Technology 2000: Recommendations on the Utilization of Information Technology in the Oklahoma Higher Education System

A Report to the Oklahoma State Regents

by

James R. Mingle
Executive Director
State Higher Education Executive Officers

August 1997

Table of Contents

Acknowledgements

In the course of this study I had the opportunity to meet with administrators, faculty, staff, and students throughout the Oklahoma higher education system. Without exception I have been treated with the utmost courtesy and professionalism. These individuals gave willingly of their time and expertise to assist me in this study and for this I gratefully acknowledge their contributions. If there are shortcomings in this study, which there surely are, it is not for lack of effort on the part of members of the Oklahoma higher education community to educate me. I also want to express my appreciation to Chancellor Brisch who provided me extraordinary and unrestricted access to his staff. Collectively and individually, they spent numerous hours in explaining the intricacies of the system and providing candid and thoughtful comments on drafts of this report. My special thanks are extended to Joe Kinzer, President of Northern Oklahoma College and chair of the Presidents' Technology and Innovation Committee, to members of the various advisory groups, to Gary Smith, Cindy Ross, Mike Erhart, Ruth Ann Dreyer, and Phil Moss of the Regents staff, and to my able research associate, Rhonda Epper.

Executive Summary of Recommendations

OBJECTIVES TO GUIDE REGENTS ACTIONS

With the advent of broad-band digital networks, the growth of distance learning both within Oklahoma and across state and international borders, and the rapid application of instructional technology in the classroom, the Regents are challenged to adapt their policies to new circumstances. The simultaneous objectives of the Regents should be to:

1.   Strengthen the capacity of all institutions and all programs to utilize information technology tools in carrying out instruction, research, and public service goals.

2.   Strategically target state resources on projects that accomplish important statewide goals and improve the quality and competitiveness of Oklahoma public institutions.

3.   Expand the options that Oklahoma residents have for how, where, and from whom they receive educational services and programs.

Recommendations on Regents Academic Policy and Related "Receive Site" Financing Issues

Recommendation 1: The State Regents should move steadily toward the elimination of the "geographic service area" in its oversight of electronically delivered courses and programs.

Recommendation 2: The critical factors in Regents' approval of electronically-delivered programs should be (1) compatibility of the offerings with overall mission and capacity of the institution; and (2) qualitative considerations of the highest order. Such reviews to the greatest extent possible should be conducted cooperatively with the North Central Association.

Recommendation 3: The Regents staff should incorporate the "best practices" methodology into its program approval and review process.

Recommendation 4: The State Regents should provide incentives that will encourage the use of imported curricula through the OneNet system. This will stimulate new program development responsive to emerging market needs as well as termination of low productivity and low quality programs.

Recommendation 5: The State Regents should establish policies to more adequately support receive site costs.

Recommendation 6: The Regents should undertake further review of its "Policies and Procedures for Accreditation of Institutions of Higher Learning" to insure adequate protection of consumers who are participating in electronic media programs.

Recommendation 7: The State Regents, in cooperation with state colleges and universities and the Governor's Office, should develop a plan for Oklahoma participation in the Western

Governors University.

Recommendations on Student Access to Computing Resources

Recommendation 8: The State Regents should support a "laptop university" approach in one or more pilot institutions.

Recommendations on Faculty and Course Development

Recommendation 9: The State Regents, in cooperation with the common schools and the vo-tech sector, should establish regional "centers for instructional development."

Recommendation 10: The State Regents should use its Quality Incentive Grant Program for collaborative initiatives aimed at content development.

Recommendations on Library Initiatives

Recommendation 11: The Oklahoma State Regents should provide leadership and support in the acquisition of shared full-text databases for all libraries throughout the state.

Recommendation 12: The Oklahoma Council of Academic Library Directors (OCALD) should be formally established as a council by the Oklahoma State Regents and be given the mission to realize the vision of a coordinated "virtual" library concept for the state.

Recommendations on Administrative/Student Support and Equipment Financing Initiatives

Recommendation 13: The State Regents, through its Quality Incentive Grant Program, should support the development of the following student services initiatives: (A) a multi-institution electronic application form; (B) a web-based registration system at one or more institutions; (C) electronic job postings for on-campus and off-campus employment; and (D) an electronic degree audit system for one or more institutions.

Recommendation 14: The State Regents should support the full implementation of electronic transfer of student records and transcripts across the higher education and K-12 sector.

Recommendation 15: Regents staff, using the survey data completed as a part of this study, should develop, in cooperation with campuses, a comprehensive plan for technology equipment replacement.

Recommendation 16: The State Regents should implement a Master Leasing Program to assist campuses in acquiring technology equipment.

Recommendation 17: Given the large number of small institutions in Oklahoma, the Regents should provide financial incentives for institutions to merge functional administrative areas and/or to be served by service centers in "lead" institutions.

Recommendations on OneNet Management and Governance

Recommendation 18: OneNet management and service functions will need continuing attention and strengthening.

Recommendation 19: The overall governance and policy direction of OneNet should be broadened to include the major "user groups" of the state.

Recommendations on Economic Development Initiatives

Recommendation 20: The State Regents should tie its technology investment strategies more directly to state priorities for economic development.

I. ORIGIN OF THE STUDY, PROCESS, AND ACTIVITIES

In the fall of 1996, as the expansion of Oklahoma's statewide communications and Information Network (OneNet) became fully implemented, the Oklahoma State Regents for Higher Education began a strategic planning initiative focused on the utilization of technology throughout the state's system of higher education. OneNet's capability to electronically link public schools, vocational-technical schools, colleges and universities, and state government agencies to one another and to the world had raised many expectations, hopes, and concerns among the higher education community in Oklahoma.

The Regents' Council of Presidents, representing all institutions within the system, began discussing with the Chancellor a number of issues that would need to be resolved in order to best utilize this new resource to advance both state and institutional goals. Among the most important of these "emerging issues" identified by the presidents were: developing system goals for the use of technology; improving workforce preparation; connecting with area high schools; assessing the impact of technology on FTE enrollment funding and geographic service areas; training faculty and developing technology-based curriculum; and providing technical support for OneNet users.

With support from the presidents, the Chancellor and Regents staff made a decision to employ external expertise in a project designed to assist the Oklahoma higher education community in achieving the full potential of information technology to improve access, quality, and productivity. In December 1996, the Regents authorized such a planning initiative with staff assistance from external consultants, Regents staff, and institutional and campus expertise as represented in the State Regents Advisory Groups. Overall coordination of the project was provided by the President's Technology Committee, chaired by Dr. Joe Kinzer of Northern

Oklahoma College. The external consultant group operated under the direction of Dr. James R. Mingle, executive director of the State Higher Education Executive Officers in Denver, Colorado. In addition, the planning effort was closely coordinated with the work of the Citizen's Commission on the Future of Oklahoma Higher Education, under the direction of Regent Bill Burgess.

The planning process began with a written survey sent to all campuses to assess the equipment and networking capacity of institutions as well as the utilization of technology by faculty, staff, and students. The survey was based on the assumption that effective use of technology for instruction, research, and public service depends not only upon statewide networks, but adequate campus infrastructure and "human" capacity as well. The survey revealed considerable differences among campuses in their readiness to use technology both in the classroom and for distance learning. A summary of results from the survey is contained in Appendix A.

With the baseline information obtained from the survey, consultants and Regents staff made a number of campus visits throughout spring of 1997 to several institutions within the system. Campus visits included Oklahoma State University Technical Branch-Oklahoma City, Oklahoma City Community College, University of Oklahoma, Oklahoma State University, Tulsa Community College, Rogers University-Calremore, Rogers University-Tulsa, and Northern Oklahoma College. These visits provided staff with a closer look at institutional capacity beyond the quantitative information obtained from the survey. Also, the visits provided an opportunity for a dialog between campus representatives and Regent's staff/consultants around technology issues. On every campus, meetings were held with senior administrators, faculty, staff, and students.

A corollary activity, which was organized by the external consultants, was a series of "best practice" site visits to institutions out of state that are nationally recognized as leaders in the development and use of information technology for teaching, learning, and research. Presidents or their representatives, as well as faculty and students from each institution, were invited to participate in these visits during the spring of 1997. The site visits included the University of Minnesota at Crookston, Colorado Electronic Community College and their state-of-the-art Educational Technology Training Center, and Virginia Polytechnic Institute and State University. Approximately 60 individuals from the Oklahoma system attended these visits. (For a brief description of each best practice site visited, see Appendix B.)

The fourth and perhaps most important element in the planning process was the involvement of each of the Regents' advisory groups in forming the recommendations for this report. In addition to the President's Council, advisory groups that participated in the study were the Faculty Advisory Committee, the Student Advisory Board, the Library Advisory Group, the Council on Student Affairs, the Council on Instruction, an informal group of continuing education directors, and a cross-cutting group made up of representatives from the advisory groups. In January 1997, the Chancellor gave each advisory group a charge to come up with issues, concerns, and recommendations for Regents action in the area of information technology (advisory group charges and reports are contained in Appendices C through F). Each group, after meeting with consultants and Regents staff, took this task to their constituencies and returned with their recommendations in May 1997. Some of these recommendations are incorporated into the main body of this report, and presented in full with each advisory group report in the appendices.

Finally, in an effort to make the process as inclusive and widely publicized as possible, the

Regents organized two statewide teleconferences, broadcast over OneNet, which featured updates on the planning process and a special presentation by internationally-known technology expert, Dr. Anthony Bates of the University of British Columbia.

The remainder of this report is organized into three sections. Section II examines technology progress in the Oklahoma system; Section III contains a policy framework to guide future Regents action; and Section IV contains recommendations for Regents action. Seven appendices contain the campus technology survey and the advisory committee reports.

II.   TECHNOLOGY PROGRESS IN THE OKLAHOMA SYSTEM

In the course of this study, the project team had the opportunity to visit several campuses around the state. It was apparent during those visits that the level of interest in technology issues was high among all the groups with which we met — administrators, faculty, and students. In many ways, the dilemma facing institutions is meeting the demands of this increasing interest. Faculty want training and upgraded equipment. Students want wider and better access to computers and network connections. Institutions realize the power of information technology tools to accomplish their goals and are in the midst of transforming many of their operations.

This is not to say that progress is universal across programs and areas and across the state. Some institutions and faculty, for example, are considerably more advanced than others in the use of instructional technology tools in the classroom; others are more actively using the OneNet system for distance learning; others are focusing on improving their "virtual" libraries; some are focusing on electronic student services. Some are still struggling with basic infrastructure problems and out-dated equipment.

The statewide survey conducted as part of this project (summarized in Appendix A)

provides the Regents and institutions with baseline data to assess current capacity and future

needs of the system. The campus visits and the brief catalog of campus technology initiatives are

the first step in disseminating innovations and "best practices" to other institutions. This

preliminary list should be expanded and incorporated into future dissemination activities

following this project.

During the past year (1996-97), the Regents staff has taken a number of steps that have

resulted not only in OneNet expansion but in several policy changes and related technology

initiatives.   Among the actions and developments of note during the year are the following:

- Expansion of the OneNet system, now with 45 hubs and over 1000 end-users. One of

  the many results is the expanded use by campuses of interactive video for course delivery

- The initiation of the Oklahoma City Downtown Consortium Kiosk Project to provide

  direct student access to information about courses, programs, transfer, and other services

  from conveniently located kiosks and the World Wide Web

- Additional professional staff to focus on instructional technology issues

- The participation of the Regents and campuses in a national benchmarking "best

  practice" study on electronic student services

- A statewide license for a commercial database (Firstsearch) for all libraries in the state

- Significant changes in academic policy governing electronic media and program

  approval and review standards that incorporate technology use as a priority

- Regents sponsorship of faculty training at the Teletraining Institute

- Expanded web-based information and exchange to facilitate purchasing officers

- Web-based information on transfer policies

- Sponsorship of the Lieutenant Governors' conference on technology and live video

delivery of the Governor's State of the State address over the internet and through the

statewide video network

These and other regents initiatives during the past year are discussed further in the context

of specific recommendations for further action (Section IV of this report).

III. A POLICY FRAMEWORK TO GUIDE REGENTS ACTIONS

The use of information technology in Oklahoma can and should be applied to the multiple

goals of the Oklahoma college and university system: (1) to extend access through distance

learning to place- and time-bound students; (2) to improve the achievement and skill level of

students, whether in traditional campus programs or in distance learning settings, by actively

engaging them in the learning process; (3) to improve the linkages between Oklahoma higher

education and other sectors of education; and (4) to be a force for the dissemination of

information and knowledge to business, government, and community organizations.

The Constitution of Oklahoma provides broad powers to the Oklahoma State Regents to

establish standards, prescribe functions, allocate resources, and coordinate public institutions of

higher education. Over time, the Regents have exercised their authority to fit the times and

circumstances facing them. This has often meant a close partnership with institutional boards,

administrators, and faculty.

With the advent of broad-band digital networks, the growth of distance learning both within

Oklahoma and across state and international borders, and the rapid application of instructional

technology in the classroom, the Regents are once again challenged to adapt their policies to

new circumstances.

While a simplistic view of Regents' policy would suggest that the Regents choose between

the poles of "free market" and "regulation and control," a more thoughtful approach recognizes

that the role of the Regents is more complex. The simultaneous objectives of the Regents should

be to:

1. Strengthen the capacity of all institutions and all programs to utilize information technology tools in carrying out instruction, research, and public service goals.

2. Strategically target state resources on projects that accomplish important statewide goals and improve the quality and competitiveness of Oklahoma public institutions.

3. Expand the options that Oklahoma residents have for how, where, and from whom they receive educational services and programs.

These three parallel agendas — namely, equity, strategic investment, and choice — may

appear at times to be working at cross purposes, but over the long term they are likely to serve

the state well.

Objective #1: To strengthen the capacity of all institutions and all programs to utilize

information technology tools in carrying out instruction, research, and public service goals.

In the accomplishment of this goal, the Regents should play primarily a supporting rather

than a leading role with institutions. Through their academic and financing policies the Regents

should seek to upgrade the information technology capacity of all programs for all students, not

just those with a technical or occupational focus. Information technology tools, whether in the

form of electronic data bases or software applications, or in the form of expanded networks and

upgraded hardware, have become essential information and learning tools in all fields.

The primary obligation for insuring that institutions incorporate information technology

ubiquitously across programs rests with institutional boards and administrative leadership. This

should be accomplished through productivity improvements, institutional reallocations, technology fees, and other sources of institutional revenue. After this baseline institutional commitment has been determined and achieved, some portion of designated state appropriations for technology should be distributed equitably through a formula approach or other incentives (for example, matching grants).

Objective #2: To strategically target state resources on projects that accomplish important statewide goals and improve the quality and competitiveness of Oklahoma institutions.

In developing this report, the President's Council's committee on technology initiatives urged the Regents to develop systemwide initiatives from which individual institutions would benefit from collective action. This "utility" role of the State Regents is exemplified best in the manner in which OneNet has been developed and managed. At the heart of the OneNet development was joint investment with varying levels of participation through a pricing structure. It is now time for the Regents to extend this investment model to a more difficult but critical realm: building individual and organizational capacity to utilize information technology tools.

In carrying out this objective, the State Regents will need to take a more proactive role both in academic program development and financing mechanisms. This approach assumes that:

- Oklahoma residents will best be served by a high quality, well-differentiated system of public higher education, with individual campuses and units serving different market niches. Without this differentiation and focus on quality, Oklahoma public institutions will not successfully compete in an increasingly diverse and global learning market.

- Investments aimed at lead institutions and/or collaborative approaches will be the most

productive way for the Regents to foster this quality in the public sector.

Under this objective, the Regents should systematically look for opportunities to focus institutional missions on those programs where they have comparative advantage not only within Oklahoma but in the "export" of electronic curricula. At the same time, such reviews should look for opportunities to replace low quality and low producing programs with electronic alternatives through the "importation" of curricula.

A more proactive role on the part of the Regents suggests that a significant amount of state appropriated funds be set aside for targeted initiatives. In order for the distribution of these funds to be viewed as legitimate and equitable, a competitive grant process should be established where qualitative, not distributional or political, criteria are the dominant decision-making factors.

Objective #3: To expand the options that Oklahoma residents have for how, where, and from whom they receive educational services and programs.

Through such initiatives as the Western Governors University and other national and international distance learning options, Oklahoma residents will soon have available to them a much expanded world of educational programming, modules, courses, and degree programs. OneNet, through its low-cost and equitable pricing structure, already is a powerful force for expanding the number of affordable options to Oklahoma residents. Other public and private initiatives will continue to expand bandwidth services and bring many of those services directly to the home and to the desktop. The Regents should welcome, endorse, and support this expanded choice whether it comes from Oklahoma public colleges and universities, out-of-state institutions, or for-profit providers. In this way, the competitive forces of the marketplace are

likely to improve the quality of all providers and the Regents can use informed student choice, in combination with state and local priorities, to assess the success of its initiatives in the future.

The Regents should make no firm assumptions about the future preferences of students for one mode of delivery or educational experience over another. Rather, in cooperation with campuses, the Regents should develop feedback mechanisms from students, employers and other "customers" to guide future initiatives. There are likely to be roles for both traditional campus providers as well as for electronic or distance learning providers. Students are likely to mix and match their curriculum, combining face-to-face instruction with asynchronous electronic-based delivery.

As the Regents expand choice and options, student and customer behavior will send important signals as to the kind of educational structures and delivery to support in the future. *Thus, student, employer, and community preferences can become an important criteria for determining the preferred provider at any given location.* This can and must be an eventual substitution for exclusive franchises based on territorial or political considerations. A market-based approach, however, will put special obligations on the Regents to improve the quality of information available to consumers, including the performance of institutions in accomplishing their goals. It also will require the maintenance of vigorous standards of operation and recognition of outstanding providers of educational services. Finally, it will require that the Regents examine their own policies as well as those of state government to see if the regulatory environment is inhibiting the ability of public institutions to operate in a competitive environment.

IV. RECOMMENDATIONS FOR REGENTS ACTION

The following section focuses on a number of specific recommendations and projects for implementation through both joint initiatives between campuses and the State Regents and by direction of the Regents. Where appropriate, they incorporate some of the recommendations made by the advisory groups. Many of the advisory group recommendations focus on needed campus initiatives. They can be found in the appendices to this report.

Recommendations on Regents Academic Policy and Related "Receive Site" Financing Issues

During the past several years the Regents staff have moved steadily and progressively to improve its academic planning functions. In 1991, they established APRA (Academic Planning/ Resource Allocation) aimed at strengthening academic program approval and review processes and developing specific benchmarks for program productivity. For example, a recent review of teacher education programs has resulted in a number of actions either to improve or terminate a number of unproductive and low quality programs.

During this past year, with approval from the Council on Instruction, Regents staff have incorporated technology standards into program approval and review policies. In addition, they have recommended the necessary obligations and functions that should be provided at both the send and receive sites. The Regents staff also have developed proposals for further deregulating the geographic service areas governing distance learning activities.

This continuing emphasis on quality will need to be sustained as the Regents play a continuing role in assuring quality programs to Oklahoma residents. The recommendations that follow combine two parallel strategies: the first aimed at deregulating the distance learning market, the second in strengthening Regents quality assurance policies and more directly supporting receive site costs.

Recommendation 1: The State Regents should move steadily toward the elimination of the "geographic service area" in its oversight of electronically delivered courses and programs.

In 1995, the Regents took important steps toward deregulating its oversight of distance learning by exempting the out-of-state offerings of its comprehensive universities from review (see Table 1 for an overview history). This electronic media policy also allowed all institutions with cooperative agreements with other institutions to be exempt from Regents oversight. In early 1997, the Regents staff developed a second iteration of the policy that proposed to end "third party vetos" of these cooperative agreements. This effectively will allow host institutions to choose from any statewide provider, not necessarily the institution in closest geographic proximity.

But the proposed policy stops short of complete deregulation in circumstances where a campus wishes to offer distance learning courses or programs independent of other institutions (for example, a regional university offering a course in another part of the state, or at some public access facility such as a library or school, or directly to the student's home or desktop). In this case, the proposed policy requires that the provider (or sending) institution is "expected to cooperate with sister institutions in the immediate local area, which includes notification, and to exercise professional courtesy in the delivery of such courses." This language suggests, if not mandates, that institutions work out their mutual disagreements as to territory. The policy further notes that the "Regents will ultimately be responsible for conflict resolution."

In an ideal world, a policy of voluntary cooperation among Oklahoma institutions is a wise strategy. In fact, the entire thrust of the technology recommendations contained in this report is to encourage Oklahoma institutions toward this voluntary cooperation and, in the words of one

member of the faculty advisory group, "to focus on the enemy outside of Oklahoma (competing institutions from other states) and not the enemy within." This report also assumes that a high-quality distance learning operation will require significant services provided at the local receive site location.

But the draft policy on electronic media, as it stands now, may not resolve all of the conflicts that are likely to arise in the near future as distance learning activity grows. This is especially true for courses and programs delivered in asynchronous modes to an individual's home. The policy may also be having some unintended consequences as the Oklahoma comprehensive universities spend more time and resources in serving students out of state because of the constraints (regulatory as well as political) to act aggressively to serve in-state students, especially in the continuing education arena. Maintaining geographic service areas may also put all Oklahoma institutions at a competitive disadvantage since no such constraints are imposed (or possible) on the operations of out-of-state institutions, including those participating in the Western Governors University.

In further revisions of the electronic media policy, this consultant recommends that the following principles guide policy development: (1) the eventual elimination of *all* geographic service areas in Oklahoma for electronic media, including those outlined in Scenario C of the draft policy; and (2) the limitation of Regents' approval and review to programs, not individual courses (although an electronic program may need to be defined as something short of a complete set of degree offerings).

Recommendation 2: The critical factors in Regents' approval of electronically-delivered programs should be (1) compatibility of the offerings with overall mission and capacity of

the institution; and (2) qualitative considerations of the highest order. Such reviews to the greatest extent possible should be conducted cooperatively with the North Central Association.

Delivery of an oncampus program in a distance learning format, or initiation of a new program that is substantially electronically based, should require that institutions seek and gain approval according to the Regents Policy Statement on Program Approval and meet standards outlined in the electronic media policy. New approvals are justified for existing programs, given that the North Central Association also requires such reviews (although does not always enforce its policy). Ideally, a Regents review should be closely coordinated with the North Central review so that each will benefit from the other and institutions will not be unduly burdened by data requirements and onsite visits. By requiring reviews of existing programs that are taken off campus, the Regents may also inspire the accrediting bodies to enforce their own policies.

Regents approval and review processes should be limited to programs or collections of courses constituting the majority of offerings or requirements. Individual or limited electronic offerings should not be subject to review. (Thus, a community college offering a course from a program already approved by the Regents through the internet would not be subject to approval and review. Once the internet offerings, say, constituted a majority of the credits required for a degree, the program would be subject to approval and review.)

It is critically important that Regents staff (or their external consultants) actively conduct interviews and site visits as part of the review process. A "paper review" process will not be adequate to insure quality in distance learning programs. The use of external reviewers on the substantive curricular issues is encouraged at both the campus and Regents levels. The Chancellor and the Regents also should protect staff from intimidation on the part of campus

leaders who are not supportive of this quality assurance role.

While this consultant has recommended the elimination of the geographic service criteria in program approval, it is appropriate for the Regents to judge a new program proposal in the context of the overall mission and capacity of the institution. As a matter of illustration, consider the following example. A community college that wishes to extend an oncampus program in computer science, with a substantial local enrollment base to distant learners, might receive a favorable Regents review, while the same institution with little local interest or need seeking to provide this program in other parts of the state (or out of state) might be denied program approval.

Recommendation 3: The Regents staff should incorporate the "best practices" methodology into its program approval and review process.

Whether it is the institutional, accrediting, or State Regents approval process, it is difficult to apply hard and fast standards for program approval in an emerging area such as distance learning and electronic delivery. For this reason, the Regents, as part of the initial approval of programs, should seek institutional commitment to conduct an organized, rigorous and thorough "best practices" review. Continuing approval of the program should be contingent upon the conduct of this "best practices" review and should be conducted within a reasonable period of time (for example, three years from initiation of the program). The "best practices" review should include: (1) systematic identification of the qualitative processes that contribute to high performing institutions in the particular mode of delivery and field (using external consultants to assist in this process); (2) the identification of quantitative benchmarks against which progress and success can be measured; (3) systematic survey of potential best practice sites both in

Oklahoma and outside of the state to discover which institutions nationally have been most successful; (4) site visits and/or personal interviews with key personnel at the best practice sites; (5) a summary of findings; and (6) an implementation plan for making the necessary improvements in processes to achieve "best practice" at the Oklahoma institution.

The role of the Regents staff should be to assist in the design of the study and solicit other participants initiating similar programs. Such "best practice" or benchmarking activities could substitute in whole or in part for current review processes. Through these best practice activities, the Regents should develop an evolving and dynamic set of "standards of best practice" that institutions, both in and out of state, would agree to meet.

Recommendation 4: The State Regents should provide incentives that will encourage the use of imported curricula through the OneNet system. This will stimulate new program development responsive to emerging market needs as well as termination of low productivity and low quality programs.

The overall objective of Regents policy should be stimulate the exchange of "academic commerce" across institutions. Many institutions in Oklahoma are struggling to sustain quality programs in fields where, because of location or student interest, enrollments and graduates are relatively low. At the same time, they are often seeking to expand their offerings to meet emerging demands. The Regents should support a dynamic academic program development system whereby new programs can be launched, low productivity programs can be terminated, and inter-institutional collaborations will capitalize on the unique resources around the system. Distance learning, both asynchronous and synchronous, provides a number of opportunities for solving these problems. While it is hard to predict future demand for specific programs, there

appears to be significant new opportunities for colleges in the area of continuing professional and

technical education for working adults, while the growth of enrollment among 18-24 year-olds

may be relatively stable. As Dennis Jones, President of NCHEMS, noted to the Citizens

Commission examining this subject, demands in underserved areas are likely to be episodic.

Importing programs from outside the region for limited periods may be more cost-effective than

long-term commitments to faculty and infrastructure.

Technology also provides great opportunities for campuses to improve quality at a

relatively low-cost. Faculty expertise both from other Oklahoma institutions and other states can

be used to supplement on-campus resources.

While some institutions will be motivated without incentives to take advantage of

imported curricula, the internal pressures to sustain academic positions or to grow through

traditional campus-based expansion will require special financial incentives and new ways to

allocate resources among send and receive sites. (See Recommendation 5 for further discussion).

 But additional incentives may be needed for program termination, including the continuing

aggressive application of productivity standards through APRA as well as explicit mandates or

encouragements to include imported curricula in program development plans. Grants to support

the purchase of additional receive site equipment could also be a *quid pro quo* for program

elimination. The Regents may also wish to consider "community vouchers" to support the

importation of curricula in lieu of new off-campus centers or programs.

The Regents' standards for low productivity programs are a good starting point for

identifying programs that might receive incentives for program or course importation. Low

productivity programs can be found in nearly all the major discipline areas including education,

engineering, physical sciences, the social sciences, fine arts, health care, and business.

In the area of new program development, the Regents can use their program approval policies to encourage, or mandate, the use of imported curricula for some portion of the program. Campuses should also be encouraged to increase the options their on-campus students have for taking internet-based courses, not only from their own faculty but from institutions around the state and nation.

Recommendation 5: The State Regents should establish policies to more adequately support receive site costs.

A successful and high quality distance learning program needs support from both provider and host institution. Under the current financing system, state FTE support and tuition flow overwhelmingly to the institution granting credit. The Council on Instruction has outlined several important functions of the institution hosting electronically delivered courses including access to facilities, personnel, library and computing resources. Host institutions also can play an important role in marketing and advertising programs if properly compensated. In addition, some students may require more intensive mentoring/tutoring to be successful distant learners.

The first step in implementing this recommendation should be an analysis of instructional costs such that associated administrative and academic support costs can be separated and priced. After this analysis is completed, the Regents may wish to choose among the following options to support a quality receive site operation.

1. A standard allocation of state FTE support and/or tuition between the provider and host (receive site) institution (for example, 60% to the provider, 40% to the host)

2. A recommended allocation (based on an assumed level of services) to be negotiated by individual institutions

3.   A flat and standard allocation to receive sites hosting a specified and minimum level of activity (for example, $100,000 to all hosts receiving at least 15 courses annually)

The advantages of the Regents taking a standardized approach (Options 1 and 3) will be the incentives they provide for the importation of curricula and the quality upgrade of distance learning programs through adequate support of receive site costs. Among these options, this consultant prefers Option 3.

Recommendation 6: The Regents should undertake further review of its "Policies and Procedures for Accreditation of Institutions of Higher Learning" to insure adequate protection of consumers who are participating in electronic media programs.

Out-of-state higher education institutions that are nationally or regionally accredited may operate in Oklahoma by notification of the Chancellor of their accreditation status and anticipated course and program offerings. Accredited institutions operating in Oklahoma must also meet the consumer protection standards that require certain disclosure to students. The Regents may wish to strengthen this section by requiring — or seeking voluntary compliance to — "standards of good practice" in distance learning if the institution plans to operate in electronic modes.

Recommendation 7: The State Regents, in cooperation with state colleges and univer-sities and the Governor's Office, should develop a plan for Oklahoma participation in the Western Governors University.

As noted in the policy section of this report, one objective of the Regents should be to expand the choice and options available to Oklahoma residents to electronic information

resources, curricula, and degree programs. Oklahoma's participation in the Western Governors University will greatly enhance these options, as will opportunities for Oklahoma institutions to gain enrollments outside the state.

By participating in WGU, institutions with distance learning curricula can use WGU as a broker, marketer, and aggregator of their curricula outside the state. By establishing a number of "neutral receive sites" or "learning centers" around the state, Oklahoma will be expanding access to the programs available through WGU (which are expected to include a full associate degree via distance learning technologies). The elements of this plan should include the following: (1) provisions for local dial-up access to the internet and the WGU icon where currently not available; (2) the establishment of neutral "learning centers" in existing institutions, community buildings, schools, and libraries; (3) a determination of the services available at these learning centers and their pricing structure.

Recommendations on Student Access to Computing Resources

With OneNet hubs scattered throughout the state, affordable broad-band access is now available to students and faculty in every public college and university in the state. Yet during our campus visits we found campuses that, for a variety of reasons, had not taken advantage of the services available through OneNet. At relatively modest cost, for example, campuses can use OneNet servers to provide e-mail accounts and some level of remote access to students. In its technology recommendations (Appendix C), the Student Advisory Board called upon campuses to establish minimum standards of access, including providing every college and university student with internet access and an e-mail account, providing at least one 24-hour computer lab, a maximum of 35 students per general computer access, a minimum (but unspecified) level of

free printing, and reasonable ease for remote access. The students also noted that they are "willing to pay increased fees for technology services if they see immediate improvements and have immediate access to the technology."

Recommendation 8: The State Regents should support a "laptop university" approach in one or more pilot institutions.

Those who visited the University of Minnesota, Crookston can attest to the power of this comprehensive strategy of change, especially its power to engage students with technology and to improve their job competitiveness. The Regents should sponsor one or more pilots of this approach, with at least one targeted at a community college or regional institution. (One Oklahoma institution has already indicated its support for such an approach.) The Regents could either conduct a competitive process or selectively recruit pilots. Regents support would be two-fold: (1) subsidizing part of the lease cost in order to lower the student technology fee; and (2) providing technical support for the development of campus infrastructure. Institutional obligations would include significant reorganization of curricula in order to take advantage of laptop technology and campus networking. In its report to the Regents, the Student Advisory Board noted that "students would benefit from use of a notebook computer," but that "required notebook computers will only be successful if faculty are adequately trained to fully implement (their use) into the classroom and curriculum."

Recommendations on Faculty and Course Development

The recommendations that follow focus on faculty development and other academically related initiatives aimed at utilizing the power of information technology to improve teaching and learning, both on campus and in distance learning environments. Many of the recommendations draw heavily from those of the Faculty Advisory Committee (Appendix D).

In making these recommendations, this report assumes the following: (1) that faculty development needs will be continuing, not episodic; (2) that this development will be most effective when delivered "just in time;" (3) that the costs of providing such development, especially for smaller institutions, will require some joint and collective action; and (4) incentives may be needed to increase the level of institutional commitment to faculty development.

In the initial survey sponsored by the technology committee of the President's Council, faculty development was identified as one of the highest priorities. This finding is confirmed by the campus visits conducted by the consultant and the recommendations of the Faculty Advisory Committee. In the statewide survey of institutions conducted as part of this project, faculty development also was identified as a top priority.

Given the substantial resources being invested in information technology by both the state and by campuses, it is appropriate to ask why faculty development in the use of technology has not been a higher priority. In part, this relates to the individual nature of faculty work and also to the high cost of such development in a technology rich environment. Moreover, those campuses that have put resources into development initiatives have been unable to respond to the growing demand among faculty for the incorporation into their curricula of such tools as multi-media, internet resources, and interactive video. Finally, infrastructure developments as represented by

the growth and development of OneNet and campus infrastructure have taken precedence.

While the State Regents can stimulate faculty development through such vehicles as its Quality Incentive Grants, this will not meet the full needs of faculty for assistance and training in the use of instructional technology. Without leadership from campus presidents, boards of trustees, and academic deans, and without increased investments form institutional funds, the full potential of the faculty to utilize technology resources will not be realized. Now is the time to invest in the human capacity to utilize this infrastructure.

Recommendation 9: The State Regents, in cooperation with the common schools and the vo-tech sector, should establish regional "centers for instructional development."

While some larger institutions may have the resources to support self-contained "centers," the Regents should support a collaborative approach for smaller institutions. The work of the centers should be focused on developing a team approach to content develop-ment, especially in the realm of multi-media and internet-based curricula. Instructional designers, technology staff, multi-media experts, and those faculty with expertise in pedagogy can work closely with the content experts (namely, mainline faculty) to develop materials, modules, and curricula that can be widely shared and utilized by university faculty, school teachers, and vo-tech instructors. Given the short supply of qualified "instructional designers," such an approach may be a necessity. Thus, a "train the trainer" method will be needed. The evaluation and joint purchase of commercially available software (applications and course content) will also be an important function of these centers.

Initially three or four centers around the state should be established through a competitive grant process and modeled after the instructional development centers at Oklahoma City

Community College and those observed in the best practice site visits in Virginia and Colorado. An important criteria would be the solicitation of partners in school districts and the vo-tech sector to support operational costs. Significant new funds both for capital investment in space and equipment will be needed as well as an ongoing financing plan for operations. The State Regents staff should secure the funds through the existing capital development process and serve a networking function in ongoing faculty development initiatives through the Director of Instructional Technology.

The costs to build and operate a faculty development center can vary widely depending on the model chosen and the level of support provided to faculty. For example, Virginia Tech, one of the best practice site visits, runs a Faculty Development Institute program that costs approximately $2.5 million per year. That amount covers equipment, software, and training costs for roughly 360 faculty, as well as the maintenance of 35 presentation classrooms and computer labs containing approximately 500 computers. Also included in that budget is a New Media Center, which serves as the primary training site for the Faculty Development Institute. Equipment at the facility is replaced every 18 months in order to keep current, which costs between $75,000 and $100,000 for every turnover. In addition, the center holds a software budget of $25,000 per year, and maintains a staff of two half-time directors, two full-time programmers, and three wage students. While overall costs of approximately $7,000 per faculty member may seem very costly, the training program is extensive and includes a fully equipped, multi-media computer provided to each faculty member upon completion of the program.

While Virginia Tech's faculty development center serves only one public four-year institution, the Educational Technology Training Center (ETTC) in Colorado, which was also included as a best practice site visit for this study, offers another model. The ETTC facility

(described in Appendix B) was built with a significant influx of funds from the state legislature, which totaled $6.3 million. Of those funds, $4.8 million were dedicated to equipment purchase, while $1.5 million were used for remodeling and construction of the facility. In addition, the initial state investment was leveraged with $3.75 million in private donations and in-kind services. While the capital costs for this faculty development facility were substantially greater than Virginia Tech's investment, the ETTC will serve faculty throughout the entire state system of community colleges, some four-year faculty, and even out-of-state faculty where capacity permits. Operational costs are met, in part, by leasing portions of this state-of-the-art digital production facility to private industry when not in use for faculty training.

The above examples are relatively large-scale operations. Examples closer to home can also be used in developing specific budget proposals for the regional centers. For example, based on the experience at Oklahoma City Community College, an instructional technology center could include the following staff: an instructional technologist, a multimedia developer, a hardware and software technician, and a multimedia author/programmer. Annual salaries and operational costs for this staff are estimated at approximately $250,000. Equipment and setup costs for 20 workstations, multimedia equipment, and software is estimated at approximately $150,000 ($5,000-6,000 per workstation plus additional equipment). Additional costs would include space, utilities and administrative overhead. More exact budget figures can be developed after the size, scope and workload of the regional centers is determined.

Recommendation 10: The State Regents should use its Quality Incentive Grant Program for collaborative initiatives aimed at content development.

In its report to the Chancellor, the Faculty Advisory Committee called upon the Regents to act jointly with institutions to provide incentives for investment in technology training. The Committee suggested that funds be made available for participation in summer workshops, technology sabbaticals, technology roundtables and campus user groups.

The Faculty Advisory group also called upon the Regents to provide grants for collaboration across institutions. Such grants should be made on a competitive basis, should be substantial in size, and should receive external review. An important element of these faculty development grants should be opportunities for student assistance and employment. Often the best source of expertise in developing web pages and multi-media materials are students themselves. In the case of community colleges, provisions for employment from the comprehensive universities or nearby regional four-year institutions also should be encouraged.

In the RFP, the following priorities should be highlighted:

A. <u>The development of asynchronous courses and/or modules that are likely to be useful in the priorities established by the Western Governors University</u>. While some institutions in Oklahoma are experimenting with asynchronous, multi-media curricula, these tend to be in "specialty" courses (for example, Quality Control at OSU-OKC) or are limited to single courses at individual institutions (for example, Geology at OCCC; Introduction to Management at TCC). High quality, cost-effective curricula will need to "scale" to a wider enrollment base. Ideally, students in Oklahoma, regardless of location, should be able to choose a more self-paced internet- or CD-ROM-based option that is widely transferable. Both the learning needs of on-campus students in Oklahoma and the priorities established

by the Western Governors University suggest Oklahoma focus on content development on (1) general education curricula found at the associate degree level and (2) math and science courses (including "virtual labs") where significant learning problems remain and opportunities for collaboration with high school programs exist (for example, OSU's studio chemistry courses). Oklahoma's work in this arena should be closely coordinated with other participants in the Western Governors University. Asynchronous courses also should be available to on-campus students as an alternative to traditional lecture formats.

B. <u>A multi-media repository of materials</u>. Another approach to curriculum development would be to organize and support discipline-based groups that would referee the development of multi-media materials in modular form that could be accessed by faculty throughout the state. Through faculty "peer review," these materials would be screened and would eventually be accessed electronically. These discipline-based groups also would begin to define the "performance" or "competency" aspects of the curriculum that will be necessary if we are to develop high quality, self-paced, or self-directed curriculum. Access to these materials will be easily and cost-effectively available through the OneNet system.

In order for faculty to more effectively deliver internet-based asynchronous courses, they will not only need access to well-organized and updated content (most likely from commercial providers), they will also need a "course management" system. These tools and standards are currently under development by a coalition of institutions brought together through Educom under the rubric of the "Instructional Management System" (IMS) initiative. Institutions and Regents staff should monitor these developments closely.

Recommendations on Library Initiatives

The development of OneNet in Oklahoma has provided extraordinary opportunities for resource sharing among academic, public, and school libraries in Oklahoma. As the Regents Library Advisory Committee noted in their recommendations (see Appendix E), "with the drastic reduction in purchasing power being experienced, it is imperative that all academic libraries participate in cooperative collection development and materials sharing projects." With OneNet leadership, this resource sharing already has begun with the acquisition of *First Search*, an electronic data base that will be shared by libraries throughout the state of Oklahoma.

The long-term vision of the library community in Oklahoma should be the continuing and full development of a "virtual" library in which all Oklahoma residents have full and equal access, not only to the collections of Oklahoma libraries but to those throughout the world through electronic means. Oklahoma institutions should begin to view their libraries as part of a state-wide library distribution system of which their physical space is an "outlet" of a larger enterprise.

A number of actions, both organizationally and technically, will need to occur for this vision to be fully realized. In its report, the Library Advisory Committee offered several recommendations that were primarily institutional responsibilities, including conversion to the national "Machine Readable Cataloguing" (MARC) standard, which is a basic requirement for networking library resources. In addition, the group called upon all institutions to replace card catalogs with online public access catalogs with full internet access, and for all academic libraries to have full access to OneNet. The Library Advisory Committee also noted the important role that libraries and librarians play in support of the academic programs of institutions, including the necessary role in support of distance learning. *It was apparent from our campus visits that*

library support remains a weak point of distance learning offerings in Oklahoma institutions.
The State Regents can play a strong leadership role across the library community in Oklahoma
and this role is recognized in the Library Advisory group's recommendations as well.

**Recommendation 11: The Oklahoma State Regents should provide leadership and support
in the acquisition of shared full-text databases for all libraries throughout the state.**

Building upon the current capability of the Oklahoma Library Technology Network
(OLTN), the Regents can expand the opportunities for collaboration and realize substantial cost
saving through joint purchase of multi-site licenses. (The Regents can serve as the contracting or
fiscal agent or an institution could take the lead in negotiations and have others buy off of their
contract.) Among the potential data bases that would have widespread use are CHEMICAL
ABSTRACTS, which covers publications in chemistry and chemical engineering; PSYCINFO+,
which includes 4,000 new references every month in psychology related fields; AGRICOLA
covering the field of agriculture, agricultural economics, and such topics as hydrology and water
quality; and CINAHL+, which provides access to nursing and allied health literature.

**Recommendation 12: The Oklahoma Council of Academic Library Directors (OCALD)
should be formally established as a council by the Oklahoma State Regents and be given
the mission to realize the vision of a coordinated "virtual" library concept for the state.**

By establishing this advisory mechanism, the Regents will create a vehicle for sustaining a
more coordinated library system in the state. In addition to collaborative acquisition policies and
joint licensing projects, the OCALD can plan for the implementation of the variety of projects
suggested by the ad hoc library advisory group to this project. These include further interlibrary

loan cooperations, a statewide courier system, expanded borrowing privileges, a central materials

storage facility, and additional resource sharing protocols. The OCALD also should be charged

with responsibilities for coordinating Regents' library initiatives with those of the Oklahoma

Department of Libraries and the Library Media division of the State Department of Education.

This advisory group should be supported by the Director of Instructional Technology on the

Regents staff.

Recommendations on Administrative/Student Support and Equipment Financing Initiatives

The opportunities for improved service and lower administrative costs are substantial in a

networked technology environment. In some cases the increased productivity will come through

self-initiated services, for example, students registering for courses through the internet, or

faculty directly entering grades into an information data base. In other cases savings can occur

through joint licensing of administrative data base management systems. But unless these new

electronic data bases are also accompanied by "process reengineering" to cut cycle time and

bureaucracy, few savings will be realized. Smaller campuses must look for ways to leverage the

purchasing power of larger campuses and to "outsource" some of their operations in order to gain

economies of scale. In campuses and businesses throughout the country, analysts are examining

business processes to cut personnel costs and processing time. Such enhanced services are also

likely to improve the competitiveness of Oklahoma institutions as customer satisfaction rises.

Not only are self-initiated processes like online registration cheaper, they are also more

preferable to customers than standing in lines and moving from office to office. Process

reengineering also requires retraining of staff from narrow specializations (such as financial aid)

to generalists (all student services).

The role of the State Regents in disseminating the exchange of information and "best practice" is critical and was recognized by the various advisory groups. The Council on Student Affairs directed several of its recommendations (see Appendix F) at disseminating information on developments in electronic student services. With the support of Regents staff, the Council should be encouraged to continue to play this role by sponsoring conferences and workshops and disseminating the results of the national benchmarking effort in which they recently participated.

Increasingly the Regents office has been using electronic means to disseminate information and facilitate cooperation. In the area of purchasing, the Regents staff have already undertaken this initiative by creating a purchasing web site and by establishing policies and procedures for joint purchasing contracts across campuses. The Regents web site also includes information on nearly 3000 courses that transfer among Oklahoma colleges. The course equivalency information can be used by both students and counselors as well as faculty.

Beyond these general recommendations, the State Regents should implement the following:

Recommendation 13: The State Regents, through its Quality Incentive Grant Program, should support the development of the following student services initiatives: (A) a multi-institution electronic application form; (B) a web-based registration system at one or more institutions; (C) electronic job postings for on-campus and off-campus employment; and (D) an electronic degree audit system for one or more institutions.

The Oklahoma City Kiosk project and participation of the State Regents in a national benchmarking project on electronic student services has laid the groundwork for further action in this arena. Electronic services will have a number of benefits including improved service, especially to undergraduates; expanded participation in higher education both in on-campus

programs and distance learning opportunities; and, if done correctly, reduced administrative costs. RFPs should be developed seeking lead institutions or consortia to implement each of the four objectives outlined above, with obligations to share products and work with other institutional partners. Given the rapid advances in commercially available software in this arena and with the experience of best practice sites identified by the national benchmarking project, implementation of these goals should be more quickly developed. The opportunities for collaboration and joint services also are apparent, such as electronic registration systems among the Oklahoma City downtown consortium, and a consolidated career and job placement service among Tulsa institutions.

The University of Oklahoma also should be encouraged to provide leadership to other campuses in employing and using "smart cards" (called OneCard at OU). There are direct applications to the current kiosk and Touchnet technology being employed in the Oklahoma City consortium.

Recommendation 14: The State Regents should support the full implementation of electronic transfer of student records and transcripts across the higher education and K-12 sector.

The Council on Student Affairs called upon the Regents to implement use of SPEEDE, a software with nationally agreed-upon protocols to allow for the electronic transfer of transcripts across institutions and from the K-12 sector. The estimated cost of such a system statewide is set at approximately $350,000, with expected reductions in record keeping and registrar costs. One method of financing this initiative would be through Regents or lead institutions assessments or taxes to pay for the costs of development. This project should also include the continuation of

the Course Transfer/Course Equivalency Project begun by the Regents Staff in 1995.

Recommendation 15: Regents staff, using the survey data completed as a part of this study, should develop, in cooperation with campuses, a comprehensive plan for technology equipment replacement.

This is the first step in implementing Recommendation 16 (master leasing concept). The overall objective here should be to recognize and plan for the ongoing replacement of information technology equipment, especially desktop computing equipment. Such a plan would include the following elements:

A. An assessment of current inventory and future needs (already completed)

B. Assumptions about rates of replacement

C. Current expected contributions from the base of state appropriations, federal funds, and technology fees

D. Expected productivity gains

Once these calculations and assumptions are made, the Regents will have an estimate of annual equipment needs that can be included in the master leasing concept. Unmet need is the sum of A plus B minus C and D.

Recommendation 16: The State Regents should implement a Master Leasing Program to assist campuses in acquiring technology equipment.

The objective of this initiative would be to consolidate and streamline the current campus methods for lease-purchase of equipment (for example, computers and peripherals) under a single statewide agreement. This will result in a number of benefits, including lower interest costs and lower administrative costs. Such statewide agreements for financing equipment also

could be the vehicle for more systematic planning for the costs of equipment replacement. A

number of steps (including legislative changes) would be required to implement such a program:

A. Legislative authorization to allow the Oklahoma State Regents to enter into loan

   agreements

B. The development of needs assessments to justify loan agreement requests to state

   lending authorities and offices

C. The development of financial vehicles, such as certificates of participation, for lines of

   credit for a specified amount and period (for example, $10 million over five years)

D. Institutional draws against this credit line and the use of designated streams of revenue

   (either state appropriations or technology fees) to service this debt

Such an approach is likely to result in interest rates significantly below those currently used by

institutions to finance such purchases and will streamline administrative processes.

Recommendation 17: Given the large number of small institutions in Oklahoma, the

Regents should provide financial incentives for institutions to merge functional

administrative areas and/or to be served by service centers in "lead" institutions.

In this way, important economies of scale can be achieved. Given the expanded capacity of

OneNet to serve as transport for audio, video, and data, such statewide or regional service centers

are now feasible without loss of service to students and other customers. (OneNet already is

beginning to play the role of technical support to many of its customers, but is hindered by

staffing constraints.) Potential areas include: (1) computing and systems support; (2) personnel

management; (3) purchasing; (4) financial aid; and (5) other student services (for example, for all

distance learning students). Regents can facilitate such consolidation by developing a *quid pro*

quo between funding formula support and participation in consolidation of administrative services (for example, non-participating institutions would no longer be protected from the fiscal impact of enrollment decline). On a small scale, the Regents already have initiated shared approaches to administrative services. With support from the Regents staff, the University of Oklahoma has taken the lead in providing required environmental safety training for other campuses in the system. Costs for this program are covered through institutional assessments. In addition, the Regents staff has taken steps to share expertise of larger campus purchasing offices with smaller campuses.

Recommendations on OneNet Management and Governance

Throughout the course of this study, we have heard criticisms of the operational function of OneNet. These comments have come not only from presidents and campus computer center directors, but from students and faculty who are users of the system. Most commonly, the problems involve the failure to make a video connection (usually due to software problems with both the wide and local area network), audio problems (often stemming from poor quality equipment at the receive site), and the lack of timely response from OneNet staff to these service problems. OneNet has also had problems in communicating the range of services available and the methods for gaining technical assistance.

Many of these comments and criticisms from institutional representatives were offered with a sympathetic understanding of the difficulties of managing a new and complex system that has grown well beyond the expectations of OneNet staff. As Table 2 illustrates, OneNet has already grown substantially beyond the expectations outlined in the 1995 business plan. With 45 hub sites and nearly 1000 current client organizations connected, OneNet is now one of the

most comprehensive statewide networks in the country. A recent report by the Southern

Regional Education Board documents this achievement, noting that Oklahoma is one of the few

states with an integrated network across higher education and other segments of state

government as well as one of the fastest and least expensive communications networks.

In retrospect, the OneNet management staff and the Oklahoma telecommunications

consortium (OKFive) not only underestimated the demand for network services, they under-

estimated the complexity of the task. For example, many of the state agencies participating in

OneNet are asking that significant security features be incorporated into the network.

OneNet staff also underestimated the technical difficulties that would result from a lack of

systemwide standards, especially for audio equipment. Driven by the desire to be "customer

responsive" and to respect institutional autonomy, OneNet staff essentially promised institutions

that they "would make whatever you have work" with the new OneNet system. Other problems

relate to the sheer volume of work in establishing new end sites. OneNet's private sector partners

also are struggling to keep up with demand for OneNet connections. Given that they have direct

financial incentives to improve service (they receive approximately $10 million annually in

revenue from users of OneNet), Regents staff expect a staffing increase in response to user

demand.

**Recommendation 18: OneNet management and service functions will need continuing
attention and strengthening.**

The financing of OneNet operations in the Regents Office comes from revenues paid by

users to the telecommunications companies. OneNet receives 10% (plus a flat monthly fee) of

these revenues. Out of this pool of money, OneNet runs the data side of OneNet and maintains

the statewide backbone. Current staffing of OneNet includes 18 FTE technical staff who are a part of the OneNet budget. Fiscal Year 1997 costs for this technical support were approximately $828,000. Two additional technical staff were recently added, using savings from the retirement of a senior engineer. In addition, two technical staff employed on the Regents staff have been assigned OneNet responsibilities. This OneNet technical staff handles the tasks of video switching and scheduling as well as configuring routers and maintaining network services, including domain name services and maintaining web servers, e-mail, and Usenet news servers. In addition, three senior staff members on the Regents budget have had management and oversight responsibilities.

In June 1997 a new management arrangement was established with the Office of State Finance, with overall OneNet management direction assigned to the director of the Information Services Division, and continuing policy direction from the executive vice chancellor/chief operating officer of the State Regents. A portion of this individual's salary will need to be allotted from the Regents budget. These management changes and increases in technical support staff are a good first step in confronting some of the technical, service, and managerial problems identified by our respondents. With these changes, OneNet should be able to respond to problems in a more timely fashion. However, we suspect that OneNet will continue to be pressed to expand its services, especially among smaller campuses that may need assistance on activities such as web-page design or e-mail that would normally fall to a campus computing office. If OneNet is to provide these services, staff will need to price them and charge campuses accordingly.

Recommendation 19: The overall governance and policy direction of OneNet should be

broadened to include the major "user groups" of the state.

OneNet is an asset that serves not only higher education, but, as Table 2 demonstrates, a wide range of state agencies and institutions in Oklahoma. The current advisory structure (the State Data Processing and Telecommunications Advisory Committee), while repre-sentative of these entities, has not been active. This consultant recommends that a small policy advisory committee to the Regents staff be formed. This group should include a key representative from K-12, the vo-tech sector, state government, local government, and the statewide library community. In addition, active working committees should be organized around services, issues, or important constituents (for example, telemedicine). Moreover, the overall governance structure of OneNet, including the current role of the Regents in providing oversight, needs further examination. The experience of other states with statewide networks (for example, Utah, Iowa, North Carolina) would be a good starting point for this review.

Table 2 OneNet Client Organizations as of June 1997			
Organization	Dedicated Connections	Dial-up	Total
K-12	90	64	154
Vo-tech	38	14	52
Higher Education	54	31	85
State Agencies	231	74	305
Libraries	10	4	14
Hospitals	52	0	52
Rural Telcom Centers			200*
Other	11	7	18
Total			880

*Not fully implemented, estimated number expected.

Recommendations on Economic Development Initiatives

Much of the expected impact of OneNet and the growth of distance learning opportunities in Oklahoma will be felt by working adults. The time and place flexibility that these new delivery systems allow will mean opportunities for receiving continuing professional education in a much more convenient manner. Learning modules, short courses, and even full degree programs will increasingly be delivered "to the desktop." Group and collaborative learning will increasingly take place within the context of work. While the corporate and for-profit sectors of education are expected to grow, traditional public higher education, if it is well-positioned, can expect to share in this growing continuing education market. It also will be vitally important for the State Regents to watch for shortcomings in the private sector response to assure that all citizens are adequately being served with continuing education opportunities.

Currently, the primary state economic development money for training is focused exclusively on the vo-tech sector, and some collegiate representatives noted that Regents policy, which requires "full-cost" recovery for these programs, reinforces legislative belief that public support is not needed. While the Regents may wish to continue this policy for cost recovery of operational expenses, additional state investments are needed in covering program development costs.

Recommendation 20: The State Regents should tie its technology investment strategies more directly to state priorities for economic development.

The project team received advice and oral recommendations on this topic from an ad hoc group of continuing education directors and other campus representatives involved in economic development initiatives on their campuses. They believed that state government in Oklahoma is

not fully appreciative of the important role that higher education plays in the continuing education of professionals and "high wage" employment in the state. They noted, with some frustration, that economic development monies aimed at attracting businesses to Oklahoma were spent exclusively on start-up training provided by the vo-tech sector. At the same time, they admitted that individual campuses often were slow to respond to the needs of business and did so in an uncoordinated fashion. (Similar comments and criticisms of higher education were noted in testimony to the Citizens Commission on the Future of Oklahoma Higher Education.)

The Regents staff have had some past success in playing a brokering or deal-making role with the business community (most notably in the recent "Aviation Alliance"). Forming these alliances, or assisting institutions in forming their own partnerships in response to community needs will require even greater emphasis from Regents staff in the future.

One way to increase state commitment to a higher education role in economic development is to seek programmatic funding for course and content development in targeted areas of high state priority. The Department of Commerce, for example, has designated five industries for potential growth: aviation, telecommunications, electronics, composites, and biotechnology. Strategic investments through a competitive RFP process can be used to develop applied research programs and continuing education modules for delivery to employees and professionals at the worksite and desktop. Business/user advisory groups should be used to guide this development. State matching grants also could be provided to employers who wish to develop receive sites for employee training at their offices or plants in these targeted areas.

A Final Word on the Financing of Technology Initiatives

Throughout this report, we have suggested various approaches to financing specific

recommendations. In some cases we have been able to suggest approximate dollar amounts that might be allocated on an annual basis to a particular initiative. But further Regents staff work will be needed during the FY98 budget process and in subsequent years. Some of the recommendations lend themselves to incorporation into base budget and institutional programmatic initiatives, but many suggest a more substantial set-aside for special project funding, including the Regents Quality Incentive Grant program. While there has been a reluctance on the part of institutional presidents to support this "below the line" funding, it is important that the Regents have a financial instrument to implement their statewide priorities.

Technology enterprises also lend themselves well to joint legislative initiatives with other sectors including K-12 and vo-tech. House Bill 1815, which passed during the 1997 legislative session, provides a $7 million pool of money from a surtax on retail local exchange access lines that can be used for teacher technology training across educational sectors. A portion of these dollars could be used to support the proposed regional instructional development centers or could be distributed as vouchers directly to teachers and faculty to pay for faculty development courses and services at these centers. The Regents, for example, may wish to pursue joint funding of the proposed regional instructional development centers. As noted earlier, economic development initiatives should be pursued in partnership with the Department of Commerce and the Oklahoma business community.

Finally, it is important that the Regents establish technology initiatives as among its highest priorities early in the budget deliberations. The goals outlined by Oklahoma State Regents Chairman Robert L. McCormick in his May 30, 1997 memo are an important first step in this regard, but continuing communication of these priorities to the staff and to the Presidents Council will be needed throughout the year.

Appendix A

Campus Technology Survey

In October 1996, State Regents staff conducted a written survey of the 31 public colleges, universities, centers, and constituent agencies in order to assess their overall progress in integrating information technology into instruction, research, administration, and academic support activities. The survey also gathered baseline data on campus networks, use of the internet, computer access, software, and classroom equipment. Finally, the survey asked institutional leaders to respond to questions concerning budget priorities and policy issues. This Appendix contains highlights from the results of the survey, which were presented to the higher education community over OneNet in January 1997.

Technology Progress

In the first section of the survey, institutional respondents were asked to rate themselves as "behind," "equal to," or "ahead of" their peers toward integrating information technology into the fabric of campus activities. Results indicate that several institution believe they are slightly ahead of their peers, while others suspect they are trailing behind. The survey also asked about progress in specific areas: instruction, research, administration, and academic support. Rogers University, the two-year tier, and technical branches believe they have made the most progress on the instructional side. The comprehensive tier indicated that their greatest progress has been in the research area. The higher education centers, two-years, comprehensives, and technical branches all said they have made significant progress in providing academic support.

<u>Student/Faculty Preparation</u>

In two separate questions, respondents were asked to rate how well both students and faculty were prepared to use technology. On a five-point scale from poor to excellent, most institutions ranked both their students and faculty near an average score of three. But interestingly, most also saw their faculty as less well prepared to use technology than their students. This finding suggests that faculty development is an important priority for institutions in the Oklahoma system.

<u>Technology Planning</u>

Institutional respondents were asked whether they had in place a formal, written plan for information technology in the following areas: instruction, research, administration, and academic support. Only 22% of institutions in Oklahoma indicated they had such a plan, which is below the national average of 31% of institutions with a formal technology plan (Source: *Campus Computing 1996*, Kenneth C. Green).

<u>Computer Competency Requirement</u>

Institutions were asked whether there is an explicit expectation that students possess a set of computer-related skills (often defined as wordprocessing, manipulating spreadsheets, troubleshooting their equipment, or using electronic databases) at the undergraduate level. According to the survey results, slightly more than half of Oklahoma institutions do have an undergraduate computer competency requirement. This statistic is somewhat higher than the national average, where only 39% of institutions have a computer instruction/competency requirement (Source: *Campus Computing 1996*, Kenneth C. Green).

Computer Use Fee and Computer Ownership

The survey results show that computer use or technology fees are widespread in Oklahoma higher education, with 80% of institutions reporting they impose such charges. This is substantially higher than the national average, with just over half of public four-year and 36% of public two-year institutions charging a special computer use fee to students. The prevalence of this fee strategy in Oklahoma could reflect the constraints placed on institutions in more general purpose charges to students, such as tuition.

At the same time, only four of the 31 institutions in Oklahoma recommend computer ownership — even in specific disciplines. Two institutions recommend ownership for all students. Computer ownership increasingly is an important factor in the ability of students and faculty to utilize information resources found on the Internet as well as computer tutorials and other software applications used in instruction and research. According to the survey results, student computer ownership ranges from 2% at the low end to 50% of students with computers at the high end of Oklahoma institutions. Across the nation, 32% of students at all institutions own their own computers (Source: *Campus Computing 1996*, Kenneth C. Green).

Top Policy Issues for the Oklahoma System

One section of the survey was devoted to assessing institutional priorities for the present and future as well as policy issues facing the campus and the system. The survey results showed a surprising consensus across the campuses on the top issues: providing faculty support to use technology was rated first, followed by the clarification of goals and campus plans and then developing ongoing budget mechanisms to routinely replace aging equipment. Within each tier,

institutions expressed some specific priorities as part of their future plans. For example, the comprehensives were concerned about intellectual property and licensing issues, the two-years and higher education centers had a special interest in developing joint programs with the K-12 schools, and the technical branches and constituent agencies indicated that using technology-based commercial curriculum products was a priority.

Network Infrastructure and Utilization

An important objective in conducting the survey was to assess the current state of network infrastructure as well as student and faculty access to computing resources on each campus. According to the survey, nearly all institutions (28) have some form of Internet connection. The comprehensive tier reported 100% accessibility for students, faculty, staff, and administrators. Only two of the ten regional universities and two of the twelve two-year institutions reported complete Internet accessibility. With the rapid pace of development and the growth of OneNet use in the months since this survey was conducted, it is expected that Internet access and usage is increasing steadily.

When asked what percentage of institutionally owned computers, academic and administrative buildings, and dormrooms were linked in a campuswide network, responses varied by sector and within sectors. Regionals ranged from zero dormroom connections, 30% of computers connected, and 66% of campus buildings connected at one institution, to 100% connections for all three at another regional institution. Two-year institutions reported similar ranges of campus network connections. Comprehensives reported greater than 70% of dormrooms connected to a campus network, and greater than 90% of all computer workstations and buildings being connected. In addition, 15 of the 31 institutions offer dial-up access service

to the campuswide network with only one institution charging a service fee of $15.00.

The survey also contains estimates on the scope and nature of technology available to faculty in classrooms and on desktops. As of December 1996, there were 399 classrooms systemwide which could receive one-way video transmission and 86 which had handled two-way video (either compressed or full-motion). As for desktop equipment, the survey reports the total number of institutionally-owned computer work stations by sector and estimates of their age. The percentage of workstations estimated to be five years or older ranged from a low of 5% at some campuses to a high of 40% and 50% at others. The two comprehensive universities reported that about one of every five work stations was five years or older. Complete survey results are available from the Regents office.

Appendix B

**Oklahoma State Regents for Higher Education
Technology Planning Project
Best Practice Site Visits
Spring 1997**

1. University of Minnesota at Crookston — As part of an intense strategic planning process in the early 1990s, UM Crookston established a new vision to create self-directed learners via selected polytechnic associate and baccalaureate programs with priority given to the implementation of a technology strategy. In the fall of 1993, UMC initiated a strategy that provided all full-time students and faculty with notebook computers. Concurrently, a ubiquitous campus networking infrastructure was used to change the learning and academic culture of the campus. Prior to implementation, campuswide discussions formed the basis for decisions on financial models, hardware and software, policies concerning part-time students, warranty, security, faculty development, and expected learner outcomes in each course. Today, students and faculty are using the computers in powerful and sophisticated ways. Students have greater access to library and online resources, enhanced communication capabilities with faculty and other students, more opportunities for collaborative projects, and advanced skills for employment in the information age. As a result, an institution once threatened with closure now boasts thriving programs, growing enrollment, and a national reputation for innovation.

Location: Crookston, Minnesota
Date: March 19, 1997

2. Colorado Electronic Community College (CECC) — Created in 1995 as a 12th college within the Colorado community college system, CECC's purpose is to deliver the Associate of Arts and Associate of Science degrees to local and national audiences using telecommunications technology. In collaboration with Jones Intercable and other partners, CECC offers a full range of general education transferable curriculum using a variety of technologies including television, telephone, Internet, CD-ROM, and interactive video. CECC has also built a state-of-the-art production facility to train faculty and other interested public and private parties in the use of educational technology for enhanced learning. The newly opened facility, located at the Lowry Higher Education and Advanced Technology Training Center, provides opportunities for faculty to produce their own curriculum products, such as CD-ROM masters, video programs, and Internet curriculum for global audiences. The Lowry center also will house the academic development functions of the newly created Western Governors University. As a former air force base, Lowry offers many amenities including dormitories, dining and recreation facilities, and classrooms with extraordinary capacity for implementing the latest technological advances.

Location: Denver, Colorado
Date: April 7, 1997

3. Virginia Polytechnic Institute and State University — Blacksburg, Virginia has been described as "the most wired town in America" due to an experimental alliance involving the town, Virginia Tech, and Bell Atlantic, which put 40% of the population on the Internet, and gave 62% access to electronic mail. It is no accident that this occurred in a town with a technologically sophisticated higher education institution. Within a large, overarching technology initiative, Virginia Tech launched several complementary programs intended to redefine the dynamics and economics of all aspects of the university. The four programs within the initiative are: the Course Transformation Project (faculty development through Cyberschool), the Advanced Computing Project (research in high-tech programs), the Statewide Broadband Network Project(distance learning), and the Information Support System Project (electronic student services). Substantial university resources have been reallocated to begin each of the four transforming programs, demonstrating this institution's resolve to become a model for the land grant university of the 21st century.

Location: Blacksburg, Virginia
Date: April 23, 1997

Appendix C

Report of the Student Advisory Board

Student Advisory Board Response
to the
Chancellor's Technology Charge to Students

Response to Question 1 --Access to Computing Resources.

Oklahoma students advocate the following minimum standards on each college campus.

1.   Every college/university student should have access to the Internet
        and an e-mail account.
        ″

″

2.   Faculty and students should have access to the same technology.
        ″

″

3.   At least one 24 hour computer lab should be available to all students.
        ″

″

4.   Computer Availability:
        ″

        A.   No more than 35 students per computer.
        B.   Minimum level of free printing for all students**.**

5.   Students should have reasonable ease with off-site dial-up with ppp access.
        (Students understand that costs are too prohibitive for institutions to adhere to
        industry standards on the number of modems per users.)

Required use of notebook computers in order to enhance access:

        A.   Oklahoma college/university students would benefit from use of a notebook
                computer. Students believe, however, that the decision to implement such a
                policy should be determined on an institutional basis. After studying models
                used by a handful of institutions already requiring mandatory notebook
                computers, we suggest that the need for standardization on a campus is important
                and that students would benefit most from a lease-to-purchase option. We
                reiterate that this decision is best made on a campus level.

B. Required notebook computers will only be successful if faculty are adequately trained to fully implement the notebook computer into the classroom and curriculum. We should not embark upon a required notebook policy until faculty are adequately trained.

Technology Fees:

Oklahoma students are generally willing to pay increased fees for technology services if they see immediate improvements and have immediate access to the technology.

Response to Question 2 -- Technology literacy, classroom experience.
″

″

Oklahoma students believe there should be a major emphasis on technology literacy. Students suggest at least a one hour required technology course implemented on every campus. This course should be targeted to all new students.

Institutions should provide all faculty formal training in the application of software used by the institutions. Faculty should also be trained to fully utilize software (such as Power Point) in order to enhance classroom presentations.

Institutions should create incentive programs to encourage faculty to include technology/software into their curriculum.

If institutions move to a notebook computer environment faculty must integrate its application into their individual curriculum.

Students should be encouraged to work with faculty in developing ways to implement technology in the classroom - for example, web pages, Power point presentations, chat room discussions, etc.

Response to Question 3 -- Using technology to improve time-to-degree.

Institutions can enhance academic options and improve time-to-degree through the development and expanded use of "distance learning" with the creation of on-line and Internet courses, telecourses, and interactive classrooms. Colleges and universities should prominently list courses offered through technology in the class schedule and catalog.

The enhanced use of technology in Student Services will also assist students in completing

degrees in a timely fashion. Oklahoma higher education should fully expand the kiosk concept currently utilized by the Greater Oklahoma City Higher Education Consortium. All institutions should have kiosks or on-line information systems available for students to check grades, enroll, apply for financial aid, and review business office accounts. This technology is currently available and should be implemented immediately.

Institutions should be fully utilizing programs such as Discover and Sigi Plus to facilitate the advisement and enrollment processes. These software packages help students gain an understanding of their academic career path. These exercises will allow students, hopefully as freshmen, to more accurately select a major without having to change it several times prior to graduation.

Appendix D

Report of the Faculty Advisory Committee

RESPONSE TO THE
TELECOMMUNICATIONS CHARGE

Faculty Advisory Committee
May 1997

In February 1997, the Faculty Advisory Committee to the State Regents was issued a charge to provide advice and counsel on four issues relating to technology: (1) Faculty development, (2) Student competencies, (3) Quality of technology-based instruction, and (4) Cooperative course and program development. The advice and counsel will be used by the State Regents and Dr. Jim Mingle of the State Higher Education Executive Officers Association, who is working with the State Regents to determine ways to increase utilization of OneNet and state information technology resources. Several members of the Faculty Advisory Committee had the opportunity to participate in best practice site visits scheduled by Dr. Mingle to acquaint State Regents' advisory committees and institutional personnel with innovative technology practices in higher education in other states. Faculty Senates at several institutions also responded to Chairman Tom Boyd's letter asking faculty organizations for input.

Before we address the specific charges, the Faculty Advisory Committee offers the following caveats and concerns:

• AVOID UNREALISTIC EXPECTATIONS OF TECHNOLOGY. Both the advantages and disadvantages of technology-based instruction must be evaluated, lest unrealistic perceptions about technology-based education develop. Technology is a tool to be used by the educator to enhance and expand educational strategies. Although some expectations of increased efficiency may be merited, others are unrealistic and may give the erroneous impression that technology is the solution to all our problems. At the same time, technology has great potential for resolving a variety of educational issues.

• RECOGNIZE THAT TECHNOLOGY WILL EXPAND ACCESS AND OPTIONS FOR STUDENTS BUT NOT SUPPLANT THE TRADITIONAL CLASSROOM. Plans to develop technology-based instructional activities must emphasize that these technologies are not designed to replace traditional classroom-based instruction. Rather, technology will expand the educational market by increasing the capacity of the system to accommodate learners who are barred from traditional educational opportunities by economic restraints, geographical limitations, family commitments and other social and personal constraints. Just as television did not eliminate radio, distance education and other permutations of educational technology will not eliminate traditional higher education. It will, hopefully, improve that tradition and create new traditions and niches as varied as learners themselves.

- UNDERSTAND THE RELATIONSHIPS BETWEEN TRADITIONAL AND ELECTRONIC CLASSROOMS. We are uncertain about the ultimate effect of technology on students. On the one hand, the increased computer interactivity can lead toward increased participation. Students who will not speak up and contribute in front of the classroom may be more likely to ask questions in class through computer exchanges. Students may be more likely to seek professorial help via electronic mail. On the other hand, the increased computer interactions may come at the loss of personal face-to-face interaction. Students may participate in class activities from their homes, dorm rooms, and offices. Some portion of the classroom dynamic may be lost. This may contribute to the growing problem of social isolation. The same dilemma occurs on the issue of quality. Student learning may be enriched by access to additional resources and increased interactivity between student and professor. On the other hand, the more personal kinds of encouragement and counseling provided by faculty may be casualties in the shift to technology interaction.

  There is another issue which relates to knowledge dissemination. Each professor views things uniquely and thus presents his/her material or course in different ways. If one professor teaches a statewide course via telecommunications, these varying points of view and insight could be replaced with a homogenous "party line." Such a pattern is susceptible to social and political catastrophe. On the other hand, access to many points of knowledge over Internet and technology-based "team teaching" may ensure the desired diversity.

  Technology-based learning, like any learning, will be most effective when tailored to the student. Some students may need the motivation of the traditional classroom setting. For others, asynchronous learning may be effective. For still others, ITV learning may prove to be ideal. Still many students will seek the discipline, pace, and refuge of the traditional classroom environment.

- PROVIDE THE PUBLIC WITH A RATIONALE. The higher education community should be *proactive* in explaining why technology dollars are being requested and the benefits that will accrue to Oklahoma. The outlay of funds should be viewed more as an investment in the improvement of the state's human capital than a mere expenditure of limited state dollars for the latest technology. The initial and continuing outlay of funds for this purpose will be surpassed by the future benefits to be returned from faculty and students becoming better prepared to compete in the world market place.

FACULTY DEVELOPMENT

1.	Faculty Development. Nearly every institution in Oklahoma is struggling to keep up with demands for technical support for both distance learning and on-campus applications of technology. At the same time, there is a growing demand among faculty for assistance in instructional design using some of the new media available. What is the nature of the training and support that is needed by faculty? Are there opportunities for us to act jointly as a system in this area?

The nature of the instruction needed by faculty includes training in instructional design, experience with various hardware and software, exposure to creative applications of technology in other educational

venues, access to experts, and the *time* needed to develop personal skills.

Several principles underlie our recommendations, all of which are based on the assumption that the tools of technology are valuable only if they support and are integrated into educational curriculum.
SOME BASIC PRINCIPLES AND OBSERVATIONS:

- If state-of-the-art use of technology within curricula is to be a realistic goal, then faculty must have ready and easy access to state-of-the-art equipment. This equipment and software must be kept current and in good working order. Technical assistance must be readily available on an on-call basis.

- Faculty must be offered appropriate and timely training as needed in order for technology to be meaningfully integrated as part of instructional strategy. Recognition should be given to the fact that it takes time to dramatically change one's approach to teaching. Faculty should be given incentives to invest such time.

- Innovations of technology provide opportunities for educators to explore alternate methods of instruction. Such exploration and change do not come with a guarantee of success. Therefore, support should be offered to faculty who are willing and able to engage in the risk taking that the exploration involves.

- It is important to recognize that there can be no substitute for a committed, energetic, and knowledgeable "in-the-flesh" teacher. Such a person, using no technology, still offers superior instruction compared to someone adept at using the tools of technology, but who lacks concern for students, subject matter expertise, and integrity of education. Technology's educational power depends entirely on how it is used.

- Investment in faculty technology should make all reasonable efforts to obtain second and third generation benefits from funds expended. Training should not be merely for a few selected individuals under idyllic conditions. Faculty receiving training should return to their assigned duties with an obligation to share the benefits of their experiences with their peers. On the other hand, some efforts should be developed involving those faculty who are the most advanced in the utilization of modern technology so that breakthroughs in technology-based teaching can be developed, disseminated, and favorably employed on a larger scale throughout the state.

RECOMMENDATIONS:

Based on the above assumptions and principles, the Faculty Advisory Committee recommends the following for State Regents' and/or institutional action:

1. PROVIDE INCENTIVE FUNDS. To provide the kind of technology training described above, the State Regents should act jointly with institutions to provide incentive funds to faculty willing to develop proposals to incorporate technology into existing courses and new courses. State Regents and institutions should provide funding or other budgetary incentives for such initiatives as summer workshops, technology sabbaticals, technology round tables, and campus user groups.. Funding should be provided to establish a technology research and development center and to award fellowships for faculty involvement. Grants could give full-time faculty release time to mentor and assist faculty colleagues in incorporating technology into their instruction.

2. PROVIDE GRANTS FOR COLLABORATION. The State Regents should provide grants for distance education projects that include collaboration among institutions (both public and private and in-state and out-of-state). Funds for collaboration and development can be used to release faculty from current responsibilities, providing the time necessary to learn and apply these technologies. In addition, funds could also be used to send faculty to national and international conferences which emphasize the use of technology in education, thereby providing connections with innovations in other states.

3. RECRUIT TECHNOLOGY EXPERTISE IN NEW FACULTY. Exposure to creative use of technologies can be increased by emphasizing the use of technology in teaching during the recruitment of newly-hired faculty. Bringing in faculty with previous experience or specialized education can act as a stimulus to existing faculty and forge partnerships for the development of new technology-based instruction.

4. INCORPORATE TECHNOLOGY INTO CRITERIA FOR TENURE, PROMOTION, AND PERFORMANCE EVALUATION DECISIONS. Institutional units charged with developing performance criteria should be encouraged to increase the value placed on designing technology-based instruction. Faculty may well hesitate to take the risks required to successfully implement new technologies. Funding grant proposals on the use of technology will help to integrate current evaluation criteria with technology goals, but institutional commitment is also necessary.

5. EXPAND EXISTING INSTRUCTIONAL DESIGN DEPARTMENTS. The State Regents and institutions should provide the funding to expand existing design departments in order to coordinate a program to increase faculty appreciation of new techniques. If such a department does not exist within the institution, a group of professional instructional designers should be hired to serve as coordinators and consultants that can advise faculty on developments in multi-media, equipment, and software that might stimulate change. Another method might be to establish a research and development center staffed by faculty with funded fellowships to assist others in analysis and use of technologies (including grant writing for federal or other funds for research in this area). This "center" could be a network of individuals linked by technology, rather than a physical space.

6. ESTABLISH A TECHNICAL STAFF FOR ONENET to ensure that OneNet works at all send and receive sites so that faculty do not have to be technicians as well as professors.

7. ASSURE THAT ALL SEND AND RECEIVE SITES HAVE COMPATIBLE EQUIPMENT (e.g., phone, fax, e-mail, testing machines)

8. IMPLEMENT A TECHNOLOGY REPLACEMENT PROGRAM. Provide all the institutions with sufficient funds for a technology replacement program in which computers are routinely replaced or upgraded every two to four years, as appropriate. Provide student employment funds for staffing computer labs with upper-level students who can serve as mentors and assist entering and lower-level students in developing competencies. Provide funds for staffing labs with well-trained supervisors to keep things running and current.

9. CUSTOMIZE FACULTY TRAINING. Many of the current training sessions are scheduled in the 8 a.m.-12 and 1-5 p.m. time blocks that are not conducive to faculty teaching schedules. We suggest that the technology training sessions be conducted on an as-needed basis. Because the trend is toward "just-in-time" learning, so too should the faculty technology training follow this

model. Faculty training needs to be customized according to the individual's level of expertise.

10.   OFFER A MASTER TEACHER OR BEST PRACTICE SHARING SESSION VIA ONENET.
       Such a session could be offered every one to two weeks via OneNet. The transmission might
       feature the best use of a document camera in the or best practices on involving students at remote
       sites in various teaching and learning formats.

11.   OFFER A STATE REGENTS' STATEWIDE COMPETITIVE AWARD FOR MOST
       EFFECTIVE INNOVATION IN USES OF INSTRUCTIONAL TECHNIQUES. This would be
       a statewide competitive award for the most effective innovation in the uses of instructional
       technologies.

QUALITY OF TECHNOLOGY-BASED INSTRUCTION

2.   Quality of technology-based instruction: While Oklahoma institutions have a long history of distance learning, the range and scope of this activity is expanding rapidly. This provides tremendous new opportunities, but perils as well. We want to be known, not only for expansiveness of our activities, but their quality as well. What constitutes "best practice" in distance learning? What essential academic and technical support is needed at both the send and receive locations? What criteria should we use at both the institutional and state level to judge quality in technology-based instructional delivery? (e.g., should our academic and professional programs be judged against technology standards found in the fields in which our graduates will work?)

The issue of "best practice" in distance learning is being addressed by the American Council on
Education (ACE) and the Western Interstate Commission for Higher Education (WICHE). These
recommendations and the results of other research in the field should be relied on for statements of "best
practice" in distance learning. The Faculty Advisory Committee also suggests that the recommendations
of the Council on Instruction be used in determining the needs at both the send and receive locations for
distance learning.

Judging the excellence of these programs should be the responsibility of the current accrediting agencies
using the same criteria applied now to classroom programs. Distance format and the use of technology
does not change the current accrediting and licensing agencies capacities or qualifications to assess
quality.

RECOMMENDATIONS

1.   ADOPT QUALITY CRITERIA FOR SEND AND RECEIVE LOCATIONS. The Faculty
       Advisory Committee endorses quality criteria developed by the Council on Instruction for send
       and receive locations. State Regents' adoption of the criteria is recommended.

2.   INCORPORATE RESULTS OF ACCREDITATION REVIEW AND ASSESSMENT
        PROGRAMS TO ENSURE QUALITY. Institutions and State Regents should rely on
        accreditation review and assessment programs to ensure the quality of courses and programs with
        technological components.   While the same criteria used for traditional classes should be used
        for technology-based instruction, additional criteria should be included to evaluate the
        technology portion of the system as well as the technological expertise of the faculty member.

3.   USE BEST PRACTICE DISTANCE EDUCATION MODELS IDENTIFIED BY ACE AND
        WICHE AS MODELS FOR OKLAHOMA DISTANCE LEARNING.

4.   INCORPORATE TECHNOLOGY COMPONENT IN PROGRAM REVIEW. The Faculty
        Advisory Committee supports proposed changes in the State Regents' program review policy
        relating to technology.

STUDENT COMPETENCIES

---

3.   Student Competencies: There are two interrelated issues here: (1) What is the value of our
        current "computer literacy" requirements? Should they be altered or abandoned? (2) To what
        degree should we be developing competency-based curricula that can be used in
        asynchronous, self-paced modes of delivery? In what ways can the Oklahoma State Regents
        support initiatives in the area of student competencies?

In terms of the technology preparation of students entering state colleges, State Regents' policy requires
that students take 15 units of specified high school courses in order to be eligible for admission to
Oklahoma public colleges and universities. Computer science is one of several courses that can be taken
to satisfy up to 3 units of the requirement. Given the current rise in computer literacy at the secondary
level, these capacities should be made entry level requirements.

In terms of the technology preparation of Oklahoma college graduates, there is no statewide or
institutional policy that stipulates computer literacy requirements. Although the professions greatly
influence the curricula in terms of technology competencies for graduates of a particular program, it is
recognized that all graduates must be technologically proficient to succeed in today's world and
workplace environments. It should be cautioned, however, that there has never been a generally agreed
upon, acceptable definition of "computer literacy." Different schools, and even different departments
within schools, define "computer literacy" in diverse ways and note its accomplishment in varying ways.
 Some consider the student "literate" by administering a standard or self-made competency test. Some
ask the student whether he/she is literate and accept their self-defined "yes" or "no" response. Some
require passing an introductory computer course. Some require use of a word processor, and some
require completion of a programming class. A common sense approach to the problem would involve
advisors encouraging students to assess and develop their competencies in view of career requirements.

Regarding the competency-based curricula effort, we must proceed but proceed with caution. While
competency-based curricula could serve effectively in a number of disciplines, its use across all academic
areas should be carefully studied. Self-paced modes of delivery should be used to *supplement* and not
supplant present methods of instruction. Although the notion of having a competency-based, self-paced
system of delivery for the State System sounds promising for many of the nontraditional learners who

access our institutions, it falls short of being a panacea. It poses several questions that must be resolved. Included are: (1) How long should students be given to complete a specified competency? Will the present semester structure have to be changed to accommodate students who do not complete assignments by the end of the grading period? (2) Who determines competencies to be demonstrated? (3) How will academic honesty and integrity be assured? (4) How will faculty and students be trained to carry out the tasks required of this mode of delivery? Who will do the training? (5) Who will be responsible for the management of information delivered and received through the System?

There are several philosophical issues related to this delivery. The degree to which it should be utilized depends on the subject and level of the material involved. Some may lend itself well to this mode. However, more advanced concepts often require reflection, evaluation, and examination; and these do not lend themselves well to this mode. Self-paced instruction often falls prey to time management problems, a situation made worse without structure, defined goals, and dates of accomplishment. Furthermore, there are unresolved issues concerning the academic integrity of this type of education and the potential homogeneity of the learning engendered.

The degree to which competency-based curricula should be developed depends on the demand and the capacity of such offerings to fill current and future needs. A needs assessment which looks at consumer demand (both student and employer needs), subject appropriateness, and other criteria found in research on the issue should be conducted.

Once the need for such programming is clearly identified, the Regents can provide support through grant funds that are awarded for development of this type of material in the areas designated by the needs assessment as important.

RECOMMENDATIONS

1.   STRENGTHEN TECHNOLOGY REQUIREMENT FOR COLLEGE ENTRY. Computer literacy should be required for college entry, and the computer science courses in high school should be mandatory and not optional as is currently the case. (Like the other core curriculum requirements, this would apply to students directly out of high school.)

2.   STRENGTHEN TECHNOLOGY PROFICIENCY OF COLLEGE GRADUATES. Institutions should review and strengthen program technology requirements. The State Regents and institutions should work collaboratively to implement, as appropriate to an institution's mission, technology requirements for graduation.

3.   CONDUCT A SURVEY to determine the need and appropriateness for competency-based curricula.

4.   PROVIDE GRANT FUNDS for faculty development of competency based curricula in areas identified by a needs assessment. Provide financial incentives to faculty who develop academically sound competency-based courses with evaluation tools that preserve academic integrity and diversity.

COOPERATIVE COURSE AND PROGRAM DEVELOPMENT

> 4. Cooperative Course and Program Development. For the most part, traditional academic programs have developed in isolation from each other. Both the competitive environment and scarce resources suggest that we should look for ways to encourage cooperative programs. And now our technological infrastructure greatly expands the ease and quality of this collaboration. How can the Regents best foster this collaborative work in the future?

Given the increasing technological capability to deliver education, coupled with the increasing cost of higher education in general, it is imperative that greater cooperation be reached in the development and delivery of courses and programs. Moreover, the new capabilities make it possible to take interdisciplinary learning, at least in some areas, to an entirely new level. Space and distance in such cases, become less a barrier to the range of cooperation that might be entertained. Faculty should be viewed more as a resource of the entire state and less as a resource of an individual institution or discipline.

Granting this, however, certain critical qualifications must be taken into account in planning cooperative approaches to education. Considerations which underlie the recommendations listed below include:

• While minimizing cost is one goal, there are unavoidable costs to quality education. The committee believes that cutting cost should not be the primary motivation for increasing cooperative programs and courses. The *quality* of the learning must be the decisive impetus for cooperative efforts.

• Cooperation should not be aimed at the elimination of programs, but to their enhanced effectiveness.

• The guiding principle in cooperation is *synergism* and the improvement of articulation agreements; that is, cooperation should help to enforce such agreements.

• Distance learning and other forms of the cooperative use of technology should *supplement*, not *supplant* traditional forms of learning.

• The kind of cooperation needed is collaboration that expands and diversifies the options available to students.

• Cooperation must include the preservation of key elements of programs that currently work, and cooperation must not threaten such programs.

• An important element in any collaborative effort, will be a sense of participation in the process. Especially in a state like Oklahoma, where there is considerable pride in the accomplishments of our local institutions, it is essential that cooperative efforts avoid making the smaller schools mere satellites.

RECOMMENDATIONS

1. CONDUCT A NEEDS ASSESSMENT. The State Regents should conduct a needs assessment

to determine the areas in highest demand. Careful examination of academic programs needs to be made to determine the appropriate kinds of cooperation best suited to varying academic needs.

2.	PROVIDE GRANT FUNDS/INCENTIVES. Once a needs assessment is completed, the State Regents should make grant funds available to faculty for developing cooperative courses and programs in the identified areas. Institutions should provide matching funds, release time or other incentives to demonstrate institutional commitment. Funding should be provided to establish or strengthen instructional design teams.

3.	UNDERTAKE COOPERATIVE PROGRAMS. Four-year institutions should work with two-year institutions to develop programs for associate degree graduates who are unable financially or geographically to pursue a bachelor's degree. Institutions should also cooperate on offerings targeted at students who are concurrently enrolled at several colleges and universities. Cooperative delivery of programs involving colleges and secondary schools, public and private institutions, and academic and non-academic institutions should also be considered. Cooperative efforts should be evaluated by criteria beyond cost effectiveness such as improved student retention and enhanced quality of learning.

4.	CONDUCT PILOT PROJECTS. A pilot project should focus on courses in which both efficiency and quality can be best enhanced. The project should provide another option so that students have a choice between traditional and cooperative technology delivery. Evaluation of the pilot's success should include a comparison of student performance and satisfaction in the traditional and pilot approach.

5.	DEVELOP A STATEWIDE WEB ONENET LIABILITY POLICY. Such a policy is needed to guide and protect institutions and academic courses and programs.

6.	SECURE STATEWIDE LICENSES. The State Regents should establish procedures and funding for securing a site licensing of software by cooperative bodies. There is a need for an individual, an organization, or a campus to be identified and franchised to do this cooperative work. The State Regents may wish to establish grants for individuals or entities interested in coordinating a particular effort. Alternatively, the State Regents should provide staff or a "site licensing office" to facilitate consortium efforts.

FACULTY ADVISORY COMMITTEE

1997

Tom Boyd, University of Oklahoma (Chairman)
Pat Weaver-Meyer, University of Oklahoma*

Jim Trapp, Oklahoma State University

Stephen Law, University of Central Oklahoma

Yvonne Montgomery, Langston University

Martha George, Oklahoma City Community College

Bob Willis, Rogers University - Claremore Campus

Sherry Sexton, Oklahoma City University

ASSISTED BY:

William Wallo, University of Central Oklahoma
Randy Killbourne, Northwestern Oklahoma State University
Wayne Stewart, Northwestern Oklahoma State University
Bart Binning, University of Central Oklahoma
Oklahoma Faculty Senates

*   Assumed Tom Boyd's position on May 1 but participated in formulating the telecommunications response.

Appendix E

Report of the Library Advisory Group

REPORT AND RECOMMENDATIONS OF THE REGENTS' LIBRARY ADVISORY GROUP

Bela Foltin, Northeastern State University
Edward R. Johnson, Oklahoma State University, Chair
Beverly Jones, Southwestern State University
Janet Minnerath, OU Health Science Center, Tulsa
Phil Moss, Oklahoma State Regents for Higher Education
Robert Patterson, University of Tulsa
Mike Rusk, Tulsa Community College
Sharon Saulmon, Rose State College
Wilbur Stolt. University of Oklahoma
Robert Swisher, OU School of Library & Information Science
Clinton M. Thompson, OU Health Science Center, OKC

May 7, 1997

INTRODUCTION

The volume of information produced and published is increasing and libraries are challenged to provide access to information in new and traditional formats. As libraries plan for technological enhancements, more traditional formats including, paper and microforms will continue to be produced and much of it will not be available as   electronic databases. Academic libraries will be challenged in the future to collect, store, and access information in the most efficient and effective for-mats. Any vision of libraries must recognize the diversity of formats and the need to support acquisition of information resources in different formats.

Oklahoma has a broad base of state-supported college and university libraries. Cooperation among these libraries and with other academic and public libraries in the   state has been enhanced by the formation of the *Oklahoma Library Technology Network (OLTN)* and the *Oklahoma Research and Community Library Network (ORACL).* These two successful efforts at providing database access, group purchasing discounts, and computer connectivity have provided the impetus for further and more extensive cooperation and resource sharing in the future.

Some Oklahoma academic libraries are well equipped technologically to cooperate in library networks, while other institutions have relatively little automation. It is the   current implementation of ONENET across the state that has made feasible a **STATEWIDE ACADEMIC LIBRARY NETWORK** with a goal of equal access to up-to-date information technology and resources for students at all of Oklahoma's colleges and universities.

Utilizing ONENET as the technological infrastructure, Oklahoma's academic libraries   will combine into a more extensive information system. A **VIRTUAL LIBRARY** will   be developed through new systems and partnering to support gateways not only to other library collections but to information resources around the state, nation and world.

The growth of the Internet and its application in Oklahoma academic libraries has increased tremendously in recent years. As information technology has become more widespread it has also become clear that the users of this technology, students and faculty alike, require extensive training and education in its use. Academic libraries are assuming leadership roles on many campuses in this training effort as they are particularly well-positioned to provide in-depth service and teach those needing formal skills in use of the new information infrastructure. This teaching role of librarians and support staff will undoubtedly continue to expand in the future.

RECOMMENDATIONS

1. **That the Oklahoma State Regents for Higher Education build upon the efforts   of ORACL and OLTN by assisting the academic libraries of the state in implementing their vision of a statewide virtual library through further development of a statewide academic library network.**

   - all academic libraries in Oklahoma must be fully converted to the national Machine Readable Cataloging (MARC) standard. A few libraries statewide still lack full conversion to this standard which is a basic requirement in networking.   At present roughly 250,000 bibliographic records remain to be converted.

- academic libraries in Oklahoma must replace their card catalogs with state-of-the-art online public access catalogs with full Internet and telecommunications capabilities in order to take advantage of modem technology. There are still a few academic libraries in the state, however, that have not yet implemented such a fundamental and necessary change or which are operating outmoded systems.

- all academic libraries must have full access to ONENET on their individual campuses so that library resources may be shared and computer linkages established or enhanced.

- with the drastic reduction in purchasing power being experienced it is imperative that all academic libraries participate in cooperative collection development and materials sharing projects in addition to sharing electronic resources. Many other states (such as Ohio's *OhioLink, Texas' TexShare,* and Georgia's *Project Galileo)* have shown the benefits of such cooperation and Oklahoma should follow their example.

2. **That the Oklahoma State Regents for Higher Education provide support for access to shared and centralized full text databases for all academic libraries through the network.**

   - enhanced partnerships are desirable between Oklahoma academic. public, and specialized libraries to provide as wide access as possible to electronic full text databases and to the core journals required to support undergraduate instruction. Building upon the current capability of OLTN and expanding such partnerships among Libraries will further realize substantial cost savings through joint purchase of multi-site licenses.

3. **That the Oklahoma Council of Academic Library Directors (OCALD) be formally established as a council by the OSRHE and given a mission to represent the needs of academic libraries to the State Regents.**

   - a standing committee or group should be created to provide consultative oversight to the management and operational functioning of the library network.

   - academic libraries should have representation on the ONENET governing board to provide advice and enhance communication regarding statewide networking concerns.

   - OSRHE should charge OCALD with identifying statewide library priorities and developing goals and objectives for improved services to students and faculty and further interlibrary cooperation such as enhanced interlibrary loan, a statewide courier system for the rapid delivery of library materials, expanded borrowing privileges, a central materials storage facility, and development of additional resource-sharing protocols.

4. **That the importance of the library's role in instructional support and research across the curriculum, regardless of medium, be recognized as an integral part of all academic programs**.

- academic libraries need to respond to the Council of Instruction recommendation that library support be provided for all faculty and students across the state regardless of location.

- academic libraries should be held to a standard of active support for distance learning and ONENET is only one way to facilitate statewide cooperative instructional activity among libraries both public and private.

- adequacy of library resources to support new instructional programs, whether campus-based or distance learning-based, should be critically assessed before   such programs are approved by OSRHE.

 OSRHE should continue to encourage all academic institutions in the state to provide adequate funding for the library.

Appendix F

Report of the Council on Student Affairs

May 13, 1997

Dr. Hans Brisch, Chancellor
Oklahoma State Regents for Higher Education
500 Education Building
State Capitol Complex
Oklahoma City, Oklahoma 73105

Dear Chancellor Brisch:

> Re: Chancellor's Charge to the Council on
> Student Affairs

The Council on Student Affairs (COSA) is pleased to provide a response to your charge delivered by Dr. James R. Mingle at the February 1997 meeting of the Council. More specifically, the Council wishes to thank you for allowing us an opportunity to help you and the State Regents   as you endeavor to develop an overarching vision statement for the use of technology to advance institutional missions and goals, as well as statewide priorities.

The Council on Student Affairs recognizes that with the growth of computer networks and   related digital technologies, the potential for expanded electronic access to information and services has grown considerably. We believe that Oklahoma institutions should be moving steadily toward a time when any student with access to a computer, kiosk, or telephone can enroll, register, and receive a variety of other services electronically. We also foresee in the near future an opportunity for many of the following goals to be accomplished in Oklahoma.

- Widespread use of the World Wide Web by high school students and adults for applying to college and paying their application fee.

- Electronic registration, through both telephone and web-based applications on computing networks.

- Students self-help software tools for academic and financial aid planning that will improve their retention and "time to degree."

- Job posting and other career planning tools available through computer networks.

- Electronic transfer of funds between students and the institution for payment of tuition, fees, and credit of financial aid grants; and student access to transcript ordering, grade reports, and other services.

- Comprehensive information available through computer networks on faculty syllabi exams, schedules, reading list, and other essential academic information.

- A much higher level of service among student services personnel through "functional cross training" so that students and parents get all or most of their questions answered through single inquiries.

- Staff freedom from clerical tasks so that they can provide the personal attention that many students need.

In some cases, the above mentioned services are already available or are in the planning stage on our college and university campuses. As well, some of the services cited above are also detailed in the pages that follow. But realization of the full vision will take a concerted effort on the part of both State System institutions and the State Regents. Electronic student services also will be essential if Oklahoma institutions are to expand their distance learning offerings in meaningful and comprehensive ways.

Principle recommendations proposed by the Council on Student Affairs:

Question: How can we effectively support and disseminate the work of such pilot initiatives as the Oklahoma Kiosk project? How can we support institutions in their own efforts to re-engineer their student services operations?

RECOMMENDATION: Add a home page and "list serve" to accommodate sharing of information on the various pilot projects (consortium, alliance, kiosk) to the Oklahoma State Regents for Higher Education web site.

RATIONALE: You cannot build support for a major technology "revolution' without timely and accurate communication. We must use every available resource, including technology, to communicate throughout the state on technological initiatives that are in place or underway.

RECOMMENDATION: Make grant funds available for student services' re-engineering initiatives.

RATIONALE: Using the Quality Initiative Grant as a model (or matching grants), the State Regents could encourage the implementation of innovative and creative uses of technology to better serve students. There are initiatives that could easily be incorporated into existing processes which are relatively inexpensive but require fiscal support unavailable at the individual campuses. State Regents funding for "pilot" projects, particularly those which could have systemwide implications, would demonstrate a commitment to innovation and provide statewide leadership.

RECOMMENDATION: Provide opportunities (i.e., staff development) for student affairs practitioners to become knowledgeable of the delivery of "electronic student services' and the implications for their unique college/university.

RATIONALE: In order for practitioners to support and to fully integrate the use of technology into the delivery of student services, they must become aware of its potential as a way to meet increased student demands and public expectations while streamlining processes and increasing efficiency.

RECOMMENDATION: Encourage the use of compatible communication systems among colleges and universities in the State System.

RATIONALE: If college personnel and students are going to effectively communicate electronically they need to know how to communicate across protocols and to use common computer applications. It is not essential to standardize the communication systems, but they must be compatible.

RECOMMENDATION: Continue to encourage innovative programs that promote the integration and linkage of information and services.

RATIONALE: In keeping with the spirit of enhancing course credit transferability and improving time-to-degree completion, students need to be able to review their academic records. A standardized format for degree plans and for degree audits will assist students with their academic planning.

RECOMMENDATION: Encourage consensus among State System institutions about what electronic applications/services will be universally available so that there can be a "standard of access" for all current and prospective students.

RATIONALE: Parents and students need to know what postsecondary education choices and financial support options are available in Oklahoma. It is imperative that those with limited access to professional guidance counselors, such as those in rural areas, or in home schools, have accurate and timely information for informed decision making. Through technology, traditional college students will have enhanced access to services which should increase retention. Nontraditional as well as distance learning students will expect services to be available at their convenience. The use of technology is the only way to meet public expectations for accountability and to increase services to students without significantly increasing personnel costs.

RECOMMENDATION: Initiate a form of 'Malcolm Baldridge' award for best practices in student services.

RATIONALE: To encourage innovation, we must celebrate and publicize the success of early risk takers and visionaries.

Question: **What policy issues need to be addressed to ease the flow and transition of students across institutions as the number of students taking courses from multiple institutions in Oklahoma grows with the use of distance learning? (e.g., admissions policies, calendars, residency, transfer, financial aid policies, etc.)**

POLICY ISSUES FOR CONSMERATION:

- Encourage the development of common applications, complementary institution start dates, and a common enrollment form.

- Create a method by which distance learners could be admitted to multiple institutions simultaneously through a common admissions application.

- Encourage the U.S. Department of Education to recognize distance learning as a legitimate means to secure financial aid. (Current federal financial aid is determined either on "in-class seat time" or "clock hours"; distance learning has not been evaluated for financial aid eligibility.)

- Establish a method by which individual institutions can query a statewide student database to determine student information such as enrollment status, concurrent enrollments, financial aid awards, student disciplinary status, academic standing, previous institutions attended, and other matters important to malting decisions in the best interest of the State System.

Question: What partnering and collaborative relationships will facilitate a more "customer centered" system of higher education in Oklahoma? (e.g., service centers for multiple campuses, brokering centers, K-12, vendors, etc.)

- The State Regents should encourage and facilitate the use of proprietary software that   enhances a statewide student centered approach to services.

- The statewide use of SPEEDE (the electronic transfer of student academic histories) and the National Student Loan Clearinghouse Service are just two examples of currently available software that could radically improve transfer issues and help track financial and loan recipients.

- The State Regents could be the single source for the development of an inventory or common catalog of all distance learning opportunities available through colleges and universities in the State System.

- Student affairs officers may be asked to consider opportunities for partnering certain student services, especially where economies of scale may be realized, and particularly   among smaller institutions, i.e., career placement services.

On behalf of my colleagues, the opportunity to respond to your three questions was most appreciated and we look forward to working with you as the opportunity presents itself.

Sincerely,

Paulette Woods
Vice President for Student Affairs
And Chair, Council on Student Affairs

xc: COSA members
    Dr. Kermit McMurry