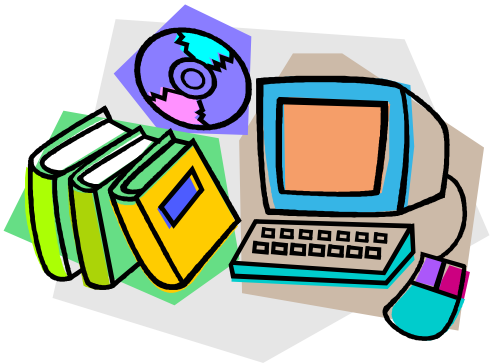
Alabama State University
College of Education



Strategic Technology Plan

October 2003

Alabama State University College of Education Technology Plan

The Alabama State University technology vision statement is as follows

The technological vision at ASU is to provide all candidates with hands-on experience using current state-of-the-art technology which they may encounter in the workplace and to equip them with skills and confidence to use existing technology and to adapt quickly and effectively to technological change. It also aims to make available to faculty and staff the necessary technological resources necessary to provide these learning experiences, further research, and to enhance the University environment. (Chapter 7 page 1, SACS Report, 1999)

The College of Education's (COE) vision statement for technology

The COE will provide state-of-the art technology to meet its teaching, research, service mission and develop educators as decision makers who are life long learners, change agents, and reflective practitioners.

The Technology Mission statement of the College of Education

The COE will incorporate technology into the educational process, which will ensure the development of ASU graduates as effective Decision Makers by

1. Providing the technology tools necessary to implement the technology mission, goals, and objectives of the College of Education.
2. Providing electronic access to information sources for faculty, candidates and staff to assist in their research, teaching and service.
3. Providing the comprehensive training and support to enable faculty and candidates to meet the mandates of the Alabama State Department of Education as well as NCATE and other national and international standards.
4. Supporting the integration of technology into the teaching/learning environment.
5. Fostering creativity and competence that will promote self esteem and diversity.
6. Encouraging and expanding communications through a strong learning community.
7. Ensuring accessibility and commitment to deal with current and future needs.

Working Definition of Educational Technology

The College of Education Technology Committee uses the ISTE (International Society for Technology Education) definition of Educational Technology.

> "Educational computing and technology (ECT) is an emerging field, which encompasses many sub-disciplines. This field includes knowledge about and use of computers and related technologies in
>
> (1) integration of technology and curriculum to support learning;
>
> (2) delivery, development, prescription, and assessment of instruction;
>
> (3) effective use of computers as an aid to problem solving;
>
> (4) school and classroom management;
>
> (5) educational research;
>
> (6) electronic information access and exchange;
>
> (7) personal and professional productivity;
>
> (8) technical assistance and leadership; and
>
> (9) computer science education."

Goals and Strategies for Attainment

In order to fulfill the COE vision and mission and meet state, national and international standards five goals have been identified:

> Goal 1: Create a technologically rich educational environment where candidates can become effective decision makers.
>
> Goal 2: Create technologically adept educators who are reflective practitioners, change agents, and lifelong learners.
>
> Goal 3: Enhance faculty members' abilities to model instructional technology.
>
> Goal 4: Continue refining courses to include current technologies.
>
> Goal 5: Continue providing current technology resources to faculty and candidates.

To attain each of the above goals strategies for attainment have been proposed as follows:

Goal 1: Create a technologically rich educational environment where candidates can become effective decision makers.

Strategies for Attainment:

1.1 Make technology available where learning occurs by placing technology in College of Education classrooms and labs.

a. Provide technology labs for College of Education candidates.

b. Provide technology in College of Education classrooms.

1.2 Provide access to computers for faculty to use in instructional research and service in the classrooms and at home to facilitate implementation.

a. Place a modern, networked computer in every faculty member's office.

b. Provide digital cameras and digital video cameras for use in instruction.

c. Investigate/implement strategies that facilitate access from homes/other off-campus sites.

1.3 Provide technological support for instruction.

Goal 2: Create technologically adept educators who are reflective practitioners, change agents, and lifelong learners.

Strategies for Attainment:

2.1 Engage learners with technology as a means of support for learner excellence.

2.2 Use technology to create learning environments in which candidates can:

a. Become lifelong learners

b. Promote a positive environment that encourages innovation and problem solving

c. Be prepared for change and help bring about change

2.3 Ensure that candidates meet the Alabama State Department of Education Technology Standards and NCATE technology standards by:

a. Requiring that candidates use technology to complete assignments

b. Utilizing alternative assessments that incorporate technology

Goal 3: Enhance faculty members' abilities to model instructional technology.

Strategies for Attainment:

3.1 Analyze strengths and weaknesses of faculty based on the new Alabama State Department of Education Technology Standards

3.2 Implement on-going staff development experiences to enable faculty to acquire and utilize the technology competencies:

a. Provide a variety of training experiences (individual and group)

b. Provide mentors and facilitators to work with faculty

Goal 4: Continue refining courses to include current technologies.

Strategies for Attainment:

4.1 Revise course syllabi to include the inclusion of appropriate technology competencies.

4.2 Provide recognition, incentives, and rewards for faculty members who strive to learn and implement new technologies.

Goal 5: Continue providing current technology resources to faculty and candidates.

Strategies for Attainment:

5.1 Ensure that adequate funding for technology is included in the Universities Annual budget

5.2 Pursue Federal, State and Private funding sources

COE TECHNOLOGY IMPLEMENTATION PLAN

***Goal 1:* Create a technologically rich educational environment where candidates can become effective decision makers.**

Strategy 1: Make technology available where learning occurs by placing technology in College of Education classrooms and labs.

Activities and Timeline

a. Provide technology labs for College of Education candidates.

Target Date	Item	Status	Responsible Agency/Office
Ongoing	Assess/Install instructional software on a regular basis		MISAC
Ongoing	Assess/Upgrade computer operating system/s on a regular basis		MISAC
Annually	Review and revise lab policies and procedures		MISAC/Dean COE
Summer 2003	Update computers in Room 325 Councill Hall		MISAC
Fall 2001	Implement a program to provide candidates with technical assistance in the labs	Completed	Dean COE
Spring 2002	Implement system to track lab usage	Completed	Title III Office
Summer 2002	Provide a mobile multimedia laboratory	Completed	PT3 Grant
Spring 2003	Provide an electronic portfolio laboratory	Completed with exception of new furniture	Title III Office
Fall 2004	Provide 16/7 technology support for the portfolio lab		Dean COE

Fall 2004	Extend student lab hours to 16/7		Dean COE
Fall 2005	Extend student lab hours to 24/7		Dean COE
Spring 2003	Update computers in Room 536 and 546 LWLC	Rm 536 Lab scheduled for Update Spring 2003 Rm 546 Lab scheduled for updated Spring 2003	MISAC

b. **Provide technology in College of Education classrooms.**

Target Date	**Item**	**Status**	**Responsible Agency/Office**
Spring 2003	Purchase 5 projection devices and 5 laptops and 5 digital cameras (one for each department and Dean's office for checkout)	Completed 4 notebooks and projectors purchased.	PT3 Grant
Fall 2002	Provide wireless data access to Councill Hall	Completed	PT3 Grant
Spring 2004	Provide wireless data access to Acadome Classroom Areas		MISAC
Spring 2004	Provide notebooks for checkout by faculty for classroom use by candidates		Dean COE/PT3 Grant
Spring 2005	Purchase and install electronic whiteboards (SmartBoards), projection devices, televisions, VCRS, and DVD-players in all classrooms	On hold due to new COE building	MISAC

Strategy 2: Provide access to computers/technology for faculty to use in classrooms and at home to facilitate implementation.

Activities and Timeline

a. Place an up to date networked computer in every faculty member's office.

Target Date	Item	Status	Responsible Agency/Office
Ongoing	Standardize software installs (e.g. Office version, browser/s, file, Acrobat Reader, video and audio players)		MISAC
Ongoing	Upgrade or replace computers		MISAC
Ongoing	Upgrade to Office XP		MISAC
Ongoing	Upgrade or replace operating systems		MISAC

b. Provide digital cameras and digital video cameras for use in instruction.

Target Date	Item	Status	Responsible Agency/Office
Ongoing	Purchase digital video cameras for faculty checkout for classroom use (one for each department)	4 purchased Spring 2003	PT3 Grant
Ongoing	Purchase digital video cameras for faculty checkout for classroom use	4 purchased Spring 2003	PT3 Grant
Fall 2005	Install technology equipment in each classroom		

c. Investigate/implement strategies that facilitate access from homes/other off-campus sites.

Target Date	Item	Status	Responsible Agency/Office
Ongoing	Promote utilization of Blackboard Course Development Tools for online delivery of courses and other web delivery tools	Committee Recommendation made Dec 2002	VP Academic Affairs

Strategy 3: Provide technological support for instruction.

Target Date	Item	Status	Responsible Agency/Office
Spring 2004	Hire a qualified individual to provide individual and group training to faculty members		Dean COE
Ongoing	Provide training to faculty members which focuses on the integration of technology in their instruction	Faculty Workshops	VP Academic Affairs, Dean COE, PT3 Grant

Goal 2: Create technologically adept educators who are reflective practitioners, change agents, and lifelong learners.

Strategy 1: Engage learners with technology as a means of support for learner excellence

Activities and Timeline

Target	Item	Status	Responsible Agency/Office
Spring 2003	Require faculty to develop candidate activities which require the use of technology		Dean COE, Department Chairs
Fall 2003	Encourage faculty to use the COE Forum to communicate with candidates		Dean COE, Department Chairs
Fall 2003	Require candidates to present technology rich lessons/presentations		Dean COE, Department Chairs

Strategy 2: Use technology to create learning environments in which candidates can:

Activities and Timeline

a. Become lifelong learners

Target	**Item**	**Status**	**Responsible Agency/Office**
Fall 2003	Provide candidates with instruction on how to use the Alabama Virtual Library		Dean COE, Department Chairs

b. Promote a positive environment that encourages innovation and problem solving

Target	Item	Status	Responsible Agency/Office
Fall 2004	Provide Internet connections in each dorm room		MISAC
Fall 2005	Provide a notebook computer for each student		MISAC

c. Be prepared for change and help bring about change

Target	Item	Status	Responsible Agency/Office
Fall 2004	Require candidates to present a technology rich lesson during student teaching.	Spring 2004	Dean COE, Department Chairs

Strategy 3: Ensure that candidates meet the Alabama State Department of Education Technology Standards and NCATE technology standards by:

Activities and Timeline

a. Requiring that candidates use technology to complete assignments

Target	Item	Status	Responsible Agency/Office
Fall 2003	Require candidates to present technology rich lessons/presentations		Dean COE, Department Chairs, Faculty Members
Fall 2004	Require candidates to present technology rich lessons/presentations during their internship/student teaching		Dean COE, Department Chairs, Faculty Members

b. Developing an electronic portfolio

Target	Item	Status	Responsible Agency/Office
Spring 2003	Portfolio Lab hardware and software in place	Completed	Dean COE, C&I Chair, Title III
Fall 2004	Portfolio Design Standards in Place		Dean COE, Department Chairs
Fall 2004	All new candidates required to develop an electronic portfolio		Dean COE, Department Chairs, Faculty Members

Goal 3: Enhance faculty members' abilities to model instructional technology.

Strategy 1: Analyze strengths and weaknesses of faculty based on the new Alabama State Department of Education Technology Standards

Activities and Timeline

Target	Item	Status	Responsible Agency/Office
Ongoing	Survey College of Education Faculty on their technology needs and competencies	Survey conducted Dec 2002. Analysis completed Mar 2003. See Attachment for results.	Dean COE, COE Technology Committee

Strategy 2: Investigate/implement strategies that facilitate access from homes/other off-campus sites.

Activities and Timeline

Target	**Item**	**Status**	**Responsible Agency/Office**
Ongoing	Examine the use of Blackboard Course Development Tools for online delivery of courses and other web delivery tools	Distance Education Committee submitted proposal to VP for Academic Affairs	VP Academic Affairs
Fall 2003	Develop a University policy on the development and implementation of distance education courses to include online courses.	Pending approval	VP Academic Affairs

Strategy 3: Implement on-going staff development experiences to enable faculty to acquire and utilize the technology competencies:

Activities and Timeline

a. Provide a variety of training experiences (individual and group)

Target	Item	Status	Responsible Agency/Office
Summer 2001	Conduct a summer training program for faculty on the creation of technology rich lessons	Completed	PT3 Grant
Summer 2003	Provide a summer training program for faculty based on the results of the faculty survey		PT3 Grant

b. Provide mentors and facilitators to work with faculty

Target	Item	Status	Responsible Agency/Office
Spring 2004	Pair technological competent faculty with "technology willing" faculty to help them create technology rich lessons		Dean COE, Department Chairs, Faculty Members

Goal 4: Continue refining courses to include current technologies.

Strategy 1: Review course syllabi showing the inclusion of State technology standards.

Target	Item	Status	Responsible Agency/Office
Fall 2002	Identify course objectives and activities which meet State technology standards	Completed	Dean COE, Department Chairs, Faculty Members

Strategy 2: Provide recognition, incentives, and rewards for faculty members who strive to learn and implement new technologies.

Activities and Timeline

Target	Item	Status	Responsible Agency/Office
Spring 2003	Develop a university wide incentive, rewards, and recognition program for faculty who develop technology mediated and enhanced courses		VP Academic Affairs

Goal 5: Continue providing current technology resources to faculty and candidates.

Strategy 1: Ensure that adequate funding for technology is included in the Universities Annual budget

Activities and Timeline

a. Recommend technology purchases

Target	Item	Status	Responsible Agency/Office
Annually to begin Fall 2003	The College of education technology committee should recommend to the Dean of the College of Education what technology purchases should be made beyond scheduled upgrades.		COE Technology Committee
Annually to begin Fall 2003	The Dean of the College of Education should recommend to the Vice President of Academic Affairs the technology needs of the College.		Dean COE

Strategy 2: Pursue Federal, State and Private funding sources

Activities and Timeline

Target	Item	Status	Responsible Agency/Office
Summer 2000	Apply for PT3 grant with the US Dept of Education	Grant received for 2000-2003	VP Planning and Institutional Advancement
Summer 2002	Work with local school districts to form partners for grant opportunities	Grant received through ADECA and Lowndes County	VP Planning and Institutional Advancement

Alabama State University

College of Education

Technology Audit

March 17, 2003

Introduction

As the largest college at Alabama State University, the College of Education is composed of 1098 undergraduate and graduate students. There are 44 full-time faculty members in the college (16 males, 28 females). The College is decentralized with faculty offices, classrooms, and computer labs dispersed in various campus buildings.

Method

This technology audit is designed to glean data about the level of computer technology available to full-time faculty and students, their perceived level of technology assess and training, and their attitudes and beliefs toward technology.

A survey was developed with 25 closed-ended and several open-ended questions. The open-ended was designed to elicit demographic information about respondents. These questions addressed respondents' perceived technology ability level, how often they utilized technology, and where they have access. It also included questions about their recent technology training and educational background. Finally, they also inquired into their hardware and software access and availability, the importance of available computer programs to accomplish their work, and their attitudes and beliefs as a faculty about technology. Besides eliciting additional comments, the open-ended questions were designed to determine what technology is necessary for faculty to accomplish their work and what needs to be done to enhance student learning.

In an effort to get a clear picture about the technology available to faculty and students in the College of Education, a walk through of computers labs identified as belonging to the College was done. Discussions about lab hours, hardware and software, and individual lab needs were held with faculty, students, and lab assistants during these visits. Also, conversations were held with several faculty members to clarify and glean additional information.

The survey was disseminated and returned during a College of Education faculty meeting. The closed-ended data were systematically entered into

predetermined categories in the *SPSS Program* (Statistical Package for Social Sciences). Using descriptive statistical methods, the data were analyzed using frequency distributions, standard deviations, means, and percentages. The open-ended statements were coded and analyzed using the *QSR NUDIST Program* to ascertain commonalities and emergent categories.

Findings

Of the 44 members of the College of Education faculty, 33 (75%) completed the survey. Forty-two were male (n = 14) and 57% were female (n = 19). They were full-time faculty members in the Instructional Support Programs (33.3%); Foundations and Psychology (21.2%); Curriculum and Instruction (24.2); and Health, Physical Education and Recreation (18.2%) departments. When responding to the question pertaining to job classification, participants indicated that they were assistant professors (33.3%), associate professors (30.3%), and professors (30.3%). One respondent indicated that he was an "acting chair," and another stated that she was a director.

The data concerning respondents' level of computer competency, their recent in-service training, and the number of undergraduate and graduate preparation hours in computer technology is arrayed in Table 1. When asked to indicate the level of their computer proficiency, an overwhelming number indicated that they were either a "very competent user" or a "competent user" (84.8%). Three respondents described themselves as "expert user(s)" and two indicated that they were "non-user(s)."

Of the respondents, 39% (n =13) indicated that they had no computer technology "in-service" or 30% (n = 10) indicated that they had between "1-3 hours" of training during the last academic year. Only ten (30.3%) members of the faculty indicated that they had between 4-21+ hours of technology in-service during the last year. Over half of the respondents indicated that they did not have any

undergraduate hours in computer technology (51.5%); however, 36.3% indicated that they had between 1-12 hours. Although 36.4% (n = 12) of the respondents indicated that they had not completed any graduate coursework in computer technology, 61% (n = 20) reported that they had between 1 and 21+ hours.

Table 1.

Competency and Training

		n	**%**	M	**SD**
Competency	expert user	3	6.1	2.45	.75
	very competent user	11	51.5		
	competent user	17	33.3		
	non-user	2	9.1		
In-service Training	None	13	39	2.12	1.24
	1-3 hrs	10	30		
	4-12 hrs	6	18.2		
	13-21 hrs	1	3.0		
	21+ hrs	3	9.1		
Undergraduate Hours	None	17	51.5	1.94	1.32
	1-3 hrs	4	12.1		
	4-12 hrs	8	24.2		
	13-21 hrs	0	0		
	21+ hrs	3	9.1		
Graduate Hours	None	12	36.4	2.24	1.35
	1-3 hrs	6	18.2		
	4-12 hrs	9	27.3		
	13-21 hrs	2	6.1		
	21+ hrs	3	9.1		

Table 2 arrays the data pertaining to where participants access computer technology and their level of usage. The great majority indicated that they have access in their university office, their home, and a computer lab (75.8%). Interestingly, two respondents (6.1%) indicated that they have no access to

computer technology. An overwhelming majority of the respondents indicated that they used computer technology "all of the time" or "almost every day" (87.9%). Only 9.1% (n = 3) indicated that they used it "once in a while" or "never."

Table 2.
Computer Access and Usage

		n	%	*M*	SD
Access	Never Use	2	6.1	4.61	1.66
	University Office	5	15.2		
	Home	1	3.0		
	Computer Lab	0	0		
	University Office & Home	13	39.4		
	University Office, Home & Computer Lab	12	36.4		
Usage	all the time	20	60.6	4.27	1.26
	almost every day	9	27.3		
	once a week	0	0		
	once in a while	2	6.1		
	never	1	3.0		

Table 3 presents the data dealing with the brand of computer and operating systems respondents have in their university offices. The data show that 63.6% (n =21) of the respondents have an older model Gateway Computers and 24.2% (n = 8) have the newer Dell Computers. Two others stated that they have a Macintosh and a Dell computer in their office. The data indicated that faculty is using a variety of operating systems. The majority are using Windows 2000, Windows 98, or Windows 95 (66.6%).

Table 3.
Office Computer

		n	**%**	*M*	**SD**
Brand	Dell	8	24.2	2.03	1.31
	Gateway	21	63.6		
	PC/Macintosh	2	6.1		
	Dell/Gateway	1	3.0		
	No Computer	1	3.0		
Operating System	Windows XP	5	15.2	3.24	2.09
	Windows 2000	8	24.2		
	Windows 98	7	21.2		
	Windows 95	7	21.2		
	Windows XP/Macintosh OS	3	9.1		
	Windows XP/Windows 2000	2	6.1		
	No Operating System	1	3.0		

The data pertaining to the access to hardware is arrayed in Table 4. The data show that the majority of the faculty have a desktop computer (91%), and access to an inkjet (51.5%) or laser printer (60.6%) in their office. Sixty-three percent of the faculty indicated that they also have access to a notebook computer (63.6%). Respondents indicated that they do not have access to an overhead projected (27.4%) in the office or classroom. Moreover, 57% indicated that do not have access to a television with a VCR in the classroom that they use to teach, and 43% indicated that they do not have access to a mobile television with a VCR.

Table 4.

Hardware Availability

	Yes		No	
	n	**%**	***n***	**%**
Inkjet printer	17	51.5	16	48.5
Laser printer	20	60.6	12	36.4
Networked printer	9	27.3	23	69.7
Desktop Computer	30	90.9	2	6.1
Laptop Computer	21	63.6	11	33.3
Scanner	12	36.4	20	60.6
Multimedia Projector (LCD)	18	54.5	13	39.4
Elmo Presentation Station	4	12.1	27	81.8
Mobile Television with VCR	18	54.5	14	42.4
Television with VCR in Classroom	13	39.4	19	57.6
Overhead Projector	23	69.7	9	27.4

Respondents were asked to indicate the computer software that is available in their offices (Table 5). Ninety-one percent of the respondents indicated that they have the Microsoft Office Suite (Microsoft Word, Excel, PowerPoint, Publisher, Outlook, and Access) on their computers. They indicated that they have access to an Internet Web browser (82%), email (97%), and the University Student Database System (72.7%). However, only 27.3% of the respondents indicated that they have access to any statistical software program. The following is a listing of additional programs that faculty indicated that they have on their office computers: ACE Database, Adobe Acrobat (n = 3), DNS Fix, Endnote (n = 3), Adobe Photoshop (n = 3), Multimedia Author, and Norton Utilities.

Table 5.

Software Available in Office

	YES		**NO**	
	n	**%**	***n***	**%**
Microsoft Office Suite	30	90.9	2	6.1
Statistical Software	9	27.3	23	69.7
Email/GroupWise	32	97	1	3.0
Internet Explorer/Netscape	27	81.8	5	15.2
University Student Database System	24	72.7	8	24.2

Using a four-point Likert Scale, respondents were asked to rate the importance of computer programs to their work (Table 6). An overwhelming majority rated word-processing (85%), email (85%), Internet Explorer/Netscape (82%), and the University Student Database System (88%) as "essential" to their work. Also, respondents indicated that spreadsheet (70%), database (70%), and presentation/PowerPoint (82%) programs are "essential" or "important" to their work. Interestingly, only 24.3% of the respondents indicated that the ACE Database is "essential" or "important" to their work and 78.8% had "no response."

Table 6.

Software Importance

	E %	I %	N %	NN %	NR %	M %	*SD* %
Word-processing	84.8	0	6.1	0	9.1	3.53	1.23
Spreadsheet	48.5	21.2	15.2	6.1	3	2.94	1.32
Database	57.6	12.1	12.1	6.1	12.1	2.97	1.45
Presentation/PowerPoint	57.6	24.2	3.0	3.0	12.1	3.12	1.36
Statistical Software	30.3	27.3	18.2	9.1	15.2	2.48	1.41
Email/GroupWise	84.8	6.1	3.0	0	6.1	3.64	1.02
Internet Explorer/Netscape	81.8	6.1	3.0	0	9.1	3.52	1.20
University Student Database System	87.9	0	3.0	0	9.1	3.58	1.20
ACE Database	15.2	9.1	0	0	75.8	.88	1.56

Note. E = Essential, I =Important, N = Needed, NN = Not Needed, NR = No Response

Faculty beliefs about computer technology are arrayed in Table 7. Using a four-point Likert Scale, respondents overwhelmingly indicated that they "strongly agree" in six out of the ten areas of inquiry. In response to the question concerning the need for COE's computer labs to be centralized in a single building, 67.6% indicated that they "strongly agreed" or "agreed." However, 36.4% indicated that they "disagreed" or "strongly disagreed." When respondents were asked about the adequacy of the University's technology policies, 51.5% indicated that they were not adequate. Respondents were somewhat equally divided when asked about the adequacy of the COE's policies; however, 12.1% had no response. An overwhelming majority indicated that a technology specialist should "be hired to support the technology needs of the College."

Table 7.

Faculty Beliefs and Attitudes

	SA	A	D	SD	*M*	*SD*
Equitable distribution of computer technology is vitally important.	93.9	3.0	0	0	1.00	.250
All students need access to computers.	93.9	3.0	0	0	1.00	.250
Administrators and staff need training in current technologies.	90.9	6.1	0	0	1.03	.305
Faculty needs training in how to integrate technology into their teaching.	84.8	12.1	0	0	1.09	.384
Faculty, administrators, and staff need access to current technology.	93.9	3.0	0	0	1.00	.250
Technology must be continually updated.	93.9	3.0	0	0	1.00	.250
University technology policies are adequate.	30.3	12.1	24.2	27.3	2.36	1.34
College of Education's technology policies are adequate.	21.2	24.2	27.3	15.2	2.12	1.27
A technology specialist needs to be hired to support the technology needs of the College.	84.8	6.1	3.0	3.0	1.18	.683
College of Education labs should be centralized in a single building.	42.4	15.2	21.2	15.2	1.97	1.23

Note. SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree

Open-ended Responses

Respondents were asked to respond to two open-ended questions. The first question inquired into their computer technology that would enhance their overall job performance. The second asked them to suggest strategies that would enhance student learning.

With regards to hardware, a respondent emphasized that "more technology is

needed!" Concerns were raised about the age of the hardware and the need for new technology. Although high tech issues were the primary concern of respondents, some indicated that there is a high need for "low tech" equipment (i.e., overhead projectors). Not only did respondents specifically mention the high tech basics (i.e., computers, LCD projectors, scanners, etc.), they also indicated the desire to have access to state-of-the-art technology like "Smart Board," wireless technology, and having classrooms wired for Internet access. One respondent indicated that there is a need for more "laptops and portable projectors for presentations in classrooms. Another stated that "more portable technology" should be made available "for loan to classes and students." Finally, to fund hardware, one faculty member suggests that "another technology grant" should be written.

Besides having "classrooms wired to connect to the Internet," respondents were raised the issue of being able to access technology in buildings where they teach, especially after 5:30 p.m. One raised concern about having to "transport equipment" to the classroom where she teaches. Another pointed out that "technology equipment (needs to be) in a central location in the J.R. Acadome to be used in the classroom, it takes to much time to check it out, wait for your turn, and to get the equipment returned to Councill Hall."

Besides the need to "improve the computer lab equipment," most comments related to student access. One respondent indicated that there is a need for a computer lab for the Business Education program, and another suggests that a general lab be located in the Acadome. Another indicated that computer labs should be opened 24 hours to students. More specifically, one respondent suggested the following: "have education computer labs open with more flexible and extended hours (nights after 8:00

p.m. and weekend hours). Our nontraditional students need ACCESS to labs on campus nights and weekend!"

Software concerns mentioned by respondents pertained to the need for "consistent access to updated equipment and software." One faculty member commented that the "Curriculum library (be) modeled on K-12 Dewey System with Athena," and students should have access to Accelerated Reader for evaluation purposes in the Library.

There was a great many concerns about technology support raised by respondents. Several individuals mentioned the inability to download software on the newer Dell computers because of the firewall. Respondents indicated the need for "more technical support with problems," "much better technology support with installation of equipment and software," and "much less (network) restriction." Several faculty members stated that MIS needs to hire more technical staff to support the college and university and a technology specialist should be available to assist both students and faculty with technology needs.

Respondents also commented about the need for more technology staff development. Several individuals commented that they would like more "training," "workshops," "on the job training," and "professional development" about computer technology. One respondent indicated that training should be in small groups or done individually. More specifically, one commented that she would like to learn "strategies to integrate more technology in my teaching."

Besides reiterating the need for more hardware and software; increasing the number of COE labs; and providing better support, respondents, in response to the question dealing with enhancing student learning, primarily focused on issues of modeling technology usage and technology integration into the curriculum. One faculty

member commented that there needs to be "effective (technology) integration into a wide range of courses," because "performance assessments (are) requiring the use of appropriate technology." Another believes "all teachers in the COE need to be involved with teaching with technology." Finally, one respondent indicated that faculty should "infuse technology into student's assignments," and instructors should be "able to demonstrate or model using technology in their classroom teaching."

Computer Labs

There are over 26 Academic Affairs labs on campus. Five are specifically identified as College of Education labs.

Instructional Technology Lab. This is a PC lab that is located in the Levi Watkins Learning Center (536). Besides 64-inch television, the lab has 36 workstations, a scanner, and a laser printer. There are several broken computers and the lab is in need of painting and new furniture. Although the restricted hours for teaching are posted, the hours that it is opened for general use needs to be listed.

Instructional Technology Macintosh Lab (Room 546). This is a MAC Lab with 20 workstations. The lab was locked so it was impossible to view the room. It is restricted for class use only.

Interactive Classroom Computer Lab (CH 325). This is a PC lab that is that is restricted for class use only. There are 18 Gateway Computers are networked to laser printer.

Teacher Education Center Lab (PH215). This lab has 28 PC and 4 Macintosh computers that are networked to three laser printers. The lab is open for general student use.

Portfolio Lab (McGee 212). This is the newest computer lab. There are 28 new

Dell Computers networked to three laser printers and one scanner. There are 17 machines with SPSS. The room is in the need of painting and new furniture. The lab hours need to be posted.

Discussion and Recommendations

Technology in the 21st century is moving at lightning speed and the College of Education believes that school personnel must have the tools necessary meet the needs of the students they serve. However, when it comes to technology, the College of Education is about "a half mile down a ten mile road."

Belief and Attitudes

The survey revealed that faculty perceived themselves as being knowledgeable about computer technology. They believe that equitable distribution and access is essential for students, faculty, and administrators. The faculty indicated that they are fervent users of computer technology. They believe that it is crucial to integrate computer technology into their teaching; therefore, it must be available in their offices, labs, and classrooms.

In-service Training

The data reveals that faculty perceive themselves to be competent in the areas of computer technology; however, less than half of the faculty has had technology training in the college background and only a limited number had in-service training in the last year. Given the rapid pace of technology growth, it is imperative that they have the appropriate training so that they can keep current and become knowledgeable about the state-of-the-art technologies. Moreover, the faculty must able to model technology knowledge, skills, and dispositions for our candidates so that they will be prepared to integrate these skills into their teaching.

Therefore, the following actions should be considered as the College of Education develops their Technology Plan:

- The COE should develop a systematic technology in-service program for faculty and staff during both the academic year and summer. Topics for these workshops should be developed with faculty and staff input and the activities should be concrete and hands-on.
- Funding for technology staff development should be included in COE's Technology Plan.
- Faculty should be encouraged to participate in staff development activities through various department and college incentive programs. These programs should be developed and included as part of the COE's Technology Plan.
- Faculty should be encouraged to improve the technology skills by including it as part of annual evaluation system.
- Alternative forms of staff development activities should be used. First, providing on-campus workshops for those interested in various software products or integration of technology activities. Second, opportunities should be provided so that faculty may attend off-campus technology workshops or meetings. Third, individual faculty attending these off-campus workshops or meetings should be encouraged to return and share what they have learned with their colleagues through program, department, or college workshops.

Hardware and Software Issues

Hardware. The survey results indicate that a commitment must be made by the College of Education and University to make even the most basic technology available to faculty and students. For instance, every classroom must be equipped with at least with an overhead projector and a television with a VCR. Although the data revealed that an overwhelming majority of the faculty have access to a desktop computer and a printer in their office, most are using computers and printers that are more than four years old. Also, some faculty indicated that their computers are in the need of repair. One faculty member that was interviewed commented that he is using his personal laptop computer because his desktop computer does not work. He indicated that he cannot access the network when advising students. Finally, some computers have been purchased for faculty and labs but they are in boxes waiting for MIS to set them up.

Faculty also indicated that having access to technology is problematic because they must often travel across campus to retrieve and return technology, which is time-consuming. They are also concerned that they are unable to access technology

in buildings where they teach. Access is especially difficult when they teach evening and weekend classes. Faculty would like to have state-of-the-art technology available to them in their classrooms along with network access.

Software. The survey data indicate that access to current software is available primarily because MIS provides the Microsoft Office Suite, antivirus software, Internet Explore, and email software. Faculty indicated that they have been able to purchase some other software programs. Faculty (76%) indicated that having statistical software as being important to their work; however, only 27% have access to the software on their computers. Although 24% of the faculty indicated that the ACE Database was "essential" or "important," 76% has no response. One could assume that faculty is unaware of the database or it is not available to them. Interestingly, a presentation was made in a recent faculty meeting demonstrating the ACE Database program.

Therefore, the following actions should be considered as the College of Education develops their Technology Plan:

- An overhead projector and television set with VCR should be in every classroom throughout the University.
- A systematic plan should be developed to insure that faculty has access to state-of-the-art hardware and software in their offices, classrooms, and in all COE's labs.
- A three-year rotation cycle should be established for purchasing hardware and software for faculty computers.
- A three-year rotation should be established for purchasing hardware and software for classrooms and computer labs.
- Faculty should be surveyed to determine their specific program hardware and software needs.
- The new COE building should be wired for Internet access and also "wireless technology.
- A prioritized list of college, department, and program hardware and software needs can be developed so that decisions will be data driven.

Support

The survey data indicates that faculty is dissatisfied with the technology support because of the lack of personnel and funding. MIS lacks the staff to provide on-going support of the College of Education. New hardware is imaged by MIS before it is setup in offices and labs. Some faculty reported that computers are in boxes for months before they are setup in offices and labs. Because of the imaging process and the new firewall, faculty is unable to install programs on their computers. MIS staff indicated this policy is in place to prevent computer piracy and viruses. The faculty overwhelmingly felt that a COE technology specialist should be hire to provide support.

- The College of Education should fund and hire a technology specialist.
- MIS should lessen the security on the faculty computers. They should address the problem of piracy by dealing directly with the violators and with computer viruses by installing the appropriate antivirus software.