education to more than 700,000 students in 1995. Writers agree that post-secondary education in the U.S. is changing. The interest in providing technology-based education continues to grow rapidly. The influx of distance learning programs onto the education environment is evident when issue after issue of professional journals including *The Chronicle of Higher Education*, contain articles and reports of the use of distance education in the classroom.

The purpose of this study was to examine the extent to which Florida's Community Colleges are implementing and using distance delivery of instruction. Research questions addressed the mission, the delivery organization, the content areas and modes of delivery, the faculty, and the support services. Hopey's (1999) five implementation points for integration of technology into adult learning opportunities; planning, training, technical support, leadership and resources were used to guide this study.

This descriptive study used a variety of sources to obtain data to examine this topic. Sources included the distance learning network, on-line catalogs, web-site information, analyses of technology plans, enrollment data, the state plan, community college (state) database and personal contact with consortium members.

This review concluded that Florida's Community Colleges are well positioned to be leaders in distance learning in the state. A major problem in implementation is that of financial support. A second major problem is coordination. Florida has implemented structures that should ensure that it will be able to serve the growing population of learners who prefer to participate in distance learning to supplement on campus learning. Particularly in large metropolitan areas where traveling even 30 miles becomes a hardship, Florida's Community Colleges are well on their way to having the means to offer alternatives to its constituents.

The business of teaching and learning with technology in Florida's community colleges

A prevalent topic within higher education today surrounds the use of technology in the delivery of instruction. According to the National Center for Education Statistics (NCES), 33% of all higher education institutions offered distance education to more than 700,000 students in 1995. Writers agree that post-secondary education in the U.S. is changing. The interest in providing technology-based education continues to grow rapidly. The influx of distance learning programs onto the education environment is evident when issue after issue of professional journals including *The Chronicle of Higher Education*, contain articles and reports of the use of distance education in the classroom.

> Despite issues of; academic integrity, copyright law, accusations of 'virtual programs' being degree mills, and the fear of the demise of the traditional 4-year college experience, online learning has made its way into the American post-secondary culture. We see new programs, new technology and new delivery platforms being developed. Online universities are seeking and earning accreditation. The academic world as we have long known it is changing. (Dempf, Van der Riet, & Plaag, 2000 p.1)

This technology debate has entered the public policy arena as well as the business and education area. Brower, Haarlow, Harmon, Harper, Hasseltine and Mueller (1998) present some of these public policy issues in their paper "Issues of Public Policy: Guiding the integration of information technology in higher education. Their issues deal with mission, quality, access, control, financing/cost, efficiency, and consortia, alliances, and partnerships. They believed that "without vision, direction, motivation and the necessary momentum, higher education will be unable to take full advantage of the United States' current edge in information technologies and its own precarious lead in education" (p. 1).

From the importance of face-to-face interaction in the college classroom to faculty development issues, colleges and universities are caught in the dilemma of deciding whether to offer courses only through the conventional means of on-campus classroom delivery (traditional) or through the new media of technology combined with off-campus offerings where students are not required to come to campus. While not new to education, today, with the introduction of technological advances of video, computer, compressed video, Internet, telecommunication networks, satellite links, etc., distance education has taken on a new image. Distance learning takes some of the value and objectives of traditional courses and uses technologies of the information age as a tool to address the needs of a broader and sometimes more complex educational market. Hence, distance education delivery has fallen to the "doing better business" phenomenon.

There are two notable market factors driving the development of distance delivery of instruction. The first is called access gap. Over the next 10 years, the student population is expected to overwhelm the capacity of the campuses. Traditional instructional delivery in classrooms will demand costly new construction that will not

find the necessary funding. Alternative delivery will be sought especially for high demand, general education courses. The second force is called dissolving of geographic boundaries, already happening in the global economy and being evidenced by the University of Phoenix and others in our communities. Community colleges can play a vital role in addressing both the access gap and the geographic boundaries, especially if they join in consortiums.

The learning that is occurring through this method of instructional delivery is receiving mixed reviews, especially from national accrediting bodies who considered this method of delivery less than adequate, yet "seventy percent of the country's two- and four year colleges offer online courses, up 48% since 1998" (DeLeon, 2001). Colleges and universities are beginning to change the way they do business. Not wanting to be left out of the technology revolution, community colleges nationwide are embracing distance education and distance delivery of courses to students who prefer to eliminate the drive to the campus during rush hour or inclement weather or simply prefer to take courses at their own convenience. Such delivery on the surface seems to be consistent with the mission of community colleges, to reach under-served populations, and of course, to reach new populations and generate additional revenues.

Distance education has always been geared toward adults. In today's society we find ourselves with less and less disposable time. Commuting alone has extended our workday. Workplaces are demanding more of employees. Students are changing and the way they want to learn is changing. Even the tools to accommodate the new demands of students are changing (West, 1999). The "new student" expects the college or university to adjust to their expectations, to offer courses that are more accessible than just on campus (Twigg, 1994). And when they do not, they seek a college or university that will.

Enrolling close to 6 million students, nearly 40% of the higher education market, community colleges are a major factor of post-secondary education in the United States. Florida's community college system is the most productive in the nation with 9 of the top 20 producers of associate degrees in the nation ('97-'98 Community College Week). Florida's system ranks 3rd in the country in the production of AA degrees; 4th in enrollment in community colleges. (Available [Online] http://dcc.firn.edu/facts). Bleed (1993) believes they can be expected to be a major player in employing new technologies in the delivery of instruction. Van Dusen (1997) wrote

> The community college is a particularly fertile setting in which to explore and develop the capabilities of information technologies for educational purposes. With its "open door" admissions policy, small classes, and focus on teaching and learning – rather than on research – the community college is poised to balance the interests of the individual with the needs of the larger community. Community colleges have long been the leaders among higher education institutions in providing innovative programs to diverse clients (p19).

Community colleges historically have responded to community needs in a number of ways. From remedial programs for academically deficient students to computer-

assisted instruction, from telecourses to directed studies, the community college has been a leader in meeting the needs of the community and particularly the adult students of the community. A growing number of average middle and lower income students have had the opportunity for higher education because of the community college. Distance education delivery is conducive to the mission of community colleges that serves the need of the community by extending opportunities for education to all through their open door policy. It seems only logical that the community college will take the place as leaders of distance education and virtual learning opportunities. This leadership will require some basic principles be put in place. Hopey (1999) presents 5 implementation points for integration of technology into adult learning opportunities; planning, training, technical support, leadership and resources. These 5 points were used to study Florida's community college system of distance education.

Purpose

Implementing reform or change in education settings is often difficult. Often in education, we jump into projects without the necessary planning because they seem like the right thing to do. Technology is one of those projects. Since the outset of the introduction of technology into education, educators have known that it is a good tool for teaching and learning. At first we were concerned that it accomplished the correct outcomes even if we had difficulty determining what they should be. Hopefully by now we are convinced that any technology in the classroom is good, that it gives teachers another tool in their toolbox of meeting the individual education needs of students of all ages. With distance education, the same is true. Russell's (1997) review of 248 research reports, summaries and papers found the literature to agree that there is no reason not to use technology – there is no significant learning difference for students who learn via distance delivery and on-campus classrooms.

This study focused on Florida 28 public community colleges. These colleges enroll nearly 1 million students and graduate nearly 50,000 associate degree and certificate completers annually. The governance structure establishes district boards of trustees, appointed by the Governor, which have authority for the institution. The boards are responsive to local community needs and adaptive to changes in the workforce. Florida's community colleges are one of the driving forces in Florida's economy, generating $2.64 billion in business volume from direct college related expenditures by faculty, staff and students. Both transfer and workforce training functions are important to the public community colleges in Florida. Fifty-one percent of students enrolled in the State University System began their higher education at one of Florida's community colleges. Florida's workforce reached 8.7 million this year with 1,105 associate degrees and certificate programs across the system, the community colleges are well positioned to meet workforce needs. Approximately 50% of the enrollment and resources in community colleges are workforce related. With a system this size, planning is critical. While Florida provides access to the first two years of higher education within driving distance of 99 percent of the population, Florida's community college students are typically older, employed, responsible for families and often find travel to campus

compromised by urban traffic congestion. Providing alternative distance delivery of courses and programs seemed like a responsible and obvious thing to do.

The purpose of this study was to examine the extent to which Florida's Community Colleges are implementing and using distance delivery of instruction. Research questions addressed the mission, the delivery organization, the content areas and modes of delivery, the faculty, and the support services. Hopey's (1999) five implementation points for integration of technology into adult learning opportunities; planning, training, technical support, leadership and resources were used to guide this study. Specifically, these questions were:

1. How is the state and community colleges in Florida planning for the implementation of distance education courses and programs?
2. a. What support and training is being provided for teachers who choose to teach their courses via distance techniques?
   b. What support and training is being provided for students who choose to take their courses via distance delivery?
3. What technical support is available for faculty to ensure they can teach their subject transparent to the type of delivery medium.
4. What leadership is being provided by the state or the college system to ensure quality delivery of distance education courses?
5. What is the nature of the resources for continued implementation of distance delivery of courses and programs?

Method

This descriptive study used a variety of sources to obtain data to examine this topic. Sources included the distance learning network, on-line catalogs, web-site information, analyses of technology plans, enrollment data, the state plan, community college (state) database and personal contact with consortium members.

Results

Distance learning has been a part of the community college system in Florida for many years. Florida's community colleges were involved in the "open college," a series of telecourses delivered via video early in their creation. In the mid 1970's, a few community colleges in Florida began offering commercially available telecourses. A few even developed their own. Today, the colleges have expanded their course delivery using a broad range of media. The first internet course was delivered in 1994. As web-course software has become more user-friendly, delivery of web-based courses comprise 49% of courses distance delivered courses reported in the state directory. The difference between web-enhanced or web-supported courses are not distinguished in this study; all courses listed on the state distance courses database were considered to be distance courses. These included video, audio, paper and web delivered. Even though the range of disciplines using distance learning as a means of course delivery is broad, the majority of courses seem to fall under Arts and Sciences, Computer Applications, and Medical

Careers. For the Fall 2000 term, the number of distance courses reported by 23 of the 28 community college totaled 1217 and ranged from 5 courses to 122 representing less than 10% of total course offerings state-wide. For the Spring 2001 term, a total of 1133 courses, ranging from as few as 9 to as many as 136 were reported from 22 of the 28 colleges (Available [Online] www.distancelearn.org/catalogue/). Distance-delivered courses appear to be re-purposed on-campus courses. Many of the faculty names seem to be the same from Fall term to Spring term; the courses sometimes changed. There appeared to be some new faculty names to replace those names not continued. Florida's community colleges are not reporting the use of interstate course developer agencies such as the Western Governor's University or the California Virtual University or intrastate between institutions at the distance learning web site. In addition, the same courses seem to be offered by the same faculty. Even with common courses as evidenced by the course prefix and number, colleges are not sharing courses between them; for example, there is not just one ENC 1101 offered by one college for the entire state system. A student can decide the college they want to take the course from even though it may not be the college in their tradition "district."

The results of this study are presented for each of the five integration points presented by Hopey (1999). The first question this study addressed tried to determine the extent of planning for distance leaning within the state, at the state level as well as the local level. There are a number of entities in place in the state to steer the distance education efforts. These are reported as entities of distance learning.

Planning

1.) How is the state and community colleges in Florida planning for the implementation of distance education courses and programs?

Before the reader can attempt to understand the entities of distance learning in Florida, it is helpful to understand the organization of education in the state. In 1998, Florida voters passed a constitutional amendment changing the Cabinet System to one where the Governor appoints a State Board of Education. This Board will appoint the Commissioner of Education (currently elected). The Bill abolished the Board of Regents and the State Board of Community College and required the Commissioner of Education to be responsible for hiring the heads of the universities and community colleges. While education is undergoing a major change in organizational structure with the dissolving of the State University System's Florida Board of Regents and the State Board of Community Colleges in 2003, the current structure is presented.

The Commissioner of Education oversees Florida Department of Education. This individual serves on the cabinet of the governor's office. The cabinet serves as the State Board of Education. The State Board of Community Colleges and the State Board of Regents focus their activities to the operation of the community colleges and the state universities.

The Florida Postsecondary Education Planning Commission (PEPC) is a citizen board of 11 members (plus one student) formed to coordinate the efforts of the postsecondary institutions and to provide independent policy analyses and

recommendations to the State Board of Education and the legislation. It was first created by executive order in 1980 and give statutory authority in 1981 (SS 240.145 and 240.147, Florida Statutes) and re-authorized in 1991 by the legislature. A major responsibility of the Commission is preparing and updating every five years a master plan for postsecondary education in the state. Areas of focus are promotion of quality, fundamental education goals, programmatic access, needs for remedial education, regional and state economic development, international education programs, demographic patterns, student demand for programs, needs of particular subgroups of the population, **implementation of innovative educational techniques and technology**, and the requirements of the labor market (Available [online] http://www.firn.edu/pepc/).

In the 1998 Master Plan (Available [online] http://firn.edu/pepc/masterplan.htm), one principle relates to implementation of technology and distance education; "fully use all providers and modes of delivery" (p. 2). Under the goal of increasing the productivity of the postsecondary education system, technology is seen as a means of efficient system of teaching additional students. In addition, the plan included a recommendation to "eliminate any policy which restricts student access to instructional courses and programs using distance learning technologies" (p. 10). Another recommendation focused on "examining the feasibility of providing degree granting authority through an institution or a 'virtual institution' for students who wish to complete portions of their coursework through alternate means (p. 11). In another recommendation the Board of Regents and the State Board of Community Colleges were directed to "provide the required tools, training and technological support to faculty members necessary to enhance or adapt their delivery of instruction" (p. 11), and they should examine the traditional faculty reward structure to ensure that adequate attention is devoted to the technology training and course development at the institute level. Faculty should be required to attain a minimal level of technological ability as a condition of employment" (p. 12). In addition, another recommendation was to "adapt the Teaching Incentive Program to reward members who successfully convert their course materials for electronic delivery" (p. 12).

Still another recommendation dealt with a Statewide Student Academic Advising System. Still another dealt with equipment and procurement plans and replacement policies for telecommunications and computer technologies, a shifting of the cost of technology away from expenses (operating capital outlay) to ongoing expense categories through short-term lease arrangements. They also recommended a high priority on statewide purchase and/or licensing of on-line databases and related instructional materials or equipment.

Operationally, there are three departments in the Department of Education, each run by a Deputy Commissioner. These are 1) Educational Programs, 2) Technology and Administration, and 3) Planning, Budgeting and Management. Within the department of Technology and Administration are the two divisions of Technology and Administration. Within the Division of Technology are the Bureaus of 1) Educational Technology, 2) Workforce Education and Outcome Information Services, 3) Educational Information and Accountability Services, 4) Education Data Center and 5) Florida Information Resource Network (FIRN). The two most involved with distance learning are FIRN and the Bureau of Education Technology. FIRN is a communications link. The Bureau of Education Technology provides leadership, technical assistance and support to public education and

telecommunications entities in the effective use of education technology and distance learning to improve student performance. The Bureau is comprised of 4 offices, 1) Distance Learning, 2) Instructional Technology, 3) Instructional Television, and 4) Public Broadcasting.

The community college system of Florida is lead by a 12 lay member, governor appointed State Board of Community Colleges (SBCC) established in 1983. The Commissioner of Education serves as the 13th member. The Board coordinates and oversees the operation of the 28 locally-controlled community colleges. The SBCC serves as the director of the Division of Community Colleges within the Department of Education. An executive director is appointed by the SBCC and serves as the executive officer and secretary to the board. The board receives input from the Council of Presidents (COP) legally designated as the taskforce of the board. Three councils serve in an advisory capacity to the COP. These are the Council of Business Affairs, the Council on Instructional Affairs and the Council of Student Affairs.

Entities of DL in Florida. Probably the first organized group of the infrastructure was the Florida Information Resource Network (FIRN). FIRN provides a communications link among colleges and universities as well as public school districts. Teachers of the state can obtain local internet dialup accounts for free. It allows for data transfer and can be used for real time and delayed interaction between faculty and student or among students to take tests, deliver text, respond to questions, locate resources. FIRN has been available for over 15 years. FIRN resides within the Division of Technology.

According to the Florida Public Post Secondary Distance Learning Institute, the governance of distance learning requires a different approach from those commonly used in public higher education (June, 1997). The issues span all the public institutions, and include both academic and administrative issues and therefore must be coordinated. Early on the distance learning institute assumed that function. The institute board consisted of the Chancellor of the State University System, the Executive Director of the Community College System, a member of the Board of Regents, 4 university presidents, 4 community college presidents, a member of the State Board of Community Colleges, the Secretary of the Department of Management Services and the Interim Executive Director of the Florida Distance Learning Network (FDLN). The institute is located at Gulf Coast University and is responsible for coordinating distance learning activities and the Florida Virtual Campus. (Available [online] http://sun6.dms.state.fl.us/institute). The Director serves on the Distance Learning Library Initiative (DLLI).

In an early prepared a paper "Assuring equitable access: A distance learning vision for Florida." The Florida Distance Learning Network (FDLN) is charged with the oversite of funding for distance learning infrastructure. It hoped to improve student learning and achievement through new instructional techniques and strategies that increase access to distance learning in the most cost-effective ways. The institute reported in its executive summary that the FDLN has been questioned in the past. As key players retired or changed jobs, the Institute was transferred to Florida Gulf Coast University. The network remains intact but inactive at this time.

The office of Distance Learning in the Bureau of Technology and Distance Learning has four functions (Available [Online] www.doe.firn.edu/edtech/dl/htm). This Bureau plays an important role in the planning of distance learning for the State. First listed is the function of technical support, second is training of faculty, followed by identifying trends and lastly researching issues. Among their projects is listed the Florida Distance Learning Network Advisory Council.

One of the key players of distance learning within the Department of Education was the establishment of the Florida Distance Learning Network Advisory Council (FDLNAC). This council was established to ensure and enhance electronic access for increased learning of all students by Florida Statute, Title XVI, Chapter 241.003 and resides with the Department of Education to advise and assist the Department in carrying out its duties relating to distance learning. The Advisory Council is appointed by the Commissioner of Education and all members are to have an interest in distance learning. The Advisory Council may study and recommend to the department marketing programs, the recipients of the Educational Technology Grant Program provided in s. 241.004, suggested legislation concerning distance learning and any other issue regarding distance learning as appropriate.

The FDLNAC's meeting minutes since December 1999 reflect an advisory role concerning the Florida Virtual High School (FHS), teacher training centers, review of technology plans (for each district), best practices, legislative budget requests, Technology Literacy Challenge Grants, as well as Southern Regional Education Board (SREB) and the US DOE grants. Through the Advisory Council, the universities, community colleges and public schools come together to insure and enhance electronic access for increased learning of all students.

With the adopting of Rule 6H-1.046 in 1996, the State Board of Community Colleges established the Florida Community College Distance Learning Consortium (FCCDLC). The consortium is made up of 32 members; one representative from each of the 28 community colleges, two representatives from the Council of Presidents and two members of the State Board of Community Colleges. Prior to official status, the consortium operated informally as the ITV Consortium to share information on the use of telecourses, student and faculty support and developments in technology mediated teaching and learning.

The consortium is an advisory committee of the State Board of Community Colleges. The State Board of Community Colleges appoints the membership of the consortium with the Chair of the State Board appointing the Chair of the Consortium. The Consortium Chair can appoint committees as necessary. The consortium is administratively assigned to the Division of Community Colleges. The consortium support staff is located on the campus of one of the state universities. Meetings are held quarterly in February, May, August and November at community colleges throughout the state.

In 1977, the consortium established the following vision statement:

The Florida Community College Distance Learning Consortium shall coordinate the establishment of a technology enhanced community college delivery system that supports the mission of the community colleges and ensures maximum access to higher education for all Florida residents by utilizing instructional technology and eliminating the barriers of distance, time, and place. (FCCDLC-Organizational Information)

The consortium is directed to address issues relating to

- access,
- time needed for students to meet their educational goals,
- coordination of the acquisition, development and distribution of courses,
- development of a distance learning associate to baccalaureate degree program with state universities,
- an inventory of distance learning courses, staff development materials and support services,
- training efforts for faculty and staff and related services involved is distance learning,
- developing a distance learning associate to baccalaureate degree program with the state university system.

The consortium operates with a committee structure. The five standing committees are 1) issues, 2) course acquisition, selection, development, & evaluation, 3) technical support and emerging technologies, 4) instructional support and 5) college partnerships and SACS. Each committee has established objectives. In 2000, a new executive director, Dr. John Opper was appointed. The executive director oversees the operation of the consortium and its members and interacts regularly with state and community agencies, educational entities, and industry regarding issues pertaining to technology and education, and participates in creating statewide distance learning policy affecting the Florida community colleges.

In 1997, the Technical Support and Emerging Technologies Standing committee of the FCCDLC recommended the establishment of the Florida Community College Instructional Network to be managed by the FCCDLC. Their role would be to allow colleges to leverage and build on existing state technology infrastructure through distance learning. The network would consist of a compressed video conferencing system connected to the SunCom backbone at each of the 28 community colleges. This network would be designed to 1) increase access to education, 2) reduce the cost of course delivery, 3) increase lifelong learning and training opportunities, 4) increase collaboration and cost-sharing among community colleges and universities, 5) reduce requirements for new facilities, 6) reduce time needed to obtain degrees or training and 7) increase capability through strategic partnerships with the private sector. This network would level the playing field of technology between the smaller community colleges and the larger community colleges. One of the requirements was matching funds. While each college may have established video conferencing, the network does not seem to be functioning.

Training

The support and training of distance education faculty and students remains a critical item related to the success of the distance mission. Without faculty who are willing to take a risk and use new technologies and students who register for these courses there would be no distance education. Making changes in the traditional way of teaching does not come without issues and problems. Both teachers and students need support and training. Hopey's (1999) second integration point focuses on support and training. For this study, the question for teachers is separated from the question for students.

2.) a. What support and training is being provided for teachers who choose to teach their courses via distance techniques?

There are numerous projects about the state relating to distance education. A major project supporting and training teachers is the Florida Education Technology Conference (FETC). The FETC is an annual conference for technology in Florida. Today over 10,000 teachers and other educators attend the conference where concurrent and keynote sessions present issues, best practices and hands-on activities relating to technology.

Another project specifically at the community college involves Staff and Program Development (SPD). Funds are derived from the state requiring 2% of a college budget to be set aside for training. Distance learning staff and program development is a high priority

State efforts. For more than 20 years, the Florida Community College System has licensed telecourses from such distributors as Public Broadcasting Service (PBS), Dallas Community College, Coast Community College, and Intellecom. Licenses are secured for statewide distribution of the telecourses by all 28 community colleges. The consortium has partnered with Archipelego, a subsidiary of Harcourt Brace, to license its online general chemistry course. Through the Florida Virtual College, Blackboard was approved for a state wide licensing fee of $35,000.00 allowing each institution a choice of Blackboard or WebCT for course delivery.

Another one of the early key players was the establishment of the Florida Distance Learning Network (FDLN). The FDLN appears periodically, but its activities are not well documents. One activity dealt with the funding of the Distance Learning Library Initiative.

The Distance Learning Resource Network (DLRN) is the dissemination project for the U.S. Department of Education's Star Schools Program. It provides many useful links to materials and assistance for distance learning faculty. Some of the information for teachers includes but is not limited to professional development, how to design online

courses, how to evaluate online courses, teaching with technology, web page design for designers, web style guides.

The Distance Education Systemwide Interactive Electronic Newsletter (DESIEN) is a searchable, interactive newsletter delivered via a discussion list. Each issue offers original articles which emphasize distance education themes or foci. In addition, news, updates, conferences and subscriber contributions are included.

The FCCDLC supports a WebBoard set up as a discussion on topics of common interest. It is a public forum and individuals wishing to participate can do so by registering. The WebBoard can serve conferences for consortium members and for faculty teaching distance courses.

The Florida Virtual Campus has an 18 member board consisting of community college presidents and others that reports to both the chancellor of the Board of Regents of the State university system and to the Executive Director of the community college system. The FVC is currently located at the University of South Florida along with the Distance Learning Library and FACTS. The FVC will make policy recommendations, give advise, and generate and implement a marketing plan for distance learning. The FVC is a neutral body, meant to market distance learning. There is some talk that is should become the states 29th community college.

The Distance Learning Library Initiative (DLLI) is a joint database sharing project between the universities and community colleges. It licenses for online database and encyclopedia service, contracts for document delivery service, and includes the Reference and Referral Center (RCC) at University of South Florida. See description under student support.

The Multimedia Educational Resource for Training and Online Teaching (Merlot) is another resource for faculty and students. It is a free and open resource designed primarily for faculty and students in higher education. With a continually growing collection of online learning materials, assignments and resources, merlot helps faculty enhance instruction. Merlot is also a community of people who strive to enrich teaching and learning experiences (Available [online] www.merlot.org).

Local campus efforts. A number of activities are happening locally at the community colleges. At one college, the policy regarding ownership of the Open Campus was addressed. All of the services, courses, information, etc. put onto the web are owned, maintained, and developed by those people that own those areas now. The ownership has to reside in the department. Copyright is another concern. At the present time, copyright is standard for most colleges in that ownership of the material belongs to the college and ultimately to the state. Another campus reported a faculty academy to improve the pedagogical basis of all modes of distance delivery. Still another is offering a summer institute for 15 faculty members to learn how to teach on line. Targeting the general education courses, the faculty will be given release time to attend the institute. A mentoring system has been established for technology and development. Another college

reported a Title III grant to establish a teaching lab for faculty to orient them in developing online courses in an effort to increase online course offerings. Still another college received a $5 million FIPSE grant to develop 140 courses over 4 years. Twenty hour workshops to train faculty in WebCT are provided in another college.

2) b. What support and training is being provided for students who choose to take their courses via distance delivery?

State efforts. The Florida Distance Learning Reference & Referral Center (FDLRRC) is on online library service for students. It maintains a free phone for students, provides basic technical support, and provides information on their website on how to access library resources.

The FCCDLC supports an electronic catalog at the distance learning web site that lists distance learning courses offered at all of the 28 community colleges allowing students to link to available courses throughout the state. Course listings are available alphabetically or by colleges. For the January 2001 term a total of 1133 courses are listed, down slightly from the 1220 listed for the Fall of 2000.

Distance Learning Resource Network (DLRN) is the dissemination project for the U.S. Department of Education's Star Schools Program. It provides many useful links to materials and assistance for distance learning students.

The state supports Florida Academic Counseling and Tracking for Students (FACTS), a student services component of distance learning. FACTS is a unique network that provides access to the computing resources of Florida's higher education institutions. It has seven expert groups to deal with academic advising, the development of 2+2, common admissions applications, registration, financial aide and authorization of users. FACTS is housed at the University of South Florida (Available [online] http://www.facts.org/). Under the distance learning hot link is a direct connection to Florida's Campus, Distance Learning Reference and Referral Center (DLRRC) and the Florida Community College Distance Learning Consortium (FCCDLC). Under student services are links to General Student Services Home pages and to Orientation Home Pages.

The Distance Learning Library Initiative (DLLI) is a joint database sharing project between the universities, community colleges and the public libraries through the State Library of Florida. It licenses for online database and encyclopedia service, contracts for document delivery service, and includes the Reference and Referral Center (RCC) at University of South Florida. It is a component of the emerging distance education programs in higher education in Florida. Components include electronic resources (FirstSearch and Britannica Online), Reference and Referral Center, Library User Training, document delivery, borrowing privileges. Their initial year funding (1997-98) was $2,000,00.00 to focus on Electronic Access, Document Delivery and Reference and Referral. An additional $2,000,000.00 the second year was authorized for electronic access, Reference and Referral, and User Training. The steering committee for DLLI

includes representative from the Community College Library Community (director of CCL and chair of CCLA Advisory Board), the State University System (Director of FCLA and FCLA Advisory Board member), and the State Librarian, and the Director of the Florida Public Postsecondary Distance Learning Institute.

A new library website is available to students. It is quick loading, and things are only one click away. It is available at http://www.neflin.org/nfcc.

The Library Information Network for Community Colleges (LINCC) provides service and leadership in statewide automated library and information resources to enhance the educational experience of Florida's community colleges. It is a program of the State Board of Community Colleges and connects the community college libraries to each other and to the world. LINCC is operated by the College Center for Library Automation (CCLA). All 28 libraries in the system are connected as well as the 63 associated campus libraries. LINCC is a gateway to important literature and information sources in all subject area. LINCC began in 1989 with a $15 million grant awarded over 5 years. With all of the colleges connect, the shift is now to ongoing software and service enhancement, and library management functions of circulation, serials management, acquisitions and cataloging.

The Southern Region Education Board's (SREB) Electronic Campus is available to all students in Florida. The electronic campus is a "one stop" point of entry for distance learning opportunities. Students can search for courses or programs. In addition user information is available that includes helpful hints on searching. All credits earned in courses and programs through the Electronic Campus are transferable. One area of useful information is the Financial Aid Information. Listings of Federal and state resources are readily available to students. The SREB Electronic Campus also makes available to the students the Georgia, Library Learning Online (GALILEO) project providing access to databases indexing thousands of periodicals and scholarly journals. Full text as well as abstract and citation databases are made available to students.

Local effort. Most of the home pages of the community colleges direct the student to resources for online courses. Many offer distance learning style inventories to inform students of the type of student most successful with distance learning. Others offer online orientations to courses as well as intervention centers and student services. All offer FAQ's. All of the home pages visited seem to attempt in someway to keep the distance learning student connected to the college. Students can easily connect to online registration systems, campus resources, administration, academic programs, student services, news and directories, faculty and internet links.

Each campus provides online Orientation pages for student access. Students might find steps to registration, assessment services, financial aid information, or advisement. Local colleges have prepared welcome packets for all students enrolled in distance learning session. One college reported online tutoring available in mathematics.

All home pages connect students to the Library system (LINCC). This gateway allows distance students advanced searching to worldwide libraries.

Technical support

Technical support is a broad term used to identify assistance to users relating to software and hardware. Hopey's (1999) third integration point focuses on technical support.

3.) What technical support is available for faculty to ensure they can teach their subject transparent to the type of delivery medium?

Technical support for faculty is available through the efforts of some of the planning agencies. In addition, many of the community colleges offer support locally.

State technical support. There are a number of areas transparent to the classroom teacher. First was licensure agreements for software and hardware. Both the Department of Education (DOE) and the Community College Distance Learning Consortium (FCCDLC) have worked to obtain agreements for software. In particular, the state purchased a license for WebCT and for BlackBoard that allows teachers unlimited access to two very powerful course design software.

Leadership

Hopey's (1999) fourth integration point focuses on leadership.

4.) What leadership is being provided by the state or the college system to ensure quality delivery of distance education courses?

There are basically four initiatives by the state designed to ensure quality delivery of distance education courses. These include standards, coordination, DOE, and common course numbering. All were in place prior to the focus on distance learning.

Standards. Both the DOE and FCCDLC have worked diligently to insure that standards have been a primary focus to insure quality of courses and programs offered through distance learning. Courses are reviewed and all colleges and universities follow the current accreditation guidelines.

Coordination. The FCCDLC was worked diligently to insure there was not a sense of confusion to the public in the implementation and delivery of the distance learning system. Numerous meetings discussed the major concerns of the consortium members.

Department of Education. The DOE took a major, upfront role for the state by forming the FCCDLC. In addition, the DOE worked to provide financial support for technical support services, hardware and software.

Common course numbering. Florida's common course numbering system has been in place for a number of years. What this means to the student is that a course offered by the college or university that has the same prefix and course number is equivalent regardless of where the course is offered. Students can transfer credits easily between community colleges and universities. In the distance learning environment, the

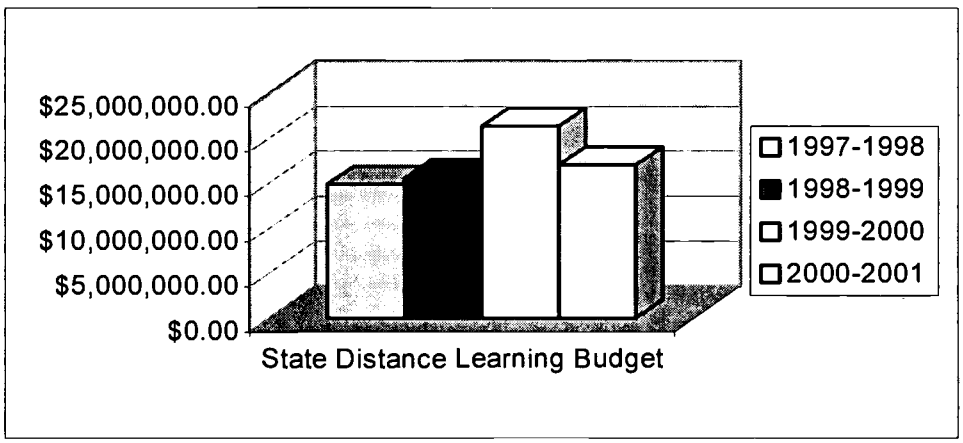
student has the choice to select a course that is convenient to their schedule and know that it will be accepted toward a degree if the course is required for the program. While there are limits in the number of hours that can be transferred, and the number that must be taken at the degree granting college or university, the option is attractive to our transient population.

Resources for continued implementation

Hopey's (1999) fifth integration point focuses on resources for continued implementation. This is often the weakest point of the technology plan.

5.) What is the nature of the resources for continued implementation of distance delivery of courses and programs?

Budget. It is well known that technology programs are costly. Since 1997-98, the consortium has received recurring funding for its operation. The budget for 2000-2001 is now at $325,000.00. Telecourses have also received recurring funding since 1997-98 and are at $200,000 for 2000-01. Other projects receiving recurring funding since 1997-98 are the Community College Library Automation currently at $7.7 million, the Distance Learning Library Initiative now $2.3 million, the Florida Virtual Campus consistent at $360,000 and the Florida Academic Counseling and Tracking for Students (FACTS) beginning at $6.9 million and currently at $4.6 million. Other projects have received onetime allocations of monies. (Infrastruction/Technology equipment, Video Conferencing Network, and the Course and Program Development). The annual budget from 1992-2001 is displayed in the graph below.



During the 1998 legislative session, all DL dollars were moved from the Postsecondary arena into Administered funds located in General government. A total of 2.5 million was set to be transferred. These funds were to be distributed $250,000 to the FCCDLN, $135,000 to Statewide Acquisition of Distance Learning Courseware – Telecourses and $715,000 to Course Selection, Acquisition and Co-Development. An

additional $1.4 million for the Advanced Telecommunications Services Equipment had not been transferred as reported in the May 1998 meeting minutes.

During the 1999 legislative session, the consortium was awarded $325,000 for administration, $200,000 for telecourses and 1.428 million for DS3 for the 2000-2001 year. The $1.5 million for program and course development was not awarded.

For the 2001-2002 session the consortium submitted requests for the 65/25/15/10 plan, e-learner support centers to allow students to call in and receive assistance, e-architecture (the technology) and e-services (the consortium, instructional support, tools, courseware licensing for IT courseware and other products needed for faculty training to teach in the electronic environment and recurring funds for FACTS, CCLA and DLLI. In addition 1.428 million dollars is being requested for the DS3/12 at each college campus. The budget is negotiable annually with the legislature.

Organizational structure. In addition to money, the organizational structure of the Board of Education, the Community College Board and the Board of Regents play a role in resources for continued implementation of distance delivery of courses and programs. With the Board of Education undergoing re-organization it is difficult to determine the focus of distance education.

Millennium Strategic Planning of the Florida Community College System outlines several objectives for distance learning in the state. These include use of SPD funds for faculty and staff training in upgrading skills and curriculum development relating to distance education. The SBCC also plans to support the Academic Counseling and Tracking system for students, a statewide student advising system. In addition, a high priority on statewide purchases and licensing of on-line databases and related instructional materials and equipment through the expansion of the College Center for Library Automation is expected to be continued. If followed through the re-organization, distance learning should continue to be a high priority in Florida.

Summary and Conclusions

The purpose of this study was to examine the extent to which Florida's Community Colleges are implementing and using distance delivery of instruction. Research questions addressed the mission, the delivery organization, the content areas and modes of delivery, the faculty, and the support services. Hopey's (1999) five implementation points for integration of technology into adult learning opportunities; planning, training, technical support, leadership and resources were used to guide this study.

This review concluded that Florida's Community Colleges are well positioned to be leaders in distance learning in the state. A major problem in implementation is that of financial support. A second major problem is coordination. Florida has implemented structures that should ensure that it will be able to serve the growing population of learners who prefer to participate in distance learning to supplement on campus learning. Particularly in large metropolitan areas where traveling even 30 miles becomes a hardship, Florida's Community Colleges are well on their way to having the means to offer alternatives to its constituents.

Peterson, Ginsburg, Garcia, and Lemke (2000) highlighting the World Forum on Education in Dakar, Senegal, the meeting of the education ministers from the Group of Eight industrialized nations and the 21 economies of the Organization for Asia-Pacific Economic Cooperation suggest, relating to information technology and distance education

> Almost every country is investing heavily in information technology to improve teaching and learning. They are also facing difficult questions about how to produce quality educational software, how to ensure that teachers have the necessary training and opportunity to make use of technology in the classroom, how to protect from potentially harmful content or effects of the Internet, and how to assure an equitable provision of technology (avoiding the "digital divide") both within and among countries. With respect to distance education, a number of issues, including quality assurance, credit recognition, and financial aid, can only be worked through in collaboration with other nations. (p. 3)

While no direct connection was found, the origins of the FDLNAC may be found in a paper presented to the Community College Distance Learning Consortium FCCDLC in 1997. The paper called for the establishment of the Florida Community College Instructional Network to be managed by the FCCDLC. Their role would be to allow colleges to leverage and build on existing state technology infrastructure through distance learning. Time will determine if this happens.

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