Arizona Department of Education
Tom Horne, Superintendent of Public Instruction

Technology Plan for Arizona Adult Education

Adult Education,
Division of Educational
Services & Resources
(602) 258-2410
October 2005

Executive Summary

The Adult Education system in Arizona bears responsibility for assisting adult learners with acquiring the basic skills necessary to function effectively within the family, the community, and the workplace. These skills include the ability to read, write, compute, communicate, gather and respond to information, learn new skills, and access and use technology. In order to address these skills, Adult Education must fully integrate the use of technology for educational purposes into its system.

The Technology Plan for Arizona Adult Education provides a roadmap for addressing the issues related to the integration of technology into the educational setting. To achieve the full integration of technology, Adult Education programs will be required to go through systemic changes with implications in budget and resource allocation, professional development and training, certification and hiring criteria, curriculum content and assessment, accountability and data issues, and the structure and scheduling of classes.

In order to facilitate the progression toward full integration of technology in the Adult Education classroom, the four critical goals of access, aptitude, application, and attitude must be addressed:

Access *(infrastructure, resources, partnerships)*

Ensure frequent and convenient access to technology for adult educators and adult learners.

Aptitude *(knowledge, skills, abilities)*

Ensure the technology competence of adult educators and adult learners.

Application

(instructional strategies, communication, accountability)

Create learning environments where technology facilitates and enhances the instructional process.

Attitude *(beliefs, feelings, mind-set)*

Foster a positive attitude toward technology in adult educators and adult learners.

This Technology Plan will play a significant role in the Arizona Department of Education's efforts to face the challenges and address the lifelong learning needs of our adult learners by providing extraordinary education to all learners. Additionally, this plan will support IDEAL, Superintendent Tom Horne's Internet-based educational information system designed to increase student achievement.

Background

In 1998, the Arizona Department of Education, Adult Education Services Unit published the ***Arizona Five Year State Plan*** to serve as a "living document" for the improvement of Adult Education in Arizona. It called for maximizing "the effective use of technology at all levels of Adult Education." Based on this plan, the State Director of Adult Education appointed a task force of representatives from Adult Education and technology to research technology issues and to develop recommendations for how to fully integrate technology into Arizona's Adult Education classrooms while providing adult learners with the technology skills needed to be productive members of society. This document is a direct result of the research and recommendations done by the members of the Education Technology Task Force (ETTF).

ETTF's Technology Vision for Adult Education in Arizona:

Extraordinary Adult Education provides opportunities for anytime, anywhere lifelong learning through technology-assisted instruction, which keeps our workforce competitive globally and enhances community, family, and personal growth.

GOAL 1: Adult learners will have equal access to, and the opportunity for, technology-related skill development.

GOAL 2: Adult Education instructors will have access to technology to enhance their instructional abilities.

GOAL 3: Adult Education personnel will be comfortable, competent, and trained in technology for accountability, Instruction, and professional development purposes.

The technology vision coincides with that of the Adult Education Services Unit at the Arizona Department of Education: "Access to Extraordinary Education." The goals are based on the ***Values for Technology in Adult Education*** *(Appendix A)*, identified by ETTF. These values address the lifelong learning needs of adults, the professional development needs for instructors and staff, and the accountability and technology needs of administrators. Each value has a corollary statement that allows the Adult Education community to measure technology successes and clearly identify areas for improvement.

ETTF Participants:

- Sheryl Hart, Arizona Department of Education, ETTF Coordinator
- Connie Armstrong, Rio Salado Adult Education, Maricopa County
- Bud Dragoo, Cochise College Adult Education, Cochise County
- Teddy Dumlao, Arizona Department of Education
- Paul Heavenridge, Literacyworks (Western/Pacific LINCS), Alameda County*
- Daniel Lantz-Leppert, Pima College Adult Education, Pima County
- Jim Lively, Cochise College Adult Education, Cochise County
- Lynn Reed, Literacy Volunteers of Maricopa County, Maricopa County
- Joan Valichnac, Northland Pioneer College, Apache and Navajo Counties
- Karen Liersch, Arizona Department of Education, State Director and ETTF Sponsor

* Alameda County, California

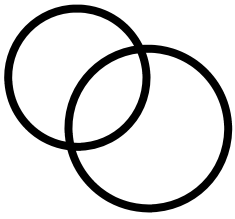
Table of Contents

Introduction

What does it mean to be literate? Merriam-Webster's Dictionary defines *literacy* as being able to read and write. However, in today's world, the definition of literacy has changed to include technology and information literacy. According to the National Institute for Literacy (NIFL):

"The Workforce Investment Act of 1998 defines literacy as 'an individual's ability to read, write, speak in English, compute and solve problems at levels of proficiency necessary to function on the job, in the family of the individual and in society.' This is a broader view of literacy than just an individual's ability to read, the more traditional concept of literacy. As information and technology have increasingly shaped our society, the skills we need to function successfully have gone beyond reading, and literacy has come to include the skills listed in the current definition."

The Adult Education system has responsibility for assuring adult learners acquire the basic skills necessary to function effectively within the family, the community, and the workplace. These skills include the ability to read, write, compute, communicate, gather and respond to information, learn new skills, and access and use technology. In order To address these skills, Adult Education must integrate fully the use of technology for educational purposes into its system.



The Technology Plan for Arizona Adult Education provides a roadmap for addressing the issues related to the integration of technology into the educational setting. To achieve full technology integration, Adult Education programs will be required to go through systemic changes with implications for budget and resource allocation, professional development and training, certification and hiring criteria, curriculum content and assessment, accountability and data issues, and the structure and scheduling of classes.

Technology integration is a slow process that requires extensive support as programs and educators move through the continuum from having no (or very little) technology toward full integration.

(Appendix B: *Technology Integration Continuum*)

The **Strategic Plan,** introduced herein, serves as a guide to assist adult education programs analyze their current situation and then strategize and prioritize their efforts in order to realize the **Vision for Technology Use in Adult Education** and to achieve the **Technology Goals for Adult Education** as set forth in this document.

Section One:

The Current Landscape in Arizona

Arizona has a unique and diverse environment – both geographically and demographically. This diversity serves as both an asset and a challenge for the educational community and for the adults who wish to take advantage of the opportunities available in the State's Adult Education programs.

Unique Challenges for Arizona:

- The population density ranges from the highly inhabited (e.g., Maricopa County with 380 persons per square mile) to the largely uninhabited (e.g., Apache County along with six other counties, which average 4-11 persons per square mile)*
- A large and increasing migrant/transient population
- A border state with a sizeable and growing immigrant population
- A high number of incarcerated youth and adults

The Following Information is from the U.S. Census (2000):

- Arizona's total population is **5,130,632**. (The Department of Economic Security (DES) estimated Arizona's population in 7/2003 at **5,629,870**, which represents a **9.7% increase** from 2000.)

- In Arizona, **78.5% of the population is age 16 or older**. Of that group, **819,500** people (20.4%) are not enrolled in school and do not have a diploma or equivalent. **246,168** adults age 18 and older speak English "not well" or "not at all."

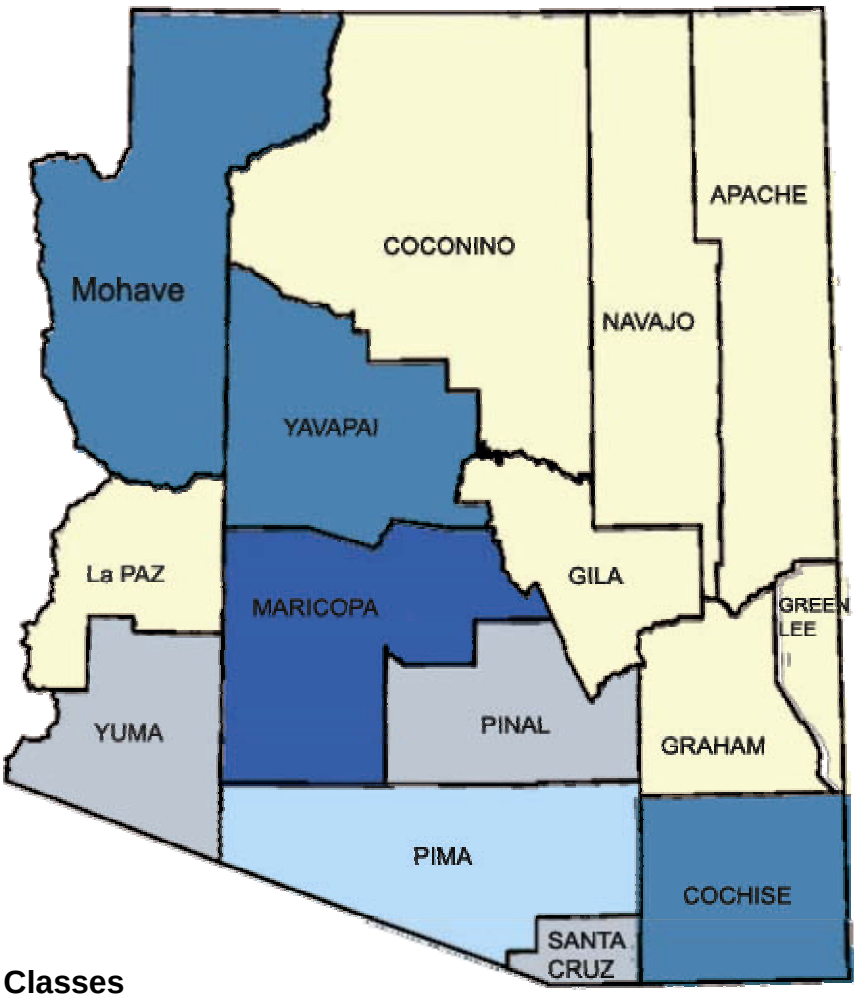
- **165,723** families, or **842,510** individuals (**15.4%** of the population), are below the poverty level.

* Source – U. S. Census Web site

Table 1: County Information

County	Total Population	% of pop. over 16	% of 16+ not in school & without a diploma	# of 16+ not in school & without a diploma	% of 18+ who do not speak English well	# of 18+ who do not speak English well
Apache	69,423	69.1%	34.7%	16,650	6.2%	4,273
Cochise	117,755	80.2%	20.2%	19,060	4.0%	4,690
Coconino	116,320	78.4%	16.2%	14,791	3.0%	3,527
Gila	51,335	79.8%	23.1%	9,455	1.4%	734
Graham	33,489	77.8%	23.6%	6,164	1.6%	535
Greenlee	8,547	74.5%	18.3%	1,162	1.4%	119
La Paz	19,715	83.7%	31.2%	5,147	3.7%	732
Maricopa	3,072,149	78.6%	19.3%	465,619	5.3%	162,469
Mohave	155,032	81.5%	23.7%	30,004	1.4%	2,093
Navajo	97,470	71.9%	28.6%	20,039	4.0%	3,900
Pima	843,746	81.3%	17.0%	116,828	3.7%	31,443
Pinal	179,727	63.5%	36.1%	41,207	3.7%	6,663
Santa Cruz	38,381	71.1%	38.2%	10,414	16.2%	6,219
Yavapai	167,517	83.6%	16.3%	22,884	1.6%	2,710
Yuma	160,026	76.9%	32.5%	40,076	10.0%	16,061
Total	**5,130,632**	**78.5%**	**20.4%**	**819,500**	**4.8%**	**246,168**

Population Density by County



Data Classes

Person/Sq Mile

- **4-11**
- **14-23**
- **32-40**
- **99-99**
- **380-380**

Section Two:
Arizona Adult Education – a "Snapshot View"

Arizona Adult Education provides comprehensive literacy services to learners age 16 and older who are not enrolled in a K–12 school. Instruction can include Adult Basic Education (ABE), Adult Secondary Education (ASE), General Educational Development (GED) preparation, English Language Acquisition for Adults (ELAA), Citizenship Test Preparation, and Workplace Literacy classes. Instruction may be delivered in the context of parenting, civics, the workforce, finances, and health.

Adult Education providers are funded by the Arizona Department of Education through a competitive, rigorous process. Eligible providers include local educational agencies, community colleges, community-based organizations, public libraries, and volunteer agencies. Funding is based on the provider's ability to deliver extraordinary educational services and a demonstrated record of producing learners who meet their academic and employment goals. Providers designated to receive funding must:

- Deliver instruction based upon Arizona's Adult Education Standards;
- Achieve performance goals;
- Report learner outcomes through Arizona's online data collection system;
- Provide instruction that demonstrates research-based best practices;
- Participate in continual program improvement processes and ongoing professional development.

Arizona Adult Education Demographics in Program Year 2003/04

The following information comes from the Arizona Department of Education, Adult Education Data Collection System:

- Arizona Adult Education served almost 35,000 students with 28,771 participants attending adult education classes for 12 hours or more.
- The students attending 12 or more hours accumulated a total of 2,617,413 instructional hours.
- The average number of instructional hours per student attending 12+ hours was 91 hours.

Entry Status (self-identified):

744 – Adult w/disability
473 – Adult w/learning disability
12,810 – Employed
11,112 – Unemployed
5,034 – Not in labor force
4,823 – Low income status
1,672 – On public assistance
1,930 – Single parent
408 – Migrant worker

Gender:

37.8% men
62.2% women

Ethnicity:

4% American Indian or Alaskan Native
5% Asian or Pacific Islander
4% Black
73% Hispanic
14% White

Age:

11% are 16-18
23% are 19-24
52% are 25-44
12% are 45-59
2% are 60 +

Entry Level:

1,221 participants entered as Adult Secondary Education
10,552 entered as Adult Basic Education
16,963 entered as ELAA

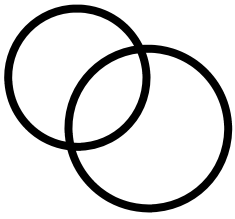


Table 2: Attendance data per county

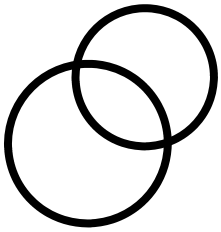
County	Total registered in Adult Ed classes	Total instructional hours provided	Average # of hours per students
Apache	194	14,131	72.8
Cochise	677	51,416	75.9
Coconino	655	25,068	38.3
Gila	112	1,075	9.6
Graham	207	7,203	34.8
Greenlee	18	779	43.3
La Paz	85	3,983	46.9
Maricopa	15,334	1,154,964	75.3
Mohave	1,253	32,676	26.1
Navajo	465	22,377	48.1
Pima	10,640	683,936	64.3
Pinal	828	42,656	51.5
Santa Cruz	1,242	132,334	106.5
Yavapai	905	50,225	55.5
Yuma	1,363	83,334	61.1
Undetermined	525	22,401	NA
Total	**34,503**	**2,764,174**	**80.1 hrs.**

The Status of Technology in Arizona Adult Education

Two surveys were designed and distributed to Adult Education programs. The first, a *Self-Assessment Survey* (see Appendix C), was designed for programs' internal use to determine the technology competency levels of staff and faculty. The second, a *Survey of Technology in Arizona Adult Education Programs*, was sent via e-mail to program directors of all thirty-six adult education programs on August 4, 2004, for the purpose of establishing a baseline in terms of technology preparedness and use. Along with the survey, an explanation of each survey item was sent to help clarify what the survey was asking. Twenty-three programs, 64%, from all over the state responded to the survey—ten community-based organizations (CBO), six community colleges, five school districts, one library, one county one-stop, and one corrections program. These programs varied in size from over 9,500 learners to less than 50 and represented a cross section of the programs in the state. Following is a summary of the survey responses (See Appendix D for survey and results.).

Technology Skills of Teachers:

Every program responding to the survey reported that **more than half** of their teachers had **basic computer skills**, with ninety percent reporting that 76-100% of their teachers had basic computer skills. (Basic computer skills were defined as, "The teacher is able to turn a computer, monitor, and printer on/off, use a mouse and keyboard, access a disk drive, open a program, print a document, save and locate a file, and minimize and maximize programs".)



Almost all of the programs reported that ***more than half*** of their teachers were competent in using e-mail, the Internet, productivity tools (word processing, databases, spreadsheets), and instructional software.

Most programs reported that ***less than half*** of their teachers were competent in using graphics tools, digital video, Web publishing, multimedia software, and desktop video conferencing.

Uses of Technology:

"Creating lessons or activities for students," "drill and practice," and "accessing lessons on the Internet" were by far the most common uses of technology reported, with ***most programs*** indicating that ***more than half*** of their teachers use technology for these purposes.

Most programs reported that ***less than half*** of their teachers "use technology to have students create products or conduct research," "evaluate and select software," "keep student records," and "support assessment."

Most programs reported that ***only 0-25%*** of their teachers "use technology to e-mail students to encourage learning," "support collaboration and teamwork between students," "build students' knowledge through models and simulations," "access electronic fieldtrips," and "support distance learning."

Technology for Professional Development:

The most frequent use of technology for professional development was "communicating with other teachers or experts via listservs," with ***eight programs***, 35%, reporting that ***76-100%*** of their teachers do this.

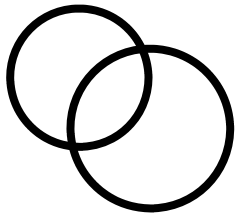
Half of the programs reported that ***fewer than 50%*** of their teachers use technology to "access articles or professional development resources on the Web."

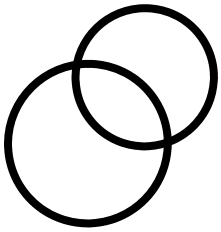
Most programs reported that ***less than half*** of their teachers use technology to "access research and materials for teacher projects," "use online tutorials," or "participate in e-courses or other distance learning opportunities."

Support for Technology:

"Dedicated staff to provide technical assistance," "staff development in using technology for administration and management," and "funding for instructional staff planning time" were reported by ***most programs*** as being ***very adequate*** or ***moderately adequate***.

Most programs reported that "staff development in integrating technology into instruction," "staff development in technology planning," "opportunities for practitioners to share expertise," "budgeting for hardware/software," and "budgeting for technology planning" are either ***not offered*** or are ***offered but not adequate***. Of particular interest, ***eleven programs*** reported that "staff development in technology planning" is ***not offered*** and ***ten programs*** reported that their "budgeting for obtaining hardware/software" is ***offered but not adequate***.





Barriers to Technology Use:

The most frequent barrier to technology use within the program reported was "other pressing issues of higher importance," with ***eight programs*** reporting this as a ***serious barrier*** and ***nine programs*** reporting this as a ***moderate barrier***.

Eleven programs reported "lack of effective models for using technology" as ***not a barrier*** or as a ***minor barrier***, and ***eleven programs*** reported this as a **serious barrier** or a ***moderate barrier*** (with ***one program*** reporting ***don't know***).

Most programs reported that "lack of up-to-date equipment," "inadequate access," lack of leadership," "lack of paid time to participate in staff development," "lack of effective staff development," "inadequate technical assistance," and "not enough paid time to develop a comfort level using technology" as either ***not a barrier*** or a ***minor barrier***.

Technology Plan:

Twelve of the twenty-three programs reported having a technology plan. Eleven of these programs involved instructional staff and program directors in the development of the plan. Eight programs also involved support staff, while seven programs involved a technology specialist. One of these programs also reported involving learners and other agencies in the development of the technology plan.

Conclusions:

While the infrastructure and basic framework for technology use appears to be in place for most programs, the in-depth use of technology for instructional purposes has not been a priority. This seems to be due to other pressing issues such as the emphasis on assessment, data collection, accountability, GED 2002 test, and funding.

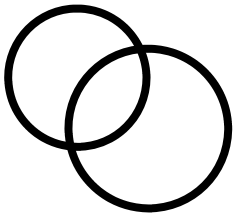
In terms of technology, the typical adult education program in Arizona looks as follows:

Teacher skills-

- Almost every teacher in the program has basic computer, e-mail, and Internet skills, and over half of the teachers are comfortable using productivity tools and instructional software.
- Most teachers do not have higher level technology skills such as using graphics tools, Web publishing or multi-media software.

Teacher use of technology-

- Teachers use technology to create lessons or activities for their students and to access lesson plans on the Web.
- Teachers do not use technology to communicate with students, evaluate/select appropriate software, or keep student records.
- Teachers do not use technology for professional development purposes, except to occasionally communicate with other teachers or experts via e-mail or listservs. collaboration, research, or distance learning.



Use of instructional technology-

- Half of the programs' teachers have students regularly using technology for instructional purposes to do drill and practice activities.
- Students do not tend to use technology for communication, collaboration, research, or distance learning.

Support for technology-

- Almost all of the technology-related staff development is for administration and management purposes, such as data collection.
- Some programs' budgeting for technology is not adequate.

Barriers to technology use-

- Lack of up-to-date equipment and access to technology is not perceived as a serious barrier.
- Because of other pressing issues, the budgeting for, training in, and use of technology for instructional purposes is not considered a priority.

Section Three:
A Vision for Technology Use in Arizona Adult Education

In order to facilitate the full integration of technology in the classroom, Adult Education programs must address the following questions:

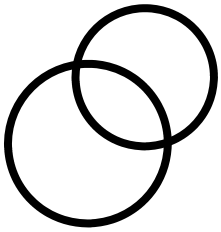
Is there a positive attitude toward the use of technology?

Do instructors and students have access to technology?

Do instructors have the necessary technology skills?

Are instructors and students given the opportunity to acquire the needed technology skills?

Is the use of technology applied appropriately and effectively?



Technology Goals for Arizona Adult Education

To answer these questions in a positive way, the Adult Education community must address the four critical goals of attitude, access, aptitude, and application. These four goals are described below:

Attitude Goal *(beliefs, feelings, mind-set)*
Foster a positive attitude toward technology in adult educators and adult learners.

- Provide incentives (recognition, rewards) for learning and using technology
- Find ways to make technology fun
- Demonstrate how tech skills are applicable to real life
- Develop advocates/mentors

Access Goal *(infrastructure, resources, partnerships)*
Ensure frequent and convenient access to technology for adult educators and adult learners.

- Form partnerships
- Budget appropriately
- Share resources
- Establish distance learning opportunities

Aptitude Goal *(knowledge, skills, abilities)*
Ensure the technology competence of adult educators and adult learners.

- Identify necessary technology skills
- Provide training and professional development
- Provide opportunities for skill development of adult learners

Application Goal *(instructional strategies, communication, accountability)*
Create learning environments where technology facilitates and enhances the instructional process.

- Develop a technology plan
- Integrate technology into the classroom
- Utilize technology for communication
- Provide a data collection system

Evaluating the Effectiveness of the Technology Plan

As the Technology Plan is implemented, it will be necessary to evaluate its effectiveness. Because technology changes rapidly, planning should be ongoing and continuous. The evaluation process should be a guide and include methods and tools that measure and record progress toward the achievement of the goal.

The ETTF recommends the use of the tools and methods described below to evaluate the effectiveness of the Technology Plan.

ETTF Recommendations for Educational Technology

Arizona State Plan for Adult Education:

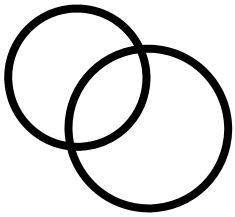
The Technology Plan should be incorporated into the State Plan

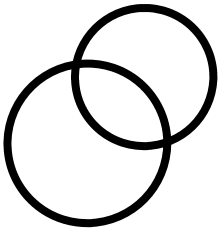
Request for Proposal (RFP):

Request for Proposals and grant applications issued by the Adult Education Unit should include criteria consistent with the implementation of the Technology Plan

Data Collection System:

- Technology Plan criteria should be incorporated into the Data Collection System
- Funded Adult Education programs should be required to submit technology-related data to the Data Collection System





Inventories:

- Programs should do annual inventories of hardware and software (owned/accessed) and input the results into the Data Collection System
- Inventory results should be analyzed and used to provide recommendations for Technology Plan revisions

Surveys:

- ADE/AE should survey programs annually regarding attitude, access, aptitude, and application
- Survey results should be analyzed and used to provide recommendations for Technology Plan revisions

State Technical Assistance Reviews (STAR):

- Criteria based on the Technology Plan should be incorporated into the STAR process
- STAR reports should be analyzed, and reviewed programs should be provided with recommendations for technology-related program improvement

Annual Program Reports:

- Criteria based on the Technology Plan should be incorporated into the annual report requirements
- Annual reports should be analyzed, and programs should be provided with recommendations for technology-related program improvement.

Table 3: Strategic Plan for Arizona Adult Education

	ACTION GOALS	STRATEGIES / RESPONSIBILITY / TIME FRAME	DOCUMENTATION
ATTITUDE	Foster a positive attitude toward technology	Embrace the change element inherent in technology and use as an opportunity to grow; **ADE/AE and Providers**; *ongoing* Model effective technology planning; **ADE/AE and Providers**; *ongoing* Encourage the use of technology to promote lifelong learning; **ADE/AE and Providers**; *ongoing* Develop advocates/mentors; **ADE/AE and Providers**; *ongoing* Demonstrate how technology skills are applicable to family, workplace and community; **Providers**; *ongoing* Provide incentives (recognition, rewards) to students and staff for learning and using technology; **Providers**; *ongoing* Find ways to make technology fun; **Providers**; *ongoing* Reward programs for effective technology planning; **ADE/AE**; *ongoing*	State Plan, RFP, Annual Program Report, STAR Reports, Survey Results
ACCESS	Form partnerships to increase access to technology	Encourage collaboration efforts; **ADE/AE**; *ongoing* Collaborate with other entities for access to computer labs and other equipment; **Providers**; *ongoing* Collaborate with other entities to provide technology training for staff; **ADE/AE and Providers**; *ongoing*	State Plan, RFP, Annual Program Report, Survey Results
	Budget for purchase and maintenance of hardware/software	Inventory hardware/software; **ADE/AE and Providers**; annually Dedicate a portion of budget toward hardware/software purchases; **ADE/AE and Providers**; *annually* Purchase new and replacement hardware/software as needed; **ADE/AE and Providers**; *ongoing*	State Plan, Data Collection System, Annual Program Report, Inventory Results
	Share resources to maximize the availability of technology	Purchase statewide licenses for software if appropriate; **ADE/AE**; *ongoing* Collaborate to purchase hardware/software in bulk at discounted prices; **ADE/AE and Providers**; *ongoing* Redistribute equipment as new equipment is purchased; **Providers**; *ongoing*	State Plan, Annual Program Report, Inventory Results
	Establish Distance Learning opportunities	Apply for opportunities to pilot and offer DL projects; **Providers**; *ongoing* Fund DL projects and train program personnel; **ADE/AE**; *ongoing* Participate in Project IDEAL; **ADE/AE**; 7/04 Expand DL by replicating best practices learned from DL projects; **ADE/AE and Providers**; 7/05	State Plan, RFP, Annual Program Report, Data Collection System, Survey Results
APTITUDE	Identify the necessary technology skills of adult educators	Develop a tool for programs to determine the professional development and training needs of staff; **ADE/AE**; 7/03 Survey programs regarding educational technology access, application, barriers, aptitudes and attitudes; **ADE/AE**; *annually* Use results of surveys to plan and provide state leadership activities; **ADE/AE**; *ongoing* Require a specified level of technology competence for new hires; **Providers**; 7/06 Recommend a specified level of technology competence for Adult Education certification; **ADE/AE and Providers**; 7/07	State Plan, Annual Program Report, Survey Results, STAR Reports
	Provide technology training and professional development	Assist adult education staff with the acquisition of technology skills; **Providers**; *ongoing* Provide training in integrating educational technology into adult education classrooms; **ADE/AE and Providers**; *ongoing*	State Plan, Annual Program Report, STAR Reports
	Provide adult learners with an opportunity to develop technology skills	Form a team to determine what adult learners must know and be able to do in terms of technology skills; **ADE/AE**; 5/03 Develop and publish Adult Education Technology Standards; **ADE/AE**; 7/04 Disseminate Adult Education Technology Standards to all adult educators; **ADE/AE and Providers**; 10/04 Require programs to implement the Adult Education Technology Standards; **ADE/AE**; 7/05 Integrate technology into Adult Education classrooms; **Providers**; *ongoing*	State Plan, Standards Document, Survey Results, Annual Program Report, STAR Reports
APPLICATION	Create and maintain a technology plan	Develop program-specific technology plan; **Providers**; 7/06 Evaluate and revise the technology plan; **ADE/AE and Providers**; *annually*	State Plan, Survey Results, Inventory Results
	Integrate educational technology into adult education classrooms	Implement the Adult Education Technology Standards; **Providers**; 7/05 Identify and replicate best practices in terms of educational technology use; **ADE/AE and Providers**; *ongoing* Utilize technology to address multiple approaches to learning; **Providers**; *ongoing* Provide appropriate and effective assistive technology devices for staff and students; **Providers**; *ongoing*	State Plan, Annual Program Report, STAR Reports, Data Collection System
	Utilize technology to improve communication	Expand the use of online list serves and discussion groups for training and communication purposes; **ADE/AE and Providers**; *ongoing* Utilize technology in place of physical meetings when appropriate (Web cams, tele-conferencing, etc.); **ADE/AE and Providers**; *ongoing* Distribute written material electronically when appropriate (memos, newsletters, etc.); **ADE/AE and Providers**; *ongoing*	State Plan, Annual Program Report, STAR Reports
	Provide a data collection system	Provide enhancements to the online data collection system; **ADE/AE**; 7/06 Collect, analyze, and interpret student and program data to inform instruction; **ADE/AE and Providers**; *annually* Identify and replicate best practices in terms of assessment and accountability; **ADE/AE and Providers**; *ongoing*	State Plan, Data Collection System

Conclusion

The Technology Plan for Arizona Adult Education will assist Adult Education programs throughout the State to fully integrate technology into their educational settings. It will also help these programs to ensure that their students are developing the technology skills needed to function successfully in today's world. Under the guidance of the Arizona Department of Education, Adult Education Services Unit, programs will undertake systemic changes with implications in budget and resource allocation, professional development and training, certification and hiring criteria, curriculum content and assessment, accountability and data issues, and the structure and scheduling of classes. By providing a state-wide system for delivering distance learning, Arizona Adult Education will provide its learners with anytime, anywhere lifelong learning opportunities through technology-assisted instruction. Doing so will help to enable the State's workforce to remain competitive globally while enriching community, family, and personal growth.

Appendix A: The Values for Technology in Arizona Adult Education

The ETTF determined that in order to achieve full Technology Integration, Arizona's adult educators should embrace these values:

1) **Interpersonal interaction as essential to the delivery of quality Adult Education**

   As evidenced by – The continuing role of teachers interacting with students and students interacting with each other supported by technology rather than replaced by it.

2) **An individualized approach to learning**

   As evidenced by – The ability of technology to provide flexible instruction that is in the context of the students – their families, their communities, and their learning preferences.

3) **The lifelong learning aspects of technology**

   As evidenced by – The ability of technology to promote and enhance opportunities of lifelong learning for the adult.

4) **High quality content**

   As evidenced by – High quality Adult Education programs using technology to engage the learner and support the learner in reaching his or her goals.

5) **Equal access**

   As evidenced by – Every student and every instructor having access to available technology such as the Internet and communications technology.

6) **Personal growth**

   As evidenced by – Student initiated learning through technology.

7) **The ability and capacity of all people to learn**

   As evidenced by – Assistive technology that offers additional options to structure the learning environment in the manner that best accommodates the needs of each student.

8) **Multiple approaches to delivery**

As evidenced by – The use of many different types of technologies, including but not limited to computers, to enhance the opportunities for individuals to learn in the way that best meets their learning styles.

9) **Our students**

As evidenced by – Our recognition of their abilities to overcome obstacles and excel in education and be recognized as contributors to their communities and to the workforce.

10) **Confidentiality and integrity of systems**

As evidenced by – The use of technology in Adult Education in ways that assure confidentiality to instructors and students and maintain the highest level of integrity possible.

11) **Our instructors, aides, and tutors**

As evidenced by – Support for professional development for Adult Education instructors, aides and tutors.

12) **Change**

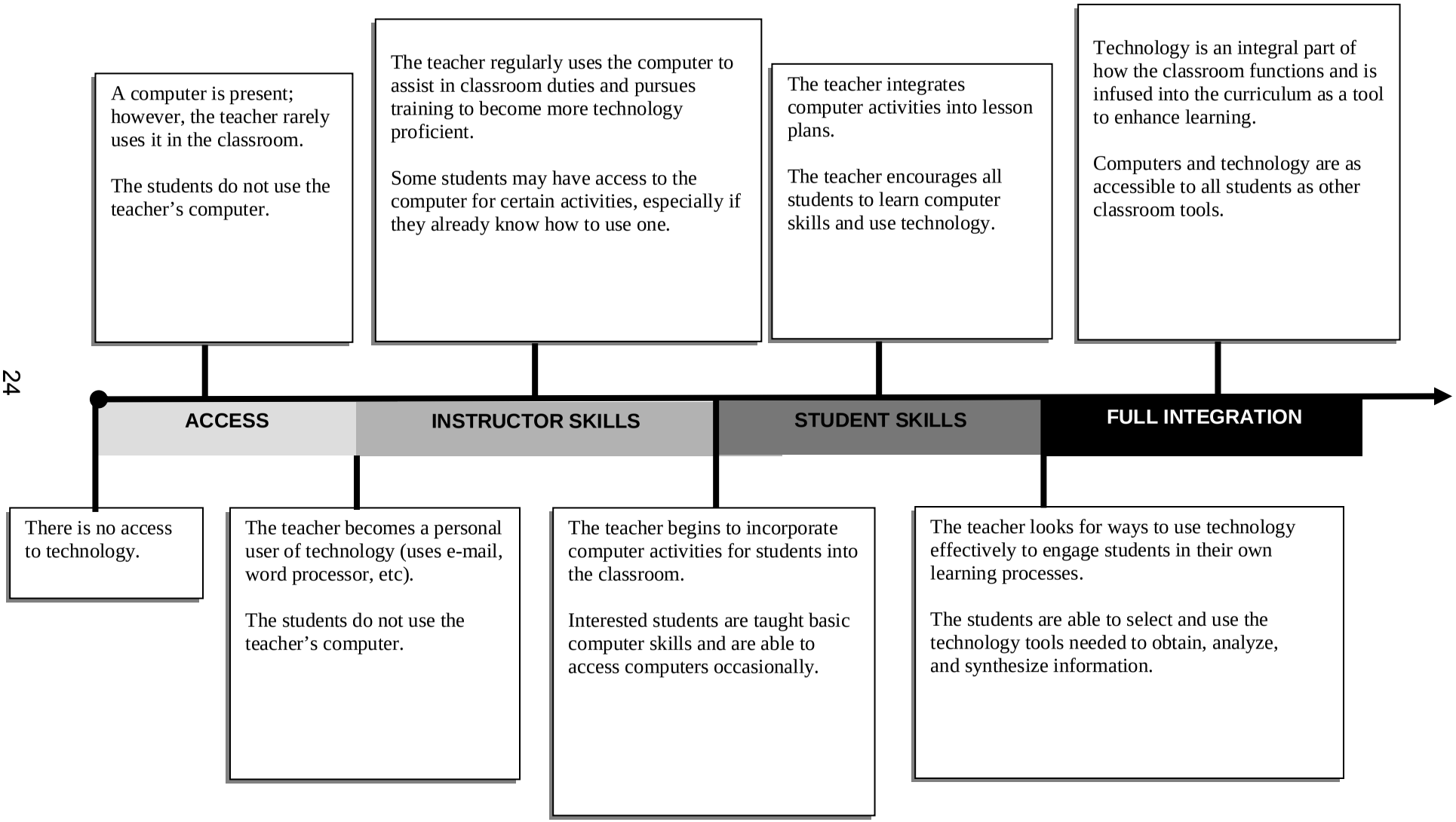
As evidenced by – The embracement of change inherent in technology in order to grow, learn, and offer even more to our students.

13) **Collaboration among Adult Education providers**

As evidenced by – The creation of partnerships and consortiums to share resources, including but not limited to: curriculum, funding, technology development, and technology support.

Appendix B: Technology Integration Continuum for Arizona Adult Education

The ETTF developed the Technology Integration Continuum in order for programs to locate their present location and move towards full technology integration.



Appendix C: Technology Self Assessment Survey for Arizona Adult Education

Name: Date:	**Staff/Faculty Technology SELF ASSESSMENT SURVEY**			
Please check the appropriate box: ❑ Administrator ❑ Teacher ❑ Data Entry Staff ❑ Other Staff	**Place an "X" in the appropriate box** **YES** **I can do this.** **I know this.** **I have this.**	**NO** **I can do this but I need help.**	**This is hard for me.**	**I can't do this at all. I don't know how.**
Basic Computer Skills: I can…				
turn a computer, monitor, and printer on/off.				
use a mouse and/or keyboard.				
access a floppy disk drive.				
recognize floppy and CD-ROM disks.				
understand the meaning of the hourglass.				
open a desktop (icon) program.				
open a program using the START menu.				
name basic computer parts.				
type a simple document.				
restart a computer (Ctrl-Alt-Del or reboot).				
print a document.				
save and locate a file.				
minimize and maximize programs.				
Other Computer Skills: I can…				
select appropriate software for a task.				
use help screens.				
add a graphic to a document.				
scan a photo and/or text.				
integrate multimedia into a presentation (animation, graphics, sound).				
acquire an image from the Internet, a scanner, and/or a digital camera.				
develop a Web page.				
Program/Software Skills: I can use…				
word processing programs (e.g., Word®).				
spreadsheet applications (e.g., Excel®).				
database programs (e.g., Access®).				
graphics presentations (e.g., PowerPoint®).				
instructional software (specify).				
antivirus software (e.g., Norton®, McAfee®).				
desktop publishing software (e.g., Publisher®).				
Internet: I can…				
use a search engine.				
save a Web site as a "Favorite"/"Bookmark."				
use the "Back" and "Forward" features.				
use links in a Web page.				
print a Web page.				
acquire an image or text.				
use the Internet as an instructional tool.				

	Place an "X" in the appropriate box			
	YES	NO		
	I can do this. I know this. I have this.	I can do this but I need help.	This is hard for me.	I can't do this at all. I don't know how.
E-mail: I can…				
use a personal/corporate e-mail address.				
log in to check my e-mail.				
write and send a message.				
send e-mail to more than one person.				
get and read new e-mail.				
save and delete messages.				
attach a file.				
use "Netiquette."				
Other Technology: I can use…				
a LCD (computer projector).				
a TV and/or VCR.				
an overhead projector.				
a copier and/or fax machine.				
a digital camera.				
a cassette tape player.				
Operating System: I know…				
which operating system my computer uses.				
Data Entry Staff Only: I can…				
run a Federal report on the ADE Web site.				
follow instructions from the listserv to download data to an Access® database.				
run queries sent through the listserv.				
write my own queries.				
	Circle the number that best describes you			
Overall Assessment	Agree			**Disagree**
I feel ***comfortable*** using technology.	**4**	**3**	**2**	**1**
I ***enjoy*** using technology.	**4**	**3**	**2**	**1**
I would like more training ***(add specifics to comments below).***	**4**	**3**	**2**	**1**
Teachers Only:				
I often use technology when I teach.	**4**	**3**	**2**	**1**
I prefer teaching without technology.	**4**	**3**	**2**	**1**
I believe that my students should learn to use technology.	**4**	**3**	**2**	**1**
Comments:				

Appendix D: Survey of Technology in Arizona Adult Education Programs

Percentage of teachers in program with these technology skills:					
Check appropriate box:	0-25%	26-50%	51-75%	76-100%	Don't Know
Basic computer skills					
Internet					
Productivity Tools (word processing, spreadsheet, database)					
Instructional software					
Presentation Tools (PowerPoint®)					
Graphics (Photoshop®, scanners, digital camera)					
Digital video					
Web publishing					
Multimedia software (Director®, HyperStudio®, Authorware®)					
Desktop video conferencing					
Percentage of teachers in program who use technology to:					
Check appropriate box:	0-25%	26-50%	51-75%	76-100%	Don't Know
Create lessons or activities for students					
Drill and practice					
Access lesson plans on the Web					
Have students create products or conduct research					
Evaluate and select appropriate software					
Keep student records (classroom management tools)					
Support assessment					
E-mail students to encourage writing and learning					
Support collaboration and teamwork between students					
Build students' knowledge through models and simulations					
Access electronic fieldtrips to museums, science centers, etc.					
Support distance learning (Internet-based, broadcast instruction, AV conferencing, other DL)					
Percentage of teachers in program who use technology for professional development to:					
Check appropriate box:	0-25%	26-50%	51-75%	76-100%	Don't Know
Access articles or other professional development resources on the Web					
Access research and other materials for teacher research projects					
Communicate with other teachers or experts via Internet (Listservs)					
Use online tutorials					
Participate in e-courses or other DL opportunities					

Support for technology offered by the program:					
Check appropriate box:	Not Offered	Offered but not Adequate	Moderately Adequate	Very Adequate	Don't Know
Dedicated staff to provide technical assistance					
Staff development in using technology for administration and management					
Staff development in integrating technology into instruction					
Staff development in technology planning					
Opportunities for practitioners to share technology expertise					
Budgeting for obtaining hardware/software					
Budgeting for technology planning					
Budgeting for instructional staff planning time					

Barriers to technology use within the program:					
Check appropriate box:	Not a Barrier	Minor Barrier	Moderate Barrier	Serious Barrier	Don't Know
Lack of up-to-date equipment					
Inadequate access					
Lack of leadership					
Lack of paid time to participate in staff development					
Lack of effective staff development					
Inadequate technical assistance					
Not enough paid time to develop a comfort level using technology					
Lack of effective models for using technology					
Other pressing issues of higher importance					

Program Description:

Identify the type of program:

□ Community College	□ School District	□ Library	□ CBO	□ Worksite	□ Corrections	□ Other (please describe)

Identify learner levels taught (check all that apply):

□ ABE Beg. Lit.	□ ABE 1	□ ABE 2	□ ABE 3	□ ASE 1	□ ASE 2
□ ESOL Beg. Lit.	□ ESOL 1	□ ESOL 2	□ ESOL 3	□ ESOL 4	□ ESOL 5

□ Other (please describe)

Does your program have a technology plan? □ YES □ NO

If yes, who was involved in the development of the plan (check all that apply)?

□ Instructional staff □ Support staff □ Program director □ Technology specialist □ Learners □ Other (please describe)

Explanation of Survey Items

Percentage of teachers in program with these skills:	
Basic computer skills	Teacher is able to turn on/off computer, monitor and printer, use a mouse/keyboard, access a disk drive, open a program, print a document, save and locate a file, minimize/ maximize programs
E-mail	Teacher is able to receive and read messages, write and send messages, save and delete messages, attach files to messages
Internet	Teacher is able to access the Internet and open a Web site, use links in a Web page, use forward and back, use a search engine
Productivity tools	Teacher is able to produce documents using word processing software (e.g., Word®) and/ or spreadsheet software (e.g., Excel®)
Instructional software	Teacher is able to use instructional software (e.g., Plato®, SkillsTutor®, Rosetta Stone®) as a component of the classroom curriculum
Presentation tools	Teacher is able to produce and give a presentation using presentation software (e.g., PowerPoint®)
Graphics	Teacher is able to access pictures and graphics from the Internet, digital camera and/or scanner, enhance or alter graphics, use graphics in presentations or documents
Digital video	Teacher is able to use a digital video camera to capture and edit video clips, transfer video clips to a computer, and create video productions
Web publishing	Teacher is able to create and publish a Web site
Multimedia software	Teacher is able to create products using multimedia software (e.g., Director®, Authorware®, HyperStudio®)
Desktop video conferencing	Teacher is able to use a desktop computer to send and receive video, audio, and text in real time via the Internet
Percentage of teachers in program who use technology to:	
Create lessons or activities for students	Regular use of technology to create lessons and/or activities for students (e.g., use word processing software to create and print flash cards, use a tape recorder to create and present a dictation lesson)
Drill and practice	Regularly has students use instructional software that is based on "drill and practice" (repetition of new skills) activities (e.g., MathBlaster®, WordSmart®, Typing Tutor®)
Access lesson plans on the web	Regular use of the Internet as a resource to find lesson plans to use or for ideas
Has students create products or conduct research	Regularly plans and implements lessons in which students use technology to create products (e.g., résumé, poster, newsletter, etc.) and/or conduct research (e.g., use a search engine, explore various sites on a specific topic, etc.)
Evaluate and select appropriate software	Regularly use online resources to assist in the evaluation and selection of appropriate software
Keep student records	Regular use of appropriate software to keep student records (e.g., attendance, test scores, etc.)
Support assessment	Use of technology to administer, score and/or analyze student assessment (e.g., TABE-PC®, Scantron®, etc.)
E-mail students to encourage writing and learning	Maintain correspondence with students via e-mail for the purpose of encouraging students' writing and/or learning
Support collaboration and teamwork between students	Regular use of technology to facilitate collaboration and teamwork between students (e.g., students work together to create and print a newsletter, students use a listserv or online discussion group to communicate with each other)
Build students knowledge through models and simulations	Regular use of computer simulations and/or models by students to enhance learning (e.g., online human anatomy models, interactive computer "dissections", virtual science experiments, etc.)
Access electronic fieldtrips to museums, science centers, etc.	Regular use of technology to incorporate classroom "fieldtrips" into the curriculum by "visiting" interactive Web sites (e.g., botanical gardens, Smithsonian.org, Aquarium of the Pacific, NASA, etc.)
Support distance learning (Internet-based, broadcast instruction, AV conferencing, other DL)	Teacher has created an environment where student learning is achieved over distances by utilizing technology such as (but not limited to) the Internet, cable-television, videoconferencing, etc.

Percentage of teachers in program who use technology for professional development to:	
Access articles or other professional development resources on the Web	Teacher uses resources found on the Internet to further develop his/her abilities as an adult educator
Access research and other materials for teacher research project	Teacher uses resources found on the Internet to conduct his/her own research project(s)
Communicate with other teachers or experts via Internet (listservs)	Teacher uses the Internet to communicate with others for the purpose of professional development (e.g., participation in a work/study group, conduct research, etc.)
Use online tutorials	Teacher uses online tutorials to learn new skills (e.g., PowerPoint® Tutorial®, etc.)
Participate in e-courses or other DL opportunities	Teacher has participated in one or more distance education courses as a distance learner
Support for technology offered by program:	
Dedicated staff to provide technical assistance	Staff is available whose main or sole purpose is to provide technical assistance with technology related issues
Staff development in using technology for administration and management	Program offers (or requires) staff development/training in the use of technology for administrative/management purposes (e.g., training on how to import and use program data, etc.)
Staff development in integrating technology into instruction	Program offers (or requires) staff development/training in how to effectively integrate technology into an adult education classroom (e.g., digital story telling, lesson ideas for first-time computer users, etc.)
Staff development in technology planning	Program offers (or requires) staff development/training in how to plan for technology so that access, application, aptitude and attitude are addressed (e.g., training in how to select software, etc.)
Opportunities for practitioners to share technology expertise	Staff is given regular opportunities and incentives to share technology expertise with each other (e.g., workshops presented by teachers for teachers, one-on-one mentoring, etc.)
Funding for obtaining hardware/ software	Program budget provides adequately for hardware and software purchases and updates
Funding for technology planning	Program budget provides paid time satisfactorily for technology planning
Funding for instructional staff planning time	Program budget provides paid time suitably for instructional staff to plan lessons
Barriers to technology use within the program:	
Lack of up-to-date equipment	Computers and equipment are out-of-date
Inadequate access	Many teachers/students do not have access to computers/technology
Lack of leadership	Program leadership is unable or unwilling to facilitate the program's technology advancement
Lack of paid time to participate in staff development	Program budget is unable to provide paid time for instructional staff to attend staff development on technology
Lack of effective staff development	Available staff development training does not adequately address the technology needs of the program
Inadequate technical assistance	Technical assistance is not adequately available to address the technology needs of the program
Not enough paid time to develop a comfort level using technology	Program budget is unable to provide enough paid time for instructional staff to become comfortable using technology in the classroom
Lack of effective models for using technology	An appropriate model for integrating technology into the adult education classroom is not available
Other pressing issues of higher importance	Program resources are currently directed toward other areas of higher priority

Complete Survey Results (August 2004)

Percentage of teachers in program with these technology skills:						
Check appropriate box:	0-25%	26-50%	51-75%	76-100%	Don't Know	# of Respondents
Basic computer skills			2	21		23
E-mail		1	3	19		23
Internet		1	5	17		23
Productivity tools (word processing, spreadsheet, database)	1	3	8	11		23
Instructional software	4	3	7	9		23
Presentation tools (PowerPoint®)	9	6	6		2	23
Graphics (Photoshop®, scanners, digital cameras)	9	7	5	1	1	23
Digital video	14	6	1	1	1	23
Web publishing	17	2	1	1	2	23
Multimedia software (Director®, HyperStudio®, Authorware®)	19	1	1	1	1	23
Desktop video conferencing	19	2		1	1	23
Percentage of teachers in program who use technology to:						
Check appropriate box:	0-25%	26-50%	51-75%	76-100%	Don't Know	# of Respondents
Create lessons or activities for students	4	2	8	9		23
Drill and practice	4	6	6	7		23
Access lesson plans on the Web	3	5	9	6		23
Have students create products or conduct research	10	8	3	2		23
Evaluate and select appropriate software	11	6	3	3		23
Keep student records (classroom management tools)	7	5	6	5		23
Support assessment	8	6	2	4	3	23
E-mail students to encourage writing and learning	17	3		2	1	23
Support collaboration and teamwork between students	12	5	3	1	2	23
Build students' knowledge through models and simulations	14	5	3		1	23
Access electronic fieldtrips to museums, science centers, etc.	18	1	2	1	1	23
Support distance learning (Internet-based, broadcast instruction, AV conferencing, other DL)	16	3	1	2	1	23
Percentage of teachers in program who use technology for professional development to:						
Check appropriate box:	0-25%	26-50%	51-75%	76-100%	DK	# of Respondents
Access articles or other professional development resources on the Web	2	9	6	5	1	23
Access research data and other materials for teacher research projects	7	6	4	4	2	23
Communicate with other teachers or experts via Internet (listservs)	7	7		8	1	23
Use online tutorials	11	5	3	2	2	23
Participate in e-courses or other DL opportunities	11	5	1	2	4	23

Complete Survey Results (August 2004) *Continued*

Support for technology offered by the program						
Check appropriate box	Not offered	Offered but not Adequate	Moderately Adequate	Very Adequate	Don't Know	Number of Respondents
Dedicated staff to provide technical assistance	6	3	9	5		23
Staff development in integrating technology into instruction	6	7	7	2	1	23
Staff development in technology planning	11	6	4	2		23
Opportunities for practitioners to share technology experience	7	6	8	2		23
Budgeting for obtaining hardware/software	2	10	8	3		23
Budgeting for technology planning	9	7	4	2	1	23
Budgeting for instructional staff planning time	3	5	8	6	1	23

Barriers to technology use within the program						
Check appropriate box	Not a Barrier	Minor Barrier	Moderate Barrier	Serious Barrier	Don't Know	Number of Respondents
Lack of up-to-date equipment	6	9	7	1		23
Inadequate access	6	9	4	3	1	23
Lack of leadership	13	6	2	1	1	23
Lack of paid time to participate in staff development	11	4	5	3		23
Lack of effective staff development	6	10	3	2	2	23
Inadequate technical assistance	5	8	6	4		23
Not enough paid time to develop a comfort level using technology	3	9	5	5	1	23
Lack of effective models for using technology	4	7	7	4	1	23
Other pressing issues of higher importance	1	2	9	8	3	23

Program Description

Identify the type of program:

6 Community College	5 School District	1 Library	10 CBO	0 Worksite	1 Corrections	1 Other (County one-stop)

Identify Learner levels taught (check all that apply):

20 ABE Beg. Lit.	23 ABE 1	23 ABE 2	23 ABE 3	22 ASE 1	20 ASE 2
18 ESOL Beg. Lit.	20 ESOL 1	20 ESOL 2	20 ESOL 3	20 ESOL 4	18 ESOL 5

1 Other (Citizenship)

Does your program have a technology plan? 12 YES 11 NO

If yes, who was involved in the development of the plan? (check all that apply):

11 Instructional 8 Support staff 11 Program director 7 Technology specialist 1 Learner
1 Other agencies 1 Library staff; discussion & observation with staff

The contents of this publication were developed with funds allocated by the U.S. Department of Education under Title II, Adult and Family Literacy Act, Workforce Investment Act of 1998.

Printed in Phoenix, Arizona, by the Arizona Department of Education: Copies (TBD), Total Cost (TBD), Unit Cost (TBD)