



# **MAJOR ISSUES IN TECHNOLOGY**

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**Report and Recommendations of the  
Florida Postsecondary Education Planning Commission**

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**MARCH 1997**

## POSTSECONDARY EDUCATION PLANNING COMMISSION

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The Postsecondary Education Planning Commission, initially created by executive order in 1980, given statutory authority in 1981 (SS 240.145 and 240.147, Florida Statutes), and reauthorized by the 1991 Legislature, serves as a citizen board to coordinate the efforts of postsecondary institutions and provide independent policy analyses and recommendations to the State Board of Education and the Legislature. The Commission is composed of 11 members of the general public and one full-time student registered at a postsecondary education institution in Florida. Members are appointed by the Governor with the approval of three members of the State Board of Education and subject to confirmation by the Senate.

A major responsibility of the Commission is preparing and updating every five years a master plan for postsecondary education. The enabling legislation provides that the Plan "shall include consideration of the promotion of quality, fundamental educational 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. The capacity of existing programs, in both public and independent institutions, to respond to identified needs shall be evaluated and a plan shall be developed to respond efficiently to unmet needs."

Other responsibilities include recommending to the State Board of Education program contracts with independent institutions; advising the State Board regarding the need for and location of new programs, branch campuses and centers of public postsecondary education institutions; periodically reviewing the accountability processes and reports of the public and independent postsecondary sectors; reviewing public postsecondary education budget requests for compliance with the State Master Plan; and periodically conducting special studies, analyses, and evaluations related to specific postsecondary education issues and programs.

Further information about the Commission, its publications, meetings and other activities may be obtained from the Commission office, 224 Collins Building, Department of Education, Tallahassee, Florida, 32399-0400; telephone (904) 488-7894; FAX (904) 922-5388.

# **POSTSECONDARY EDUCATION PLANNING COMMISSION**

## **MAJOR ISSUES IN TECHNOLOGY**

Prepared in Response to Specific Appropriation 188  
of the  
1996 General Appropriations Act

March 27, 1997

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## EXECUTIVE SUMMARY

In proviso language accompanying Specific Appropriation 188 of the 1996 General Appropriations Act, the Postsecondary Education Planning Commission, in cooperation with the Florida Distance Learning Network (FDLN), the Board of Regents, and the State Board of Community Colleges was directed to conduct studies and prepare reports which address policy issues arising from implementation of expanded educational use of technology and distance learning.

To help fulfill this directive, the Commission contracted with the National Center for Higher Education Management Systems (NCHEMS) to assist in gathering background information and making recommendations centered on a) awarding credit for technologically delivered instructional programs, b) the effective application of technology to priority instructional areas, and c) funding technology-related instruction and distance learning courses and programs. Additional background information in the areas of information and technological access and emerging technologies was prepared by Commission staff. Whenever possible, Commission staff and NCHEMS consultants participated in the deliberations of the four Institute for Public Postsecondary Distance Learning workgroups to provide input and gather additional information for the preparation of this report.

In the course of the study, several structural features of Florida's higher education system appeared to present obstacles to the adaptation needed for effective use of technology and implementation of a distance learning system. These features include: the articulation system which reinforces a rigid division of labor and thus inhibits cooperation; the common course numbering system which favors maintaining only traditional courses and curricula; the fixed service areas of institutions, again inhibiting cooperation; enrollment-based funding mechanisms which encourage competition and ignore additional costs associated with technology; and a provider-driven higher education system which does not always take into account the needs of the students.

In addition to the structural features listed above, several impending challenges to Florida's higher education system were identified. These include: anticipated enrollment increases; a shift in student behavior away from the traditional "two-plus-two" enrollment pattern; rising numbers of nontraditional students who need flexibility in their programs of study; a growing need for occupational and professional programs; and the anticipated growth in the number and aggressiveness of alternative providers of postsecondary education.

Over the course of the last eight years, the Commission has followed the advances of technology and the resulting policy challenges that have arisen. In many instances, the discussions about the potential of technology and the changes, advantages, and cost savings that it will bring about have been based on expectations created by popular magazine and newspaper articles, advertising, and the promises of industry representatives. Educational technology can allow postsecondary educational institutions to become more efficient in teaching more students. However, without significant investments in infrastructure and additional faculty, even with the use of distance learning technologies, postsecondary institutions cannot accommodate the projected forty percent increase in high school graduates that will impact the system over the next ten years. While it is true that advances in technology will certainly bring about some

positive benefits, many existing policy questions will be exacerbated and new ones will emerge. Clearly, technology will not be the panacea for all of the problems facing the State's educational sectors.

Meetings with representatives of the Florida Legislature and the Governor's Office revealed significant concerns about the future of postsecondary education in the State. Members of the Board of Regents and the State Board of Community Colleges share these concerns. However, subsequent policy actions taken by various bodies appear, in many cases, to be designed to "accommodate" technology within the current architecture of institutions and instructional delivery. Most appear to have been developed largely from the point of view of those providing instruction instead of those receiving it and whose needs it is presumably intended to meet. In addition, there has been little attention in any policy discussion of the particular educational needs that must be met on a statewide or regional basis and what technology is especially good at doing. Most reports produced to date on this topic cite increases in demand as a rationale for greater investments in technology but do not present these data in ways that suggest specific strategies to meet demand--either on a regional or a programmatic basis.

Partly as a result of these conditions, the uses currently being made of technology and distance-delivery mechanisms in Florida tend to serve institutionally-defined objectives, not those of the State as a whole. Indications of this include: a concentration of current distance education programs in graduate and professional education disciplines relevant to individual institutional interests (as opposed to addressing bottleneck courses); the treatment of distance education as an add-on rather than part of the mainstream academic program; and lack of joint ventures which encourage cooperation among institutions. What is needed is a basic shift in policy discussion from a model characterized by the present organization of public providers' use of technology within the current structure, to one organized in terms of state needs and priorities, and changes in instructional strategies and approaches to provide multiple ways of meeting these priorities with consequent applications of technology.

The recommendations regarding the use of technology and distance learning in Florida's higher education system address organizational and governance concerns, academic and student support issues, infrastructure development, and funding policies. They are as follows:

**Recommendations:**

**Florida Distance Learning Network**

1. *The Legislature should redefine the mission of the Florida Distance Learning Network to focus primarily on issues related to technology policy and infrastructure development. Current providers of telecommunications services should not be represented as voting members of the Board of Directors.*

**The Institute for Public Postsecondary Distance Learning**

2. *The Legislature, in proviso language, should re-establish and expand the membership and responsibilities of the Institute for Public Postsecondary Distance Learning. The*

new entity should be renamed and include the Commissioner of Education and a representative of private higher education.

3. *The Institute for Public Postsecondary Distance Learning should collaborate with the Department of Education in the statewide licensing and/or development of educational programs and courses of highest priority.* The Institute should work within the existing Department of Education initiative on behalf of its constituent institutions.
4. *The operational oversight of the development and implementation of the computer assisted student advising system should be housed within the Institute for Public Postsecondary Distance Learning.* An ongoing oversight committee should be formed to provide policy and operational input.
5. *The Institute for Public Postsecondary Distance Learning should be authorized and funded to operate an emerging technology evaluation program.* The emerging technology evaluation program should operate as a matching grant program within the Institute. Recipients of the grants should include public and private higher education institutions and state agencies. Recipients would be required to provide matching funds or in-kind services and to produce an evaluation report with details of the technical aspects of the technologies' installation and performance as well as an actual cost benefit analysis of the results of its application to practical use.

#### **Statewide Infrastructure**

6. *The Department of Management Services should continue its investment in the development of the technological infrastructure for delivering educational and governmental programs and services asynchronously to the homes, schools, and offices of the citizens of the State.* Particular attention should be focused upon securing competitive rates for needed levels of service through the introduction of increased competition among providers of advanced telecommunications services.

#### **Training**

7. *The Institute for Public Postsecondary Distance Learning should earmark a portion of its requested funding to organize a diversified, team approach to training on an as-needed or requested basis.* Funding for such an effort should be used to acquire or develop appropriate training materials, purchase specialized equipment for training which could be moved from site to site, and partially underwrite the cost of travel for the training teams. The teams should also be active within the learning support center network for post-training support.

#### **Accreditation Issues**

8. *The Board of Regents, the State Board of Community Colleges, the Department of Education, and the Postsecondary Education Planning Commission should examine the issue of accreditation for technologically enhanced or delivered instructional programs*

*and make recommendations concerning policy initiatives needed.* A representative workgroup should be convened by the Institute which would follow the efforts of the Western Governors University as well as similar initiatives and make recommendations for consideration by the appropriate sector board. Accreditation concerns should be pursued jointly with other states through the Southern Regional Education Board and the State Higher Education Executive Officers.

9. *Requirements for on-campus or "in person" study should be based on clear programmatic needs for a) direct interaction with faculty, peers, and educational resources, or b) "hands-on" applications that require direct experience and assessments of performance.* They should not be established arbitrarily or uniformly for all of an institution's programs.
10. *Opportunities should be explored that allow students to "test out" of particular curricular components they have mastered on the basis of experience or previous exposure.* Courses or programs acquired or developed by the Institute should contain opportunities for students to advance through content where demonstrated mastery can be shown.

#### **Network of Learning Support Centers**

11. *Responsibility for the coordination of a statewide network of learning support centers should be assigned to the Community College System.* The coordinating role should be fulfilled by the Community College Distance Learning Consortium. The Consortium should establish minimum criteria for designation as a learning support center and eligibility for support funding. A learning support center should provide, at a minimum, registration, counseling and advising, assessment and testing. Provided as well should be training and assistance in accessing centralized services such as the statewide student advising system, library and information resources, access to information technology and services (computers, audio and video classrooms, and Internet connections), access to centralized financial services (e.g., billing, payment, and financial aid), and specialized academic assistance relevant to the educational programs being supported. State universities offering distance learning degree programs should be required to submit a plan to the Board of Regents and the Institute on Public Postsecondary Distance Learning that ensures that students enrolled in such degree programs will be provided appropriate student support services. The plan should include a description of the services to be provided and provision for funding the delivery of such services. Community colleges shall adhere to policy adopted by the State Board of Community Colleges related to the delivery of out-of-district distance learning instruction.

#### **Information Access**

12. *The Department of Management Services, Florida Library Network Council, the Institute for Public Postsecondary Distance Learning, and the Florida Information Resource Network, in order to leverage as much buying power as possible, should collaborate and centralize their purchases of digital information resources when*



*feasible.* A pooled purchasing process or fund should be established for the licensing of electronic information sources on behalf of the libraries and educational institutions in the State. In order to ensure equity for all public libraries, funds for centralized purchases of a minimal set of on-line information resources should be appropriated by the Legislature.

13. *The Board of Regents and State Board of Community Colleges should initiate a research project through the Florida Center for Library Automation and Center for College Library Automation to identify high demand information resources that are unavailable in electronic form.* Once identified, efforts should be made to secure the necessary licenses or copyrights to make these resources available in a form that will speed their dissemination.
14. *The Florida Center for Library Automation and Center for College Library Automation should collaborate on the development of high quality instructional programs and information access tools to better enable students, faculty, and library patrons to make efficient use of the information resources available.*
15. *A workgroup should be convened by the Secretary of State to review the implications and value of copyright and licensing of state produced information.* The workgroup should include the State librarian, the executive directors of the Florida Center for Library Automation and the College Center for Library Automation, two representatives each from the State University System and the Community College System, the Secretary of the Department of Management Services, two representatives of the public libraries, and a member of the Joint Committee on Information Technology Resources.

#### **Financial Aid Issues**

16. *An agreement that would meet federal financial aid guidelines should be executed to allow transfer and acceptance of credit of distance education courses among the state universities, community colleges, and private postsecondary institutions.* Such an agreement could be negotiated through the Institute for Public Postsecondary Distance Learning.

#### **Access to Technology**

17. *The Department of Management Services should convene a workgroup to examine the feasibility of shifting more of the costs for acquiring and using technology from capital expenditures to operating expenditures.* The workgroup should include representatives of the Department of Education, the Board of Regents, and the State Board of Community Colleges. The workgroup should conduct a review of equipment replacement policies for advanced telecommunications and computer technologies and make recommendations concerning the feasibility of shifting the costs of technology away from capital expenses (operating capital outlay) to ongoing expense categories through short-term lease arrangement or other means.

18. *The State Board of Community Colleges and the Board of Regents should plan to require all full-time, incoming students to purchase or lease a computer as a condition of their enrollment.* The educational sectors should combine their efforts through the Department of Management Services to negotiate the best possible purchase or lease options for their students and faculty. The availability and acquisition of specialized equipment and software which allows students with disabilities to take full advantage of technologically delivered educational courses, programs, and services should also be investigated.

### **Tuition and Fee Structures**

19. *The Board of Regents and the State Board of Community Colleges should continue their movement away from traditional service areas and any other such artificial boundaries which might impede student access to educational programs and services.*
20. *The Legislature should adapt the current funding mechanism for both the SUS institutions and the community colleges to further encourage the use of technology-intensive instruction.* For the community college performance-based funding system, distance learning instruction and any performance outcomes related to such instruction should be recognized in the same manner as comparable campus-based instruction and should be subject to the same funding eligibility criteria. Total tuition and fees assessed to distance learning students should not exceed total tuition and fees assessed to traditional campus-based students enrolled in comparable courses. For the State University System, enrollment generated by distance learning students that is included within the SUS funded enrollment plan should be subject to the same tuition and fee policies applicable to funded enrollment generated by conventional campus-based instruction. Total tuition and fees assessed to distance learning students should not exceed total tuition and fees assessed to traditional campus-based students enrolled in comparable courses. Total tuition and fees charged for enrollment in excess of the funded enrollment plan should be at least at the level required to make such instruction self-supporting. Students living outside of the State and enrolled in distance learning courses offered by public postsecondary institutions should pay fees at least equal to the cost of providing that instruction. No state support shall be used to subsidize such instruction.

### **Nonduplication of Programs**

21. *Educational content of programs developed with state monies should be made available to other state institutions.* The educational institution could retain the copyright for the content of the course or program, and it would be free to license the material to other non-state institutions or private entities. Further, all institutions should clarify their patents, copyrights, and trademark procedures as they relate to instructional technology materials. All agreements and contracts for co-development of instructional technology materials using appreciable State support or monies must allow for the sharing of the developed materials among other public institutions without additional cost.

## **Partnerships**

22. *Partnerships between state universities, community colleges, school districts, private higher education, state agencies, private vendors, and telecommunications providers, both in and out-of-state, should routinely be explored before state monies are invested in the sole development of any hardware, software, instructional content, or new learning support systems.* Any state funds used for the development of hardware, software, instructional content, or support services to be used for alternative delivery must be justified on the basis of compelling state need and the lack of appropriate partnership arrangements.

## I. INTRODUCTION

Instructional technology can be used in Florida to further several public policy agendas:

- increase student access to education.
- reduce time needed to obtain a degree by allowing students to take required classes via distance learning that would normally not be available.
- reduce the demand to build additional postsecondary education classrooms.

Technology has been widely accepted as a useful partner in assisting the State in the achievement of these goals. Community colleges and state universities in Florida are quickly increasing their development and use of educational technology and telecommunications services to enhance teaching and learning. However, costs will be excessive unless duplicative services are reduced or eliminated, highly effective programs are produced, and programs are delivered in the most cost-effective manner. As a result, collaboration and cooperation among the education sectors is essential.

The 1995 Legislature enacted the Education Facilities Infrastructure Improvement Act. This legislation, s. 464.506, Florida Statutes, contains a number of the recommendations of the State Telecommunications Task Force, which was created by the 1994 Legislature to develop a plan for improved coordination of telecommunications technology and education. Through this act, the Legislature established the Florida Distance Learning Network to exercise responsibility for statewide leadership in coordinating and enhancing advanced telecommunications services and distance learning in public education delivery systems. The Florida Distance Learning Network authorized the creation of two additional committees to coordinate the distance learning efforts in the community colleges and state universities. The Institute for Public Postsecondary Distance Learning was created through a joint memorandum of understanding between the Board of Regents and the State Board of Community Colleges and is administratively housed at Florida Gulf Coast University. In scope, the Institute was envisioned as a coordinating body for all of public postsecondary education distance learning. In addition, the Florida Community College Distance Learning Consortium was established to assist in coordinating the distance learning efforts of the 28 public community colleges.

Prior to the passage of this act, both the State Telecommunications Task Force and the State University System Distance Learning Addendum to their strategic plan, identified a number of barriers to the utilization of instructional technology and distance learning programs in postsecondary education. After the establishment of the Institute, three workgroups were established with representation from the community college and state university systems to review issues concerning institutional jurisdiction and service areas, articulation and the transfer of credit, and funding and fees as they relate to the challenges and opportunities presented by technologically enhanced or delivered instruction. A fourth committee, which focused upon the implications of technological change for information access and libraries, was also formed.

## Legislative Charge

In proviso language accompanying Specific Appropriation 188 of the General Appropriations Act, the 1996 Legislature directed the Postsecondary Education Planning Commission, in consultation with the Florida Distance Learning Network, the Board of Regents, and the State Board of Community Colleges to:

*conduct studies and prepare reports which address policy issues arising from implementation of expanded educational use of technology and distance learning. Such reports and recommendations shall address but not be limited to the following issues:*

- *examine the awarding of credit for technologically delivered instruction, the feasibility of granting postsecondary degrees when courses or programs of study are offered via technology or through other alternative means, and the potential for a "virtual" degree-granting institution.*
- *examine the problems associated with implementing the use of technologically delivered instructional programs and potential for utilizing distance learning technologies in such areas as basic literacy, remediation, learning disabilities, at-risk students, workforce development, prison education, and juvenile justice programs.*
- *examine issues surrounding the FTE funding methodology of the sectors and the tuition and fee structures for students enrolled in courses and programs using alternative delivery methods and recommend fiscal policies which clearly describe how funding and services will be processed for students enrolled in distance learning courses and programs. Such policies should include provisions for shared funding among the institutions involved in instruction that crosses conventional service areas and basic student support and library services to be provided to remote students.*
- *examine the policy and fiscal implications of providing access to information and technological capabilities including an analysis of the impact upon library resources and recommend policies which will ensure a minimal level of universal access to information and technological resources for all citizens.*
- *compare existing state technological initiatives with those present in the private sector to determine if unnecessary duplication exists and make recommendations concerning the potential for partnerships with industry that could be economically beneficial for the state. The recommendations and analysis should also include a survey of the high technology and information industry to ascertain which of the newest technologies provide the greatest potential utility for adoption by the State.*

*Preliminary reports and recommendations are to be submitted no later than February 1, 1997. Additional findings and recommendations shall be submitted no later than April 1, 1997.*

To help fulfill this directive, the Commission contracted with the National Center for Higher Education Management Systems (NCHEMS) to assist in gathering background information and

making recommendations centered on a) awarding credit for technologically delivered instructional programs, b) the effective application of technology to priority instructional areas, and c) funding technology-related instruction and distance learning courses and programs. Additional background information in the areas of information and technological access and emerging technologies was prepared by Commission staff. Whenever possible, Commission staff and NCHEMS consultants participated in the deliberations of the four Institute workgroups to provide input and gather additional information for the preparation of this report.

This report addresses the issues identified by the Legislature. Section II of this report examines current challenges to the public postsecondary structure and how technology and distance education, as well as other forces, appear to be affecting Florida's capacity to function in this environment. Section III briefly reviews and critiques the specific policy responses to the challenges posed by technology that have occurred to date, including the recommendations of the various subcommittees operating under the auspices of the Institute on Public Postsecondary Distance Learning. Section IV provides the main substance of the report by discussing issues and recommendations.

## **II. CHALLENGES TO THE CURRENT PUBLIC POSTSECONDARY STRUCTURE IN FLORIDA**

Florida's public system of higher education is one of the most deliberately designed in the nation. Particular structural features of this system--including most notably its "two-plus-two" architecture--are considerably more rational than those of other states. But, they are also premised on relatively established conceptions of the types of students to be served and the modes of instruction used to serve them. In Florida, as in other states, both of these premises are changing quickly. What makes Florida special, however, is that many of the deliberate design features that made its approach to postsecondary education unusually effective under established conditions may also make it hard for the state to adapt quickly to changes in these conditions.

### **A. Salient Features of the Current Structure**

A number of specific features of the State's design for postsecondary education were found by the Commission's consultants to be especially salient in shaping its response to widespread changes in instructional delivery. They include:

- an articulated approach to undergraduate education that emphasizes the role of community colleges in providing the first two years of instruction through AA transfer degree programs, but that also reinforces a relatively rigid "instructional division of labor" between two large public sectors that tends to discourage initiatives designed to address joint issues affecting both sectors, except through direct legislative intervention.
- a common course numbering system that attempts to assure commonality of content for transfer and articulation purposes but that also tends to perpetuate the conception of traditionally conceived "courses" (classroom-based, credit-awarding, term-oriented) as the centerpiece of curricular design.
- an array of public higher education institutions with fixed geographic service areas, which results in relatively homogeneous institutions with similar arrays of programs and the use of "service areas boundaries" to resolve most emerging questions of institutional mission.
- largely enrollment-based funding mechanisms that tend to reinforce current behaviors and which fail to recognize the significantly different cost structures associated with new modes of instruction and that emphasize the "equitable" treatment of institutions.
- a relatively "provider-driven" system of higher education in which institutions themselves, for the most part, determine what is offered in the absence of much analysis of client, regional, or overall state need.

Some of these features, and in particular the latter three, are shared by most state systems of higher education. The first two were found to be especially characteristic of Florida. All five are structural realities within which, in the short run, Florida will have to evolve its

approach to inevitable changes in instructional delivery. In the long run, however, they represent powerful forces working against an easy accommodation to such changes.

## **B. Pressures for Change**

Technology and distance education provide particular challenges to the system now in place. Experience in other states suggests a number of them that Florida will need to specifically recognize and address. By substantially erasing geographic boundaries, technology and distance education allow large providers (including those located out-of-state) to effectively dominate particular markets for postsecondary education, regardless of established service areas. By allowing asynchronous and self-paced instructional delivery to occur, they potentially eliminate the traditional semester-length course as the fundamental unit of curricular accounting. By changing the underlying "production function" for delivering instruction, they make obsolete established ways of calculating costs and thus the traditional basis for allocating resources to institutions.

Identifiable challenges to the current system of postsecondary education in Florida are not confined to technology and distance education. Important factors that are, in part, independent of technology, include at least the following:

- anticipated enrollment increases of up to forty percent in the next decade due to rising numbers of high school graduates. These must be accommodated on the basis of a relatively fixed revenue base, are not likely to impact all areas of the State in an equivalent way, and are likely to significantly alter the current ethnic mix of the undergraduate student population.
- growing shifts in student behavior away from the traditional "two-plus-two" enrollment pattern toward a more "fluid" mix of courses and a more episodic set of experiences with individual colleges and universities. For example, a recently completed SUS study indicates a recent rise in the proportion of students transferring from community colleges to SUS institutions without having previously earned an AA degree.
- rising numbers of non-traditional students to be accommodated, who are often place-bound with specific educational needs and for which the "two-plus-two" system is not optimally designed.
- continuing, and often highly region-specific, needs for occupational and professional programs of study to support particular economic and societal needs.
- anticipated growth in the number and aggressiveness of alternative providers of postsecondary education (private/proprietary institutions and corporations) that may particularly emphasize the use of non-traditional delivery mechanisms and may be located out-of-state.

The Legislature and the two public higher education systems are explicitly raising issues of technology and distance education in Florida because these issues are, in part, related to these broader trends, are proving difficult to accommodate within the current structure, and are



growing sufficiently large that they can no longer be ignored. The emergence of these issues provides an important occasion for policymakers to address larger questions about the organization and delivery of postsecondary education and its ability to meet state needs.

### III. ANALYSIS OF CURRENT POLICY RESPONSE

Meetings with representatives of the Florida Legislature and the Governor's Office revealed significant concerns about the future of postsecondary education in the State. Members of the Board of Regents and the State Board of Community Colleges share these concerns. Foremost among the challenges they note is the continuing ability of the current system to accommodate rising enrollment and service demands, while remaining broadly accessible and cost-effective. The Legislature recognized the potential of technology to address this concern by a series of actions that include: a) establishing the Florida Distance Learning Network (FDLN), b) appropriating fifteen million dollars to be spent on technology related initiatives in higher education under the auspices of a newly created Institute on Public Postsecondary Distance Learning jointly created by the State University System (SUS) of Florida and the State Board of Community Colleges, and c) directing the Postsecondary Education Planning Commission to examine alternative approaches to funding, accommodating access, awarding credentials and degrees, and meeting areas of high instructional demand. Such actions evidence considerable recognition of technology's potential to transform the system.

#### A. Specific Features of the Current Response

In contrast to this vision, subsequent policy actions taken by various bodies appear, in many cases, to be designed to "accommodate" technology within the current architecture of institutions and instructional delivery. More importantly, most appear to have been developed largely from the point of view of those providing instruction instead of those receiving it and whose needs it is presumably intended to meet. In particular, the following policy documents were noted by the Commission's consultants:

- the Memorandum of Understanding establishing the Institute on Public Postsecondary Distance Learning, which allocates responsibility for the development of technology-based courses at the lower division to the Community College System and at the upper division to the SUS--regardless of the relative technical and academic capacities of each type of institution to develop and deliver particular types of technology-intensive courses.
- policies established by the Institute's Articulation and Credit Transfer Subcommittee--that--while they appropriately call for identical treatment of distance-delivered and traditional courses with respect to articulation and the award of credit--also subtly reinforce the traditional "course" as the principal unit of instructional delivery without explicitly recognizing technology's demonstrated ability to deliver instruction in flexible, self-paced, and non-course-based formats.
- a policy recently adopted by the Board of Regents and policies established by the Institute's Institutional Jurisdiction and Service Area Subcommittee that prescribes how institutions can offer technologically delivered courses and programs outside of their traditional service areas. Although the policy does reinforce established geographically-based service areas, experience elsewhere suggests that service-area boundaries cannot, in fact, prevent technology-based courses being delivered anywhere by anyone.

- some fee structures that establish additional technology fees for distance-delivered courses, potentially discouraging students from pursuing these alternatives--regardless of the original policy goal of inducing students to choose technology-based courses in order to make the higher education system more accessible and cost-effective.

Perhaps most important of all, there has been little attention in any policy discussion of the particular educational needs that must be met on a statewide or regional basis, and/or what technology is especially good at doing. Most reports produced to date on this topic cite increases in demand as a rationale for greater investments in technology, but do not present these data in ways that suggest specific strategies to meet demand, either on a regional or a programmatic basis. Nor, in fact, is there anywhere to have a conversation about appropriate strategies on a systematic basis when such issues do arise.

## **B. Consequences for the Current Use of Technology**

Partly as a result of conditions described, the uses currently being made of technology and distance-delivery mechanisms in Florida tend, for the most part, to serve institutionally-defined objectives, not those of the State as a whole. In this regard, the following are of interest:

- based upon preliminary data, current distance education capacity appears to be concentrated in graduate and professional education disciplines of particular interest to specific institutions. For example, more than two-thirds of the current course inventory of the two public systems delivered at a distance is at the upper-division and graduate levels (Table 1). [The large number of Engineering courses that dominate this inventory, it should be recognized, are a direct result of targeted funding provided by the Legislature between 1983 and 1988 to establish the Florida Engineering Education Delivery System (FEEDS Program). Data were not available on the actual enrollments in these courses. If such data were available, they would likely show a greater proportion of effort in the lower division than Table 1 suggests.]
- distance education appears to be treated by most institutions as an instructional "add-on" delivered through continuing education, rather than being seen as a part of their core academic programming. As a result, there appears to be little systematic attention directed toward applying technology to areas that experience elsewhere has shown to be effective in the regular undergraduate curriculum, for example, in the delivery of high-demand, lower-division mathematics and communications courses.
- other than those now being fostered explicitly through funding provided through the Institute, there appear to be relatively few "joint ventures" among institutions using technology to address areas of common, systemic concern, for example, in the alleviation of the "bottleneck courses" problem identified by the Commission last year.

## **C. Some Principles for Developing Appropriate Policy**

Addressed together, these circumstances suggest that while much progress has been made in sorting out technology-related issues from the institutional perspective, the original legislative intent in raising the distance-education issue is not being effectively addressed. What is needed

Table 1

**DISTRIBUTION OF "DISTANCE-DELIVERED" COURSES IN  
THE STATE UNIVERSITY SYSTEM AND  
THE FLORIDA COMMUNITY COLLEGE SYSTEM**

1995-96

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	Number	Percent of Total
<b>ALL COURSES</b>	4235	100.0
<b>System:</b>		
Universities	3234	76.4
Community Colleges	1001	23.6
<b>Level:</b>		
Remedial	29	0.7
Lower-Division	1160	27.4
Upper-Division	1462	34.5
Graduate	1584	37.4
<b>Discipline:</b>		
Agriculture	178	4.2
Fine Arts	64	1.5
Business	237	5.6
Education	246	5.8
English	73	1.7
Engineering	1665	39.3
Health	339	8.0
Humanities	384	9.1
Math	137	3.2
Professional	261	6.2
Science	315	7.4
Social Science	303	7.2
Other	33	1.0

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Source: Data provided by the SUS or FCCS

is a basic shift in policy discussion from a model characterized by the current organization of public providers' uses of technology within the current structure, to one organized in terms of state needs and priorities, and changes in instructional strategies and approaches to provide multiple ways of meeting these priorities with consequent applications of technology.

In the following section, a number of applications of technology in areas of major interest to the State are presented that are consistent with this shift of direction and suggested by experience elsewhere. At the same time, some funding and structural alternatives are examined that might be appropriate to make these happen. Guiding the development of both, however, are a number of principles that Florida policymakers should follow in developing such alternatives, whatever the array eventually considered:

- alternatives should emphasize the use of technology as a means, rather than as an end in itself.
- alternatives should be "client-driven" rather than "provider-driven," with "clients" including individual learners and community-oriented "receive sites" in dispersed geographic areas.
- alternatives should be market-driven and reflect the contributions potentially made by multiple institutions and providers located outside the state, rather than relying only on public providers to address state need.
- alternatives should effectively "unbundle" distinct functions of instructional development, instructional delivery, and student support when considering matters of funding and division of labor among institutions.
- alternatives should accommodate (and encourage) the use of multiple providers on the part of a given client.
- alternatives should encourage collaboration among institutions on any appropriate component of delivery.
- alternatives should be "transparent" to clients with respect to how they access and pay for them; clients should not need to assume extra burdens for participating in such alternatives.
- alternatives should recognize the power of the rapidly growing international marketplace for educational technology and should focus the leverage provided by public funding explicitly on things that the marketplace cannot do alone.

Based on experience in other states, refocusing policy discussions on alternatives consistent with these principles in the context of a wider analysis of state needs can pay substantial dividends.

## IV. ISSUES AND RECOMMENDATIONS

### The Role of Technology

Over the course of the last eight years, the Commission has followed the advances of technology and the resulting policy challenges that have arisen. In many instances the discussions about the potential of technology and the changes, advantages, and cost savings that it will bring about have been based on expectations created by popular magazine and newspaper articles, advertising, and the promises of industry representatives. While it is true that advances in technology will certainly bring about some positive benefits, many existing policy questions will be exacerbated and new ones will emerge. The following concepts are offered as context for the issues and recommendations presented in this section of the report.

**Focus on educational technologies versus distance learning.** In the foreseeable future, a majority of the students in our colleges and universities will, at one time or another, enroll in a course or program that will utilize educational technologies to deliver instruction. Some students may be exposed to it daily in classrooms on the campus while others will participate in a class remotely over the Internet or as a part of a video-conferenced lecture. Whatever the circumstance, much of the policy discussions around the use of technology in education seem to employ the term "distance learning" and in so doing, the focus shifts away from the campus. "Distance learning" seems to imply that the student will participate in a course or entire degree program delivered to an ill-defined remote location via technology. While students can earn degrees without ever setting foot on a physical campus, such programs and behavior are not the norm and should not be viewed as the primary model for emulation. Remotely delivered instruction is a small part of the total picture of postsecondary education. More appropriately, technology policy should focus upon the application of technology to the learning environment (K-12 through vocational and postsecondary education) regardless of the physical location of the learner. The application of educational technologies on and around our campuses and schools must not be lost in the policy debate over "distance learning."

**Technology and access.** The Commission has been concerned about the access pressures facing the postsecondary system for a number of years. Educational technology can allow postsecondary educational institutions to become more efficient in teaching more students. However, given the use of distance learning technologies, the postsecondary institutions cannot accommodate the projected forty percent increase in high school graduates that will impact the system over the next ten years without significant investments in infrastructure and additional faculty. Technology can assist in the systems' efforts to accommodate some of the additional students but not without cost. Further, the availability of alternative methods of instructional delivery, which are not tied to time, place, or the traditional pace of instruction, will attract students currently not involved in postsecondary education. Working adults, the disabled or under-served segments of the population may find that the alternative methods of instruction offered through technology provide assistance or convenience factors necessary for their participation. As a result, enrollments may increase higher than those projected based upon high school graduation rates alone.

**Technology and instructional cost.** Initial costs to start or redesign an educational program or course for alternative delivery via video or the Internet are high. Educating students via

technology is not necessarily cheaper than traditional instructional methods, and in most cases, the short-term costs are higher. The cost of delivering a course through technological means depends upon the interplay of such factors as the cost of development or licensing of the content, costs incurred for delivery to students (depends on the mode of delivery - Internet, video tapes, video-conferencing, etc.), costs for support of remote students, number of students enrolled, compensation arrangements with faculty teaching the course, administrative costs for the course, and the tuition and fees. In most cases, once established with sufficient enrollment, the per student cost can be quite low when cost efficient technologies like the Internet or telecourse instruction are employed. Any cost savings will be over the long term. Short-term costs of technologically delivered courses and degree programs are likely to surpass those when traditional instructional methods are used.

**Shift from a teaching to a learning instructional model.** While there has been considerable discussion about the need to shift to a learner-centered approach in the education of students, not much progress has been made. Traditional methods of instruction take time to change and such change requires a significant catalyst. In many ways, technology can be such a catalyst. Although some change is evident in the system, the unavailability of the technological infrastructure (computers, software, Internet connections, and equipped classrooms) has mediated the impact of such change on educational process.

**Technology and the effectiveness of instruction.** Often, in the traditional classroom, faculty members use one teaching approach for the class. When students possess a range of differing learning styles and abilities, not all can progress or achieve learning objectives at the same rate. For some applications, computers can present information tailored to a particular student's learning style or educational difficulties such that they can be much more effective than traditional instructional methods. Further, through the use of simulations and alternative presentation methods, faculty members can facilitate student learning in more effective and efficient ways. Although the potential of technology to impact the learning environment appears high, much more investigation is needed. Although most of the research that exists is rooted in specialized circumstances with limited populations, the overall trend indicates that when applied properly, technology can positively affect student learning. The key is proper application.

For Florida to have the capacity to take full advantage of technology to meet public priorities, several organizational capacities are critical. These include:

- a means through which the Governor, state Legislature, and Florida's postsecondary education leaders can **reach agreement and sustain attention to a public agenda for postsecondary education**--an agenda that makes it clear where the State should direct its investments in technology.
- a policy framework and process that presume an **open, market-driven postsecondary system** in which not only the State's public systems but other providers (private institutions, corporations, out-of-state institutions) are potentially available to help meet the State's demands for postsecondary education.

- mechanisms for **investing in change at multiple points** in the system.
- at the state level, across all potential providers, public and private.
- within each of the major systems (SUS and CCS) and within and among the individual universities and community colleges.
- between and among public institutions (including the K-12 system and the vocational-technical schools).
- a statewide focal point for **addressing specialized issues related to technology** that cut across all dimensions of Florida's educational system.
- both statewide and regional/site-specific **infrastructure for services to learners**.
- a means to provide **quality assurance and accountability** in a technology-intensive, market-driven system where traditional means such as regulation of the institutions and institutional accreditation are no longer adequate.

Florida has taken steps to address each of these needs, but further adjustments will probably be necessary. In particular, the following actions in the realm of policy, organization, and governance would further the State's ability to act on recommendations previously advanced and to take full advantage of the potential of technology-based instruction. These actions represent refinements of current structures.

### Organization and Governance

#### Florida Distance Learning Network

The Florida Distance Learning Network's current mission and structure is too encompassing and unwieldy to make it an effective body for providing policy leadership in the realm of technology-based postsecondary education. The final report of the State Telecommunications Task Force and the Addendum to the State University System Strategic Plan concerning distance learning, provided the initial recommendations for a group that would facilitate the growth of distance learning initiatives within the State and coordinate the resources of all of the educational sectors for its efficient delivery. The resulting public/private body is much larger in membership and function than was initially envisioned. Nevertheless, the State requires a mechanism for addressing critical issues related specifically to technology that cut across all providers. In other states, such boards have been particularly effective in securing more favorable rates and service levels for advanced telecommunications services from providers. This would suggest a leaner entity with a board of directors less dominated by current providers. Not included in the restructured entity's mission, moreover, would be responsibilities for making educational policy and funding recommendations for distance learning to the Governor and state Legislature. This function would be accomplished through a public agenda created directly by these factors as recommended previously. Also, the "reconstituted" FDLN would no longer have direct



responsibilities for implementing or coordinating the implementation of distance learning initiatives.

**Recommendation:**

1. *The Legislature should redefine the mission of the Florida Distance Learning Network to focus primarily on issues related to technology policy and infrastructure development. Current providers of telecommunications services should not be represented as voting members of the Board of Directors.*

**The Institute for Public Postsecondary Distance Learning**

With the changes recommended for the Florida Distance Learning Network, a need still exists for the educational sectors to collaborate on educational technology and distance learning initiatives. The Institute for Public Postsecondary Distance Learning was established through a Memorandum of Understanding adopted by the Board of Regents and the State Board of Community Colleges. The Institute, which is administratively housed at Florida Gulf Coast University, was established to provide coordination for all of public postsecondary distance education and to be advisory to the Board of Regents, the State Board of Community Colleges, and the Florida Distance Learning Network. The Institute's membership is made up of four presidents from each sector, the Chancellor of the State University System, the Executive Director of the Community College System, the Secretary of the Department of Management Services, one representative from the Board of Regents, and one representative from the State Board of Community Colleges. The Institute's charge would be broadened from a current mandate that relates only to the SUS and the CCS to one that could potentially encompass a wider range of providers. Currently, the public school system is not represented. However, given the recommended narrowing of the mission of the FDLN, the concern over high school student preparedness for postsecondary study, the large number of technological initiatives in the K-12 sector, and the number of high school students already enrolled in our postsecondary system through dual enrollment programs, this omission does not seem prudent now. If education is to be thought of as a seamless continuum with collaboration encouraged among all sectors, the membership of the Institute should include the Commissioner of Education or his designee. At the same time, it would become the State's principal means to invest in technology development and change initiatives involving two or more entities--cutting across the State's public postsecondary education systems and potentially involving private and corporate providers as well as K-12 education through the Office of Educational Technology. Rather than being organizationally established by the SUS and CCS, the Institute might be reconstituted as a more independent body. As recommended earlier, it would be the primary factor in determining priorities for investment in courseware and other instructional applications of technology and would then fund those priorities--either through RFP-based development or acquisition. As a result, it should be given sufficient fiscal flexibility to function like a state-supported foundation.

**Recommendation:**

2. *The Legislature, in proviso language, should re-establish and expand the membership and responsibilities of the Institute for Public Postsecondary Distance Learning. The new*

*entity should be renamed and include the Commissioner of Education and a representative of private higher education.*

Several important initiatives that concern the use of advanced telecommunications services for instruction could easily and appropriately be housed within the Institute. They are statewide acquisition or development of courses and programs which are enhanced or delivered utilizing advanced technologies, the development of a student advising and on-line support system, and an evaluation process for emerging technologies.

Currently, the Department of Education, through its Instructional Television Office, has developed a process for licensing high demand telecourses on a statewide basis. Each year, school districts and community colleges prioritize a list of the telecourses and other educational programs that can be delivered electronically. The Department of Education then negotiates licenses for the State of as many of the top rated programs as their budget will allow. The school districts and postsecondary institutions are then free to utilize the programs for instruction within the guidelines of the license. This program has saved the districts, colleges, and universities a considerable portion of their instructional cost. Many of the institutions would not be able to offer the range of courses students enjoy without this centralized state underwriting. Funding for the continued operation of the program has been a source of concern within recent months. The program has a proven value to the institutions involved, and it could easily be operated through the Institute as a part of a program to negotiate licenses or develop courses and programs of highest priority.

**Recommendation:**

- 3. The Institute for Public Postsecondary Distance Learning should collaborate with the Department of Education in the statewide licensing and/or development of educational programs and courses of highest priority. The Institute should work within the existing Department of Education initiative on behalf of its constituent institutions.***

In Chapter 95-243, Laws of Florida, the Legislature directed the Board of Regents and the State Board of Community Colleges to develop plans for implementing a single statewide computer-assisted student advising system, which must be an integral part of the process of advising, registering, and certifying students for graduation. The Commission believes that the development of a single, statewide computer-assisted student advising system can provide an integral link between students, faculty, administration, programs, and policy to improve the "transferability" of students between levels and institutions, improve degree completion rates, and decrease the time needed for degree completion. The Commission has also expressed concern that the system improve the *quality* of advising, not merely the access to program and degree advising information. Because much of the expertise and technologies involved in the development and implementation of the computer assisted advising system overlap with interests of the Institute, operational oversight of the system, once developed, should become the responsibility of the Institute. This would not preclude the establishment of a cross-sector advising and policy body to be responsible for the ongoing evaluation and steering of the future development of the system as previously recommended by the Commission.

**Recommendation:**

- 4. The operational oversight of the development and implementation of the computer assisted student advising system should be housed within the Institute for Public Postsecondary Distance Learning. An ongoing oversight committee should be formed to provide policy and operational input.***

The tracking and evaluation of emerging technologies can provide benefits to educational institutions and state agencies. Currently, emerging technologies are evaluated and implemented in a haphazard way around the State. No single agency is responsible for evaluating promising new technological advances to determine if such advances are stable enough in the marketplace for adoption and whether they have any real potential to improve productivity in a meaningful way. The State University System possesses some excellent resources in its faculty and facilities for research that can be employed to acquire and evaluate emerging technologies for their practical application to problems. Similarly, our public schools, community colleges, state universities, and private postsecondary institutions provide excellent learning labs where such technologies can be applied, tested and evaluated in practical situations. Through partnerships with state agencies, such evaluations can be done on a wide scale with different populations. Such technologies as wireless telecommunication, VSAT data transmission, Asynchronous Transfer Mode networks, and thin client computing technologies are examples of technologies that should be tested and evaluated. The evaluation process should result in a report that details the technical aspects of the technologies' installation and performance and an actual cost benefit analysis of the results of its application to practical use. Since much of the expertise for such evaluation resides in the research centers of our State University System and on the campuses of our community colleges and public school systems, the responsibility for this program should reside with the Institute.

**Recommendation:**

- 5. The Institute for Public Postsecondary Distance Learning should be authorized and funded to operate an emerging technology evaluation program. The emerging technology evaluation program should operate as a matching grant program within the Institute. Recipients of the grants should include public and private higher education institutions and state agencies. Recipients would be required to provide matching funds or in-kind services and to produce an evaluation report with details of the technical aspects of the technologies' installation and performance as well as an actual cost benefit analysis of the results of its application to practical use.***

**Infrastructure**

**Statewide Infrastructure**

To date, most investments have been made in video-based technologies, including under-utilized access to satellite time. It is likely that the evolution toward computer-based technologies (either asynchronous delivery over the World Wide Web or classroom instruction using CD-Roms of networked PCs with multi-media capacity) will accelerate. If this is the case,

telecommunications companies will provide much of the necessary connectivity through their regular commercial activities. The Department of Management Services has developed the Suncom network which provides telecommunications services to state agencies. In order for the State to receive the advantages of emerging telecommunications services, some upgrading of the switches and access nodes of the network will be necessary. In addition, there remain costs associated with taking commercial services the "last mile," with connecting campus networks to commercial services, etc. As we understand the functions assigned to the FDLN, the responsibility for developing this capacity and allocating the resources available for these purposes resides in that organization. As emphasized in a subsequent section, we believe that the function of this entity should be narrowed to enable it to concentrate more effectively on discharging this prime responsibility in conjunction with the efforts of the Department of Management Services.

**Recommendation:**

- 6. The Department of Management Services should continue its investment in the development of the technological infrastructure for delivering educational and governmental programs and services asynchronously to the homes, schools, and offices of the citizens of the State. Particular attention should be focused upon securing competitive rates for needed levels of service through the introduction of increased competition among providers of advanced telecommunications services.*

**Training**

A paradigm shift from largely credit-based, delivery-oriented instructional approaches to more competency-based, student oriented alternatives is significant and is already taking place. Technology is, in many states, providing an important stimulus to and occasion for such efforts. Experience elsewhere suggests, however, that the biggest obstacle to realizing the potential of this paradigm shift is not technological capacity but rather a) inability (or unwillingness) to develop appropriate learning objectives at the collegiate level, b) funding and organizational structures that continue to reward traditional course-based formats, and c) inadequate attention to faculty development. As noted, overcoming the first may require focusing initial efforts on instructional areas in which the use of alternative formats is seen as natural and appropriate. In general, this means skills-oriented academic and practice-oriented vocational and professional areas. As described elsewhere, overcoming the second demands new approaches to funding that free institutions from current institutional-FTE-based incentives. The third obstacle presents perhaps the biggest challenge. On the one hand, institutions must be induced to invest in this activity--a process well-illustrated by Oregon's productivity projects which supported institutional efforts to train faculty with categorical funds. On the other hand, faculty must be induced to participate. This means not only addressing current reward structures (as illustrated by institution-based re-structuring efforts in response to state mandate in Virginia), but also ensuring that the required tools and training are made as accessible and non-threatening as possible. Overcoming faculty fears about "loss of control" in the classroom is perhaps the most pervasive and salient issue here.

Given that faculty and students are willing to learn new ways of teaching and learning in the classroom, the fundamental lack of equipment in most classrooms seems destined to make

significant progress difficult to obtain. Little long-term impact can be made if faculty and students receive intensive instruction and training in incorporating technology into their teaching and learning if the computers, software, or other necessary equipment is unavailable to them in the classroom. Few classrooms on community college and university campuses are equipped with more than a chalkboard, overhead projector, and screen. Telephone lines or network connections, computer workstations, and presentation projection equipment is still very much an exception in the average classroom. Until a critical mass of equipment becomes available in the average classroom, the teaching and learning process may change little. The training needs of the students and faculty vary depending, to a large extent, upon the capabilities or resources of a particular campus. Some campuses have extensive administrative and instructional computer networks. Still others may have a wealth of available video equipment which can be easily moved from one classroom to the next. Most would agree, however, that such descriptions are not at all commonplace in the state. As a result, one statewide, state funded, training program would be hard pressed to meet all of the types and levels of training required.

One approach that might be efficient and cost effective involves a centrally funded “just-in-time” approach to training. Under such a program, trainers in a variety of hardware and software applications could be identified within the public schools, community colleges, and universities. Once selected, teams could be formed around certain hardware and software applications or themes such as electronic mail, Internet based instruction, video course instruction, or integrating technology into the traditional classroom environment. When an institution, college or department was ready to receive training (readiness would be determined by the institution, college, or department having the appropriate hardware and software resources in place for student and faculty use), a team would be sent to the site with the necessary training materials, equipment, and software to successfully complete the task. Training teams would be formed on an as-needed basis from “expert” individuals already employed by the sectors. Funding would be used to acquire or develop appropriate training materials, acquire specialized equipment for training which could be moved from site to site, and partially underwrite the cost of travel for the training teams. The teams could be used to do training on-site, to provide follow-up and post training support, and to develop materials that could be made available to students and faculty over the Internet or as a training manual.

**Recommendation:**

- 7. The Institute for Public Postsecondary Distance Learning should earmark a portion of its requested funding to organize a diversified, team approach to training on an as-needed or requested basis. Funding for such an effort should be used to acquire or develop appropriate training materials, purchase specialized equipment for training which could be moved from site to site, and partially underwrite the cost of travel for the training teams. The teams should also be active within the learning support center network for post training support.***

## Academic Issues

### Accreditation Issues

Any institution which is considering the implementation of a distance education course or program is subject to restrictions by the Southern Association of Colleges and Schools (SACS). The SACS document entitled "Guidelines for Planning Distance Learning Activities" states that "institutions establishing, continuing or expanding distance learning programs are expected to be in full compliance with the *Criteria for Accreditation* of the Commission on Colleges." In addition, the Guidelines state that institutions implementing distance education courses or programs must comply with the policies listed in the following documents: "General Substantive Change Policy for Accredited Institutions of the Commission on Colleges"; "Substantive Change Procedure D: The Initiation of Consortium or Contractual Arrangements"; "Substantive Change Procedure C: The Initiation of Distance Learning Activities"; and "Guidelines for Contractual Relationships with Non-Recognized Accrediting Organizations."

In general, as with other substantial changes in an institution, schools planning to initiate a distance education program must notify SACS. This is a two-step process whereby the institution informs the Executive Director of the Commission on Colleges in writing and submits a "Substantive Change Notification Form" from the chief executive officer of the institution. The Commission then reviews the "Notification Form" and determines whether or not a full description of the change is warranted. The Commission will then determine if a site visit is required and, if so, it will review the distance education activities to ensure compliance with the *Criteria for Accreditation* with which all courses, distance and otherwise, must comply.

There are several components of distance education programs which are considered by SACS to be important to the accreditation process. These components include:

- 1) relevancy of the program to the purpose and goals of the institutions.
- 2) the commitment of the Board, administration, and faculty to the program.
- 3) financial resources.
- 4) potential interest or "market" of students for the program.
- 5) the programmatic areas for which distance learning is appropriate.
- 6) administrative responsibility for the program.
- 7) quality and competence of faculty teaching in the program.
- 8) availability of appropriate learning resources and services to distance learning students.
- 9) availability and quality of support services for distance learning students including admissions, registration, academic advising, financial aid, remedial services, placement services, testing, orientation, computing, and other related support services.

- 10) availability of facilities and equipment to conduct the program.
- 11) appropriate formative evaluation processes.

While most would agree that all of these issues are important in the planning and implementation of technologically delivered instruction, the process seems ponderous and dominated by a lack of specificity as to the benchmarks against which an institution would be measured. Accreditation (or its equivalent in the form of acceptance by PONSI or similar processes) should continue to play a role as "first screen" for the acceptance of distance-delivered instruction originating from both in and out-of-state sources. It is important to recognize, however, that different accrediting bodies have, to date, handled such programs differently--with the North Central Association being historically the most compatible and the Western and Southern Associations less accommodating. Professional accrediting bodies have also historically imposed restrictions on the use of distance-delivery in their recognition processes and, unless changes are made, their criteria will continue to inhibit institutions from the fullest possible use of these technologies. Where proficiency-based alternatives can replace credit as the principal unit of accounting, formal accreditation can be supplanted by evidence of actual performance. This would allow non-educational providers to become appropriate players so long as students continue to meet outcome standards at acceptable rates.

**Recommendation:**

8. *The Board of Regents, the State Board of Community Colleges, the Department of Education, and the Postsecondary Education Planning Commission should examine the issue of accreditation for technologically enhanced or delivered instructional programs and make recommendations concerning policy initiatives needed. A representative workgroup should be convened by the Institute which would follow the efforts of the Western Governors University as well as similar initiatives and make recommendations for consideration by the appropriate sector board. Accreditation concerns should be pursued jointly with other states through the Southern Regional Education Board and the State Higher Education Executive Officers.*

Practically all educational programs require some degree of "in-residence" work, but these amounts should vary depending upon the program. At the same time, not all such work should take place on a college campus as, in some cases, the best setting might be a clinic or other applied environment. In cases where competency can be demonstrated directly, moreover, a critical mass of "residency" is no longer needed by a faculty to assure quality. Many educational institutions or academic programs require that a certain amount of credit hours be completed "in-residence". Such requirements will limit the application of technologically delivered instruction and many are not based upon actual necessity. In short, residency policies are best determined on educational grounds for each program of study, and a standard rule need not apply uniformly to all offerings.

**Recommendation:**

9. *Requirements for on-campus or "in person" study should be based on clear programmatic needs for a) direct interaction with faculty, peers, and educational resources, or b)*

*"hands-on" applications that require direct experience and assessments of performance. They should not be established arbitrarily or uniformly for all of an institution's programs.*

Students should be allowed (and encouraged) to engage in learning experiences that are not dependent upon the traditional academic calendar. The development of these alternatives would provide an important supplement to established course-based delivery formats, especially useful to meet anticipated enrollment pressures. Even where alternative formats are used heavily; institutions should still establish elapsed-time limits for completing programs; especially if there is concern about the obsolescence or atrophy of skills after long periods of time. Most courses or programs that have been adapted or created specifically for delivery using alternative technologies, such as the World Wide Web or video, have been designed as a collection of instructional modules for specific knowledge, competencies, or skills. Such a design can enable a student to select certain modules needed and skip those where proficiency can be demonstrated. Educational institutions have considerable experience with students "testing out" of courses when mastery can be demonstrated. Such options should be included as a part of the design of technologically delivered instruction and made available on a wide basis.

**Recommendation:**

- 10. Opportunities should be explored that allow students to "test out" of particular curricular components they have mastered on the basis of experience or previous exposure. Courses or programs acquired or developed by the Institute should contain opportunities for students to advance through content where demonstrated mastery can be shown.*

**Support Services**

**Network of Learning Support Centers**

The ultimate success or failure of efforts to deliver instruction via alternative methods such as videotapes, video-conferencing, or the Internet and World Wide Web will be determined, in large part, by the level of support offered to students. Both the British Open University and the soon to be established Western Governors University recognize the importance of consistent support services. Both institutions utilize or will utilize in the case of Western Governors University, a network of learning support centers and/or tutors to better ensure student success. Through such support centers, students should be able to receive academic and personal assistance with any problems or concerns they might have related to their educational experience. Such a learning support network could easily be built by taking advantage of the public secondary and postsecondary institutions, libraries, and other facilities already in place. The centers would be available to distance learners enrolled in courses and programs provided by public institutions and other postsecondary providers. Funding for these centers would be provided through the resource allocation approaches described in the previous section of this report that would allocate a portion of revenues to receive site institutions. Services would include, but would not be limited to registration, counseling and advising services, assessment and testing, assistance in accessing centralized services such as the statewide student advising system or library and information resources, access to information technology and services (computers, audio and video classrooms, and Internet connections), access to centralized



financial services (e.g., billing, payment, and financial aid), and for post-training support of faculty and students through the training teams described previously. Community colleges, libraries, and state universities should be designated as learning support centers with specific funding arrangements and clientele determined by course enrollments within their service area. Community colleges, in partnership with vocational/technical schools and regional workforce development structures, as well as local clinics, corporations, schools, libraries and other organizations, provide good places to begin developing the required statewide support network. Such entities could be designated as learning support centers depending upon demonstrated need and their ability to provide the required levels of service

**Recommendation:**

***11. Responsibility for the coordination of a statewide network of learning support centers should be assigned to the Community College System. The coordinating role should be fulfilled by the Community College Distance Learning Consortium. The Consortium should establish minimum criteria for designation as a learning support center and eligibility for support funding. A learning support center should provide, at a minimum, registration, counseling and advising, assessment and testing. Provided as well should be training and assistance in accessing centralized services such as the statewide student advising system, library and information resources, access to information technology and services (computers, audio and video classrooms, and Internet connections), access to centralized financial services (e.g., billing, payment, and financial aid), and specialized academic assistance relevant to the educational programs being supported. State universities offering distance learning degree programs should be required to submit a plan to the Board of Regents and the Institute on Public Postsecondary Distance Learning that ensures that students enrolled in such degree programs will be provided appropriate student support services. The plan should include a description of the services to be provided and provision for funding the delivery of such services. Community colleges shall adhere to policy adopted by the State Board of Community Colleges related to the delivery of out-of-district distance learning instruction.***

**Information Access**

Recent articles in popular magazines and television commercials for various vendors of hardware and software products have actually done more harm than good in presenting an accurate view of the benefits of technology and the possibilities for providing access to information. Several important concepts concerning the future role of libraries have been misinterpreted and must be placed in the proper perspective before information policy can be considered. An understanding of the following concepts and their impact on technology and information policy for the State is critical.

**Most information available on the Internet that is needed for education is not free.** The public may perceive that the entire contents of libraries can now be accessed through a personal computer with an Internet connection. While the Internet does enable one to access information from a variety of sources, much of the information available is not of the same quality as that contained in a library nor is it organized for the user in any meaningful way. The business of higher education revolves, for the most part, around books and specialized journals. Information

availability on the Internet is growing in both quantity and quality, yet most of the sources of information useful to higher education are not accessible for free. Further, while a number of electronic databases have been licensed and are available to Florida students, the question of exactly what resources to license remains. Since the number of electronic databases is still a relatively small percentage of the total amount of information needed for the business of educating students, the choices are not numerous. In the future, the problem of choosing resources will become more difficult as more sources become available on-line. The licensing expense for access to these databases will become an annual operating expense. Libraries may have to prioritize their licensing efforts towards high demand sources.

**The growth in public use of the information resources on the Internet has actually brought about an increase in the demand for services by libraries.** As more students, faculty, staff, and citizens discover the easy access to information that searching the Internet can bring, the demand for the services provided by libraries has increased dramatically. Most of the information resources needed by students and faculty are not yet available in electronic form. As a result, users are often able to locate a large number of resources on-line which then translates into increased numbers of requests for resources and materials from libraries throughout the state. The growth of the Internet has produced increased numbers of requests for services and materials from locations throughout the State, and the world, at a time when such resources and services are at peak demand from Florida students and faculty.

**The growth in the electronic information age has increased the need for additional physical space in libraries.** As libraries became more automated, card catalogs were replaced with computer terminals. Over time, as the Internet has grown and access to additional information resources has become available, libraries have added more equipment such as video cassette recorders, video monitors, laser disc players, computers and access terminals so patrons can access information resources locally or via the Internet. Because the information available in digital form comprises only about five percent of that needed for the educational process, the book and journal collection must be sustained. Many library holdings are out of print or may never be made available in digital form. In summary, the traditional function of the library as information access point, service center, archive of information, and provider of highly specialized or rare documents will need to coexist with new technologies and electronic services. At least for the foreseeable future, more space will be required for storage, equipment, patron services, and training programs.

**Increased utilization of information access available through library automation and Internet access to additional resources has greatly increased the need for competent library staff and training programs for patrons.** Although the principal role of librarians has been perceived as collectors of information, they have always been dedicated to assisting library users in information identification access and retrieval. As the value of information access has become more recognized through the growth and pervasiveness of the Internet, that facilitative role has become more critical and necessary. The library has been the container for information which is organized and identified in ways which allow a user to more easily locate and utilize information of greatest value to them. While the Internet does allow a student to search for information on a given topic, the results of such searches may deliver web sites devoted to a topic, newspaper articles, books, commentary, discussion groups, or graphics all devoted to a topic of interest. The student is left to decide which of these resources is useful or accurate.

A considerable amount of time is now devoted to assisting library patrons in accessing or retrieving information and the dissemination of that information. Students and library patrons will have to become skilled consumers of information with the necessary skills and knowledge to search, identify, and retrieve useful information. Additional training programs and materials will be necessary for students and faculty to be able to use the increased resources technology can provide in an effective manner.

**Information access capabilities are critical to economic development.** Just as an educated populace and high quality educational institutions are central to economic development activities within the State, the development of technological capabilities in information access and retrieval are becoming just as important. As the information age continues to become a significant driving force for business and industry, decisions to locate new industries and businesses may begin to rely heavily on the technological capabilities a state has to offer which will support new enterprises. Graduates of Florida educational institutions must be well educated and skilled in the techniques of information access, evaluation, and retrieval. In order to achieve this goal, the State will need the robust information access infrastructure that can be provided by its libraries.

Recent work by the Library Workgroup of the Institute for Public Postsecondary Distance Learning has been particularly relevant to the problems that the growth in the use of information technology will pose for libraries now and into the future. This task force should be applauded for its efforts to look toward such a future and to secure greater access to information databases at reduced cost to the State through joint purchasing/licensing. Further, the workplan addresses seven areas which will need programmatic and financial support if the distance learner is to receive the same level of library and information services as the on-campus student. The seven areas are: providing access to electronic resources, reference and referral services, instruction in information retrieval skills, borrowing privileges, document delivery, course reserve services, and access to library equipment and facilities. The recommendations of the library workgroup will also provide for increased levels of access and service for students on campus as well.

**Recommendations:**

12. *The Department of Management Services, Florida Library Network Council, the Institute for Public Postsecondary Distance Learning, and the Florida Information Resource Network, in order to leverage as much buying power as possible, should collaborate and centralize their purchases of digital information resources, when feasible. A pooled purchasing process or fund should be established for the licensing of electronic information sources on behalf of the libraries and educational institutions in the State. In order to ensure equity for all public libraries, funds for centralized purchases of a minimal set of on-line information resources should be appropriated by the Legislature.*
13. *The Board of Regents and State Board of Community Colleges should initiate a research project through the Florida Center for Library Automation and Center for College Library Automation to identify high demand information resources that are unavailable in electronic form. Once identified, efforts should be made to secure the necessary licenses or copyrights to make these resources available in a form that will speed their dissemination.*

- 14. *The Florida Center for Library Automation and Center for College Library Automation should collaborate on the development of high quality instructional programs and information access tools to better enable students, faculty, and library patrons to make efficient use of the information resources available.***

The state of Florida, through its agencies, community colleges, state universities, and joint ventures produces a considerable quantity of valuable information. Currently, the copyright for state agency information is held by the Secretary of State. Similarly, our educational institutions have not asserted any rights to copyright in the interest of contribution to scholarly knowledge through publication. However, such information as scholarly reports produced by faculty as a part of state funded projects, maps and charts, brochures, the Florida Administrative Code, and the Florida Statutes are valuable information sources. The copyrights for such information could be more closely retained and might be used as leverage when negotiating charges for access to commercial information resources. As a result, the State could leverage its considerable buying power and information copyrights to negotiate the best price possible for on-line databases that are critical to the educational enterprise.

**Recommendation:**

- 15. *A workgroup should be convened by the Secretary of State to review the implications and value of copyright and licensing of state produced information. The workgroup should include the State librarian, the executive directors of the Florida Center for Library Automation and the College Center for Library Automation, two representatives each from the State University System and the Community College System, the Secretary of the Department of Management Services, two representatives of the public libraries, and a member of the Joint Committee on Information Technology Resources.***

**Funding Issues**

**Financial Aid Issues**

Currently, there is a strict federal policy concerning financial aid awarded to undergraduate students. In order to receive financial aid, undergraduate students must be full-time. Full-time is defined as taking at least twelve credit hours at an eligible institution. An eligible institution is defined as an institution recognized by the Secretary of Education which participates in title IV, Higher Education Act programs. With regards to distance education, the "full time" requirement still applies with some modification. If a student is taking some of the twelve hours from another institution as distance education, those hours will still count toward the required twelve **if, and only if**, the two institutions have a signed agreement (or a consortium agreement) whereby the **home** institution (where the student is enrolled) agrees to accept the credits toward an associate, a bachelor's, or a graduate degree from the **host** institution (the institution offering the distance class).

In addition, the Higher Education Act currently contains two main restrictions on distance education: 1) if an institution offers 50% or more of its courses via distance education, then it is not recognized as an educational institution by the Secretary of Education; and 2) if a student

takes more than 50% of her/his classes via distance education, then that student cannot be considered full time for the purposes of receiving financial aid.

As more educational programs have been developed for delivery via nontraditional means, students find themselves assembling semester schedules based upon courses from more than one institution. In fact, in the not too distant future, students may often enroll in at least one course that will be delivered via videotape, television, or the Internet as a part of their semester schedule. Under current federal financial aid policy, without a formal written agreement, the student would not meet the "full load" requirement if one or more of the courses comprising the 12 credit hours originated from another institution. Such a limitation would be a major disincentive for students to take advantage of the conveniences offered through distance learning technologies at a time many states are trying to encourage student utilization of such methods.

### **Recommendation:**

- 16. An agreement that would meet federal financial aid guidelines should be executed to allow transfer and acceptance of credit of distance education courses among the state universities, community colleges, and private postsecondary institutions. Such an agreement could be negotiated through the Institute for Public Postsecondary Distance Learning.***

### **Access to Technology**

Because technology tends to change every day, it is difficult to acquire and maintain state-of-the-art equipment such as computers. The equipment needed to make use of current technology is expensive and quickly becomes outdated and obsolete. Recent estimates from Commission consultants suggest that computers experience a significant technological advancement in computing power every 18 months. In many business and industry organizations, computer hardware is replaced every three years. Further, in order to avoid the increasing costs involved with replacing obsolete technologies, business and industry have been moving away from investing capital funds in technology and including such costs as a part of their ongoing operating costs through leasing equipment and subscribing for software and Internet services. While this might not be appropriate for all aspects of the equipment and services in use in education and state agencies, the lease subscription model has been routinely used by the State in several key areas.

The Suncom Network and the Florida Information Resource Network exist primarily through the leasing of advanced telecommunications services or the actual lines and fiber optic cables as a result of a competitive bid process. The State is free to seek out the best features and price for services at the end of the contract period. As a result, Florida does not face the problem of owning and operating a network of telecommunications lines that will have to be maintained and replaced as technology changes. Florida also has ample experience subscribing or licensing services and products. The Department of Education licenses telecourses and other educational programs. All state agencies utilize software licenses. On-line information databases have recently been licensed by the libraries in the state.

Clearly, from both a business and industry perspective and from past behavior of the State with regard to products and technological services, a trend toward moving the costs of technology away from capital expenses (operating capital outlay) to an ongoing expense seems particularly relevant. Cost effective, short-term lease agreements for computers and other technological equipment, which is volatile to rapid change or obsolescence, should be examined. State agencies and educational institutions should explore the feasibility of including more of their costs for acquiring and using technology within their ongoing operating expenses.

**Recommendation:**

- 17. The Department of Management Services should convene a workgroup to examine the feasibility of shifting more of the costs for acquiring and using technology from capital expenditures to operating expenditures. The workgroup should include representatives of the Department of Education, the Board of Regents, and the State Board of Community Colleges. The workgroup should conduct a review of equipment replacement policies for advanced telecommunications and computer technologies and make recommendations concerning the feasibility of shifting the costs of technology away from capital expenses (operating capital outlay) to ongoing expense categories through short-term lease arrangement or other means.***

Current funding levels and equipment replacement formulas used for education do not allow for regular replacement of obsolete educational technology. In fact, many of our school districts and postsecondary institutions are extremely limited in their technological capabilities. With replacement schedules in business and industry averaging three to five years and significant increases in computing power and capabilities occurring every 18 months, schools, colleges, and universities have a long way to go to keep up with the pace of technological change. The impact on the quality of an educational program when students and faculty must use obsolete equipment as a part of the instructional process cannot be understated. High school and college graduates will be ill prepared to enter the next phase of their education or the world of work in such circumstances.

The current state of microcomputers in Florida's public schools can be broken into two parts: 1) total computers; and 2) recently purchased computers. Many of the computers still in use today by the public schools are limited in function. These machines include those without hard disk storage or network capabilities. Further, many of these computers are not capable of using a high speed modem to connect to the Internet. Most of these machines are being used with outdated software programs for specific learning tasks or word processing. By 1996, there was a total of 326,661 computers in secondary schools. Based upon this number, that is an average ratio of seven students per computer. However, included in this number are the older computers which have very limited capabilities. Counting only recently purchased computers (those bought since 1994) the number drops to 98,454. This new number changes the ratio to 23 students per computer. These newer computers, however, have more advanced capabilities which include the ability to connect to the Internet and World Wide Web.

A similar situation exists in the State University System. For example, at Florida State University there is a total of 7,815 computers on campus. With an estimated 1996 enrollment of 29,348, that works out to about 3.8 students per computer. However, if the formula uses the

number of recently purchased computers (within the last three years), the number of computers drops to 4,785 and the corresponding ratio increases to 6.1 students per computer. Again emphasizing that recently purchased computers have greater capability, especially with regards to Internet access, the ratios of recently purchased computers to enrollment within the State University System ranges from 4.5 students per computer (University of Florida) to 11.2 students per computer (Florida International University).

What is needed is a strategy to provide technological access to computers and other types of hardware and software to students and faculty in a timely manner. As institutions begin to provide increased course and program offerings utilizing advanced technologies for delivery, specific arrangements will have to be made to accommodate students with disabilities. Such accommodation could involve specialized equipment or additional support services. Where possible, specialized equipment and software which allows students with disabilities to take full advantage of technologically delivered educational courses, programs, and services should be acquired as well. Several options are available for consideration including technology short-term bond/lease arrangements, requiring students to possess their own equipment, or a combination of approaches.

One alternative to higher education institutions' purchasing such equipment, which has been tried in other states, involves the development of an equipment leasing program. This could be done in two ways. The first method concerns the development of a student short-term leasing arrangement. Under such an arrangement, students would pay a technology fee each semester for which they would receive the use of a computer, appropriate software, Internet and electronic mail access, and guaranteed maintenance and repair. Under such an arrangement, faculty could be provided the same computers as students. The institution would focus its efforts on development of an infrastructure to support the student-faculty machines which would include printing outlets, network access stations throughout the campus, on-line and physical help locations, and repair and maintenance facilities. At the end of each leasing period, typically one to two years, or when the student leaves the institution, the computers would be collected and returned to the vendor for credit. With each succeeding lease agreement, the institution would be able to adjust the specifications toward newer, more capable machines. As a result, the institution and the students would maintain a current level of technological capability with few, if any, obsolete equipment costs to absorb.

The second lease arrangement concerns using a state's bonding authority to raise capital to lease computers and other types of technological equipment. An example of one such equipment leasing program occurs in Virginia. In 1986, the Higher Education Equipment Trust Fund was established. The fund is made up of revenue generated through a bonding program. Under the terms of the program, equipment is financed through five-year leases. Lease payments are equal to the principal and interest due on the bonds. As lease payments are made, the State pays interest to the bondholders and the principal is invested until the bonds reach an interim, or pre-1998, maturity date. When the interim maturity date is reached, the bonds can either be redeemed or remarketed to new investors. If the bonds are remarketed, the proceeds can be used to buy more equipment pursuant to additional leases. A similar arrangement could be explored in Florida. The Virginia program has allowed the state to address the serious equipment deficiencies that existed in many of its academic disciplines. The program addressed

more than just computers, but the example could be used on short term bond/lease arrangements for Florida educational institutions.

A third option that has been used for several years at postsecondary institutions around the country involves requiring student purchase of a computer as a condition of admission. The number of students who arrive on campus with their own computers is steadily increasing. In fact, the computer has easily replaced the typewriter as the dominant method for preparing class assignments. With the growth of the popularity of the Internet, on-line data sources, electronic mail, Internet audio/video communication, and web based educational courses and programs, the personal computer has become a necessity for students. The remaining obstacle to possession or ownership is cost.

Several studies and popular magazine articles have expressed concern over the rise in the number of citizens who do not have access to the equipment and information necessary to fully participate in the educational opportunities offered by the revolution in information technology spreading through society and our educational institutions. Access to the appropriate technological and information resources is critical to the quality of our educational institutions, the ultimate success of our graduates, and the economic development initiatives within the state. As the computer has become a necessary part of life, hardware vendors have been able to steadily bring down the cost of purchasing a computer. Most of the computer vendors have announced plans for the development and sale of low cost student computers and "network-based" computer devices. Clearly, the ratio of price-to-performance will continue to improve. By requiring students to purchase a computer as a condition of admission, the cost of the machine can be mitigated in two ways. First, most institutions already offer substantial discounts on the purchase price of a computer to enrolled students. This discount could be improved with a guaranteed level of purchase that such a requirement would bring. Second, because the purchase of a computer is a condition of admission, it becomes a part of the financial aid equation as a cost of attendance.

#### **Recommendation:**

- 18. The State Board of Community Colleges and the Board of Regents should plan to require all full-time, incoming students to purchase or lease a computer as a condition of their enrollment. The educational sectors should combine their efforts through the Department of Management Services to negotiate the best possible purchase or lease options for their students and faculty. The availability and acquisition of specialized equipment and software which allows students with disabilities to take full advantage of technologically delivered educational courses, programs, and services should also be investigated.***

#### **Tuition and Fee Structures**

Current funding formulas within our educational sectors present problems which are magnified by the introduction of technology. Current funding mechanisms for both systems:

- encourage institutions to generate FTEs.



- encourage institutions to restrict the access of other providers to students in their service areas.
- rely on provider institutions to take the initiative in delivering distance education.
- make no provision for the student service costs incurred by institutions serving as receive sites--costs such as those related to on-site learning facilitation, advising, and provision of equipment and physical facilities.

More desirable funding mechanisms would encourage receive site institutions to bring high-need courses designed to meet needs that the host institution is not equipped to serve into their service areas and to reduce the costs of on-campus delivery of instruction. A funding approach that might be more in line with these objectives and provide incentives for institutions to use available technology-based alternatives might involve:

- allocating a portion of the revenues associated with distance-delivered coursework (perhaps 75%) to the providing institution to cover costs of development and delivery.
- allocating the remainder of the revenues associated with distance-delivered coursework (perhaps 25%) to the receive site to cover their support costs and to provide an incentive large enough to utilize courses developed elsewhere in preference to building their own.

Such a scheme represents a form of "revenue sharing" within the framework of the current funding system where "revenues" include all the tuition, fees, and state support associated with a given course. As a consequence, it would require few policy changes. This scheme would leave the initiative for delivery of distance education largely in the hands of the providing institutions.

An alternative funding approach designed to accomplish the intended objectives might:

- place the responsibility for identifying needs with the receive site institutions. This implies that "receive site institutions" be more than simply buildings. Instead, they would be active community-centered entities with missions that include relevant educational programming.
- allow the receive site institution to contract with appropriate providers to deliver courses that meet needs and the specifications developed by the receiving institution. Prices of courses would be negotiated. Preference would normally be given to public in-state institutions, but the receive site institution could seek delivery from private or out-of-state providers if no public providers were available or if a more favorable economic arrangement could be negotiated.
- allocate all the revenues associated with a given course to the receive site institution (a community college for lower-division instruction or a SUS institution for upper-division/graduate instruction; a SUS institution and regional community college could jointly contract for delivery of upper-division/graduate courses at a community college site).

This alternative has the advantage of creating an incentive for local institutions to identify high-need areas and to create cost-effective ways to address these needs without investing in duplicative course development. It would also begin the process of creating a client/market-driven (as opposed to provider-driven) system of postsecondary education in Florida. Given the likelihood that distance delivery will become increasingly competitive and difficult to direct through regulation, the creation of some initial conditions that will help prepare Florida institutions to excel in this environment would be a positive step. An exception to this approach may have to be allowed for programs offered deliberately on a statewide basis by only a few institutions--for example, Engineering. One possibility here would be to allocate 75% of revenues to the providing institution and 25% to the receiving institution.

The State Board of Community Colleges and the State University System Board of Regents have endorsed new policies which ameliorate the traditional service area boundaries found in statute by providing for revenue sharing arrangements when institutions collaborate to deliver instruction utilizing advanced technologies. The new policies do not eliminate the traditional service areas, but they do prescribe how institutions can collaborate on the delivery of instructional programs outside of their service areas using distance learning technologies. The maintenance of geographical service areas in Florida seems unnecessary since the Community College System is moving away from the traditional workload/FTE funding model and the new distance learning policies act to bridge the traditional barriers for distance learning efforts. Experience in other states has shown that such barriers cannot be maintained in the face of continued technological advances and increasing numbers of private providers of educational programs entering the market. Clearly, Florida's postsecondary system is in a transitional period to a more open market environment.

**Recommendation:**

***19. The Board of Regents and the State Board of Community Colleges should continue their movement away from traditional service areas and any other such artificial boundaries which might impede student access to educational programs and services.***

With projected increases in demand for higher education in Florida, fee structures should encourage, not discourage, enrollment in distance learning courses. While graduate and professional programs may be more expensive to operate because of the specialized nature of the instruction and the often lower enrollments, and continuing education offerings should continue to be market driven, increasing undergraduate access is a primary objective for the state. As a result, an undergraduate tuition and fee structure should:

- set technology fees at identical levels for students enrolled in a given institution, regardless of location.
- assume identical tuition levels for all courses offered by each institution.
- avoid any additional fees for distance delivery that might induce students to avoid such courses.

- maintain current differences in tuition and fees between Florida resident and non-resident students for both distance-delivered and traditional coursework.
- allow institutions the flexibility to use traditional fees, such as those for athletic and health services, to underwrite the costs of alternative delivery methods as long as the total charges for the course (tuition and fees) do not exceed those of a traditional course.

Such a structure would be intended to remove any barriers to participating in distance-delivered courses for Florida residents, while allowing the state to exploit the revenue potential of out-of-state markets. The institution could use the traditional fees charged to distance learning students to support infrastructure and other costs of alternative delivery methods where appropriate. Further, allowing institutions the flexibility to adjust tuition and fees lower will ensure that they can compete with other private vendors in the marketplace.

**Recommendation:**

20. *The Legislature should adapt the current funding mechanism for both the SUS institutions and the community colleges to further encourage the use of technology-intensive instruction. For the community college performance-based funding system, distance learning instruction and any performance outcomes related to such instruction should be recognized in the same manner as comparable campus-based instruction and should be subject to the same funding eligibility criteria. Total tuition and fees assessed to distance learning students should not exceed total tuition and fees assessed to traditional campus-based students enrolled in comparable courses. For the State University System, enrollment generated by distance learning students that is included within the SUS funded enrollment plan should be subject to the same tuition and fee policies applicable to funded enrollment generated by conventional campus-based instruction. Total tuition and fees assessed to distance learning students should not exceed total tuition and fees assessed to traditional campus-based students enrolled in comparable courses. Total tuition and fees charged for enrollment in excess of the funded enrollment plan should be at least at the level required to make such instruction self-supporting. Students living outside of the State and enrolled in distance learning courses offered by public postsecondary institutions, should pay fees at least equal to the cost of providing that instruction. No state support shall be used to subsidize such instruction.*

**Nonduplication of Programs**

Through increased cooperation and collaboration among educational institutions, more efficient use of the technological resources already present in the state can be achieved. A considerable number of programs and initiatives which utilize technology in the delivery of educational programs are underway within the Department of Education and the postsecondary sectors. In the last two years, increased levels of cooperation have been evident through statewide oversight. As the use of technologically delivered instruction increases, educational institutions have sought to develop or acquire high quality courseware. The cost of developing such courseware is considerable such that the state cannot and should not provide funding for the unnecessary duplication of effort in developing educational content. Since secondary and postsecondary

education institutions are provided funding through general revenue and lottery monies to provide instructional programs and materials, such programs can be viewed as a state resource and they should be made available to other faculty members and students without additional cost. As has been done in the past with correspondence courses, the institution could retain the copyright for the content of the course or program, and it would be free to license the material to other non-state institutions or private entities. Faculty members who develop instructional technology materials without the appreciable support of the State or institution would retain all rights to such material.

**Recommendation:**

21. *Educational content of programs developed with state monies should be made available to other state institutions. The educational institution could retain the copyright for the content of the course or program, and it would be free to license the material to other non-state institutions or private entities. Further, all institutions should clarify their patents, copyrights, and trademark procedures as they relate to instructional technology materials. All agreements and contracts for co-development of instructional technology materials using appreciable State support or monies must allow for the sharing of the developed materials among other public institutions without additional cost.*

**Partnerships**

One of the best ways for Florida postsecondary education to stay up-to-date with trends that impact education is to maintain close working relationships with business and industry. In fact, colleges and universities share some of the attributes of other industries. They "manufacture" information (scholarships) and occasionally "reprocess" it into knowledge, they warehouse it (libraries), they distribute it (articles and books), and they retail it (classroom teaching). Information technology has already changed each of these processes, and future change will be much greater. The historic stability of higher education is laudable, but it may not meet society's needs in the years ahead. Although some institutions will survive virtually unchanged, the majority of higher education is facing challenges from students, legislators, parents, the public, and employers. Competitiveness is increasing, and calls for increased access, improved quality, and lower cost abound.

Development or adaptation of traditional course content for technological delivery is an expensive and lengthy process. The natural inclination has been to award grants for the development of instructional content and related materials within the State University System, the Community College System, or the Department of Education. However, materials appropriate for many instructional and developmental programs are increasingly available on the market. Further, private vendors of such programs and software are increasingly interested in developing their products to suit a particular market segment. Through appropriate partnerships and alliances, educational institutions can make themselves more competitive. Consider an alliance between Florida's colleges and universities and a software company or publisher of instructional software. Florida would contribute content expertise. The vendor would contribute expertise in market research, project management, packaging, and merchandising. In some cases, the vendor might adapt an existing product to meet the State's needs. Florida and the

vendor might adopt a shared-risk, shared-gain approach to contracting for the required application development and instructional design services. The revenue from the resulting software product would be used within Florida but could also be marketed to a global education market. Revenue from the product would be used to underwrite the development of additional instructional software for other disciplines or could be invested in faculty development. Such a model partnership has been used by the Department of Education for several ventures. In addition, partnership with other institutions, state agencies, and private entities should be explored as institutions seek to develop support networks for remote learners. As the availability of technologically delivered instruction increases, the need for comprehensive support systems, as discussed previously, will also increase. Since the creation and maintenance of such learner support systems comprise a significant portion of the costs of offering such programs, partnerships with institutions and other public and private entities for the delivery of support services to remote learners can help reduce such costs.

The option of acquisition or co-development and learner support partnerships must be thoroughly explored before decisions to invest in new development or support systems are made. Acquiring third-party course materials may result in a product that is more cost-effective, of higher quality, and more timely than one that has to be developed by faculty and staff at an in-state institution. Utilizing existing institutions, agencies, or private vendors to supplement existing learner support efforts can have a significant impact on the overall costs of offering technologically delivered educational programs. The availability of high quality educational materials on the open market will continue to increase rapidly, especially in introductory, high-volume courses. As distance learning efforts continue to grow across the country, opportunities for partnerships in content development and arrangements for cooperative learner support systems should be plentiful.

**Recommendation:**

22. *Partnerships between state universities, community colleges, school districts, private higher education, state agencies, private vendors, and telecommunications providers, both in and out-of-state, should routinely be explored before state monies are invested in the sole development of any hardware, software, instructional content, or new learning support systems. Any state funds used for the development of hardware, software, instructional content, or support services to be used for alternative delivery must be justified on the basis of compelling state need and the lack of appropriate partnership arrangements.*

## V. CONCLUSION

This report provides a discussion of many of the issues facing Florida as technological change forces a re-examination of existing policies and infrastructure development. A number of alternatives are presented for consideration. Discussions of these alternatives also provide initial answers to the specific questions posed by the Legislature in proviso.