Maryland Adult Education Technology Standards

MARYLAND

Maryland Adult ESL Program Standards

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Learner Technology Standards

Technology is revolutionizing how people learn, communicate, pursue leisure activities, and do their jobs in today's rapidly changing, information-rich society. Technology is impacting every aspect of our lives, from how we access government services to how we communicate and gain knowledge. To be successful in a society marked by the rapid development of new information and communication technologies, adults must be able to use technology effectively. Adult education learners should be provided the opportunity to use technology as part of their instructional program. The use of technology in instruction can enhance the ability of adult learners to find, analyze and evaluate information; solve problems and make decisions; communicate, collaborate and share ideas; to be informed, responsible and contributing citizens; and to learn how to learn and keep up with the world as it changes.

Maryland's Vision for Technology in Adult Education

Every adult learner has access to and use of technology in instructional settings. Technology supports achievement, enabling learners to be effective family members, independent and competent members of a dynamic workforce and global economy, as well as creative thinkers, effective communicators and problem solvers.

The Maryland Adult Education Learner Technology Standards are designed to guide teachers in designing instruction that is supported by technology. Learners become engaged in activities that integrate instructional content and relevant educational technology skills. Effective integration enables learners to select technology tools to obtain, analyze, synthesize and present information and ideas. Ideally, technology should become as accessible and integral as all other instructional tools.

The technology standards specify what a learner in an adult education program should know and be able to do; they describe the range of desirable knowledge and skills. The standards are meant to provide a guide and ensure consistency across programs and classrooms. While the standards guide instruction, the integration of technology will be individualized to achieve learner and local program goals.

This publication is designed to provide teachers and educational decision makers with standards and performance indicators to guide them in creating technology-supported learning environments that should prepare learners to:

1. Understand basic technology concepts to operate computers, calculators, and other technologies
2. Construct meaning from information
3. Create a quality technology-based product
4. Learn independently with appropriate support
5. Communicate effectively
6. Participate effectively as group members
7. Use information responsibly

Adult Education Learner Technology Standards and Competencies

The *Learner Technology Standards* include a full range of technology skills learners should ideally be able to achieve. This is not a checklist of what each learner should accomplish in an adult education class. Instead, skills addressed should be selected based on available technology and the learning needs of individual learners.

Standard	Indicator of Competency
1. Learners understand basic technology concepts to operate computers, calculators and other technologies.	**A.** *Use input devices to successfully operate computers, VCRs, audiotapes, and other technologies* • Correctly turn on and off appropriate technology • Use a mouse and its buttons to operate simple programs • Identify the keys on a keyboard • Demonstrate keyboarding skills
	B. *Use output devices to successfully operate computers, VCRs, audiotapes, and other technologies* • Use computer monitor • Use computer printer • Record using videotapes and audiotapes • Save computer files
	C. *Demonstrate proper care procedures for a variety of hardware and software* • Use the keyboard, mouse, touch screen or other available input devices with regard for appropriate procedures • Identify and recognize care procedures for a variety of hardware and software • Follow class rules related to the use of technology
	D. *Use a computer word processing program to effectively create, edit, save, print, and open files*
	E. *Use a variety of available technology resources for both directed and independent learning activities*
	F. *Utilize multimedia to accomplish a specific task*
	G. *Communicate about technology using accurate terminology* • Develop vocabulary to include descriptions, processes and strategies
	H. *Use multimedia resources, such as interactive books, educational software and multimedia encyclopedias to support learning*
	I. *Discuss common uses of technology in daily life and the advantages and disadvantages those uses provide*
	J. *Know basic strategies for identifying and solving routine hardware and software problems that occur during everyday use (know when and whom to ask for help)*
	K. *Make informed choices among technology options and resources*
	L. *Demonstrate healthy computer ergonomics such as appropriate posture and hand/wrist positions when using any type of keyboard*
	M. *Identify and use resources and strategies for keeping abreast of advances in technology*

Adult Education Learner Technology Standards and Competencies

Standard	Indicator of Competency

2. Learners construct meaning from information.

A. Determine information needs
- State the purpose
- Explore options
- Define a manageable focus

B. Develop information seeking strategies to locate information
- Frame appropriate questions
- Identify likely technology-based sources of information
- Use a variety of strategies
- Build a reasonable timeline

C. Use a variety of technology resources and tools
- Use appropriate technology resources for directed listening, viewing, reading, problem-solving, and organizing activities
- Use a variety of technology resources, including calculators, video, educational software and Internet for problem solving, self-directed learning, and extended learning activities
- Choose and use a variety of appropriate electronic searching tools including online catalogs and databases, Internet browsers and electronic reference books

D. Acquire information
- Use a variety of technology resources and tools
- Determine which technology tools are the most useful for the specific purpose and context
- Read for significant details and concepts
- Extract appropriate details and concepts
- Record bibliographic information using currently accepted formats

E. Identify and evaluate sources of information

F. Analyze information relative to need
- Identify criteria and evaluate accuracy, format, relevance, appropriateness, quality, comprehensiveness, authoritativeness, completeness, reliability, and timeliness of electronic information sources
- Apply criteria to information
- Select appropriate material

G. Organize information
- Classify and sort information independently
- Assemble material to meet information needs

H. Process information
- Integrate information from a variety of sources
- Make inferences & draw conclusions
- Construct meaning
- Build connections to prior knowledge

I. Act on information
- Answer a question; satisfy a curiosity
- Take informed action
- Develop a product
- Solve a problem
- Present information

J. Evaluate process and product

Adult Education Learner Technology Standards and Competencies

Standard	Indicator of Competency
3. Learners create a quality technology-based product.	A. *Recognize a quality technology-based product*
	B. *Plan a quality technology-based product* • Establish a clear purpose • Consider the audience • Determine product content • Choose format • Develop process • Identify necessary resources
	C. *Create and present a quality technology-based product* • Use general-purpose technology-based productivity tools and resources • Integrate appropriate media • Communicate clearly
	D. *Evaluate a quality technology-based product*
4. Learners learn independently with appropriate support.	A. *Use technology to accomplish personal goals*
	B. *Independently establish clear information goals and manage progress toward achieving goals*
	C. *Independently consult media sources* • Read for pleasure, to learn and to solve problems • Use media sources for information and personal needs • Seek answers to questions • Consider alternative perspectives • Evaluate differing points of view
	D. *Explore topics of interest* • Use the public library media center and other information sources • Ask for help • Recognize organization and structure of information centers
	E. *Keep up-to-date on new technologies that may be useful for communicating, managing information, solving problems, and carrying out daily tasks*
5. Learners communicate effectively.	A. *Determine communication needs* • Establish a clear purpose • Consider the audience • Choose appropriate format
	B. *Use a variety of technology resources (word processing documents, the Internet, E-mail, online discussions) to interact, collaborate and publish*
	C. *Use a variety of formats*
	D. *Use a variety of applications to enhance communication*
	E. *Choose and use a variety of appropriate technology tools, such as spell check and grammar check*
	F. *Follow guidelines and etiquette for using electronic communications*

Adult Education Learner Technology Standards and Competencies

Standard	Indicator of Competency
6. Learners participate effectively as group members.	A. *Work cooperatively and collaboratively with peers in using technology*
	B. *Collaborate with peers to investigate curriculum-related problems, issues and information*
	C. *Collaborate with peers to develop products or solutions to problems*
	D. *Help group determine information needs* • Work with group to define project or problem parameters • Collaborate to determine common definitions, questions, processes, and information access skills
	E. *Accept and share responsibility for planning and producing a quality group product*
	F. *Collaborate to determine relevant information* • Select information using various resources and technologies • Work with others to organize information • Help integrate information from a variety of sources
	G. *Show respect for others' ideas, backgrounds and learning styles*
	H. *Offer useful information to the group and defend that information when appropriate* • Discuss opposing viewpoints constructively • Help create projects that reflect differences among individuals • Offer well thought-out evidence justifying information presented • Demonstrate effective interpersonal communication skills
7. Learners use information responsibly.	A. *Practice ethical usage of information and information technologies* • Adhere to copyright guidelines • Cite references in proper format • Do not plagiarize • Recognize copyright as protection for the copyright holder
	B. *Follow guidelines and etiquette using electronic information sources* • Utilize electronic resources to locate, retrieve, and transfer information
	C. *Maintain the physical integrity of information resources and facilities* • Follow policies and procedures • Preserve integrity of printed and electronic materials • Acknowledge and respect the rights of others
	D. *Recognize the need for equal access to technology-based material and resources*
	E. *Identify and evaluate sources of information for potential risk and benefit*
	F. *Understand that there are no oversight standards for the Internet, including chat rooms and Web sites*

Introduction to the Adult Education
Teacher Technology Standards

The meaningful use of technology supports instruction. Technology should be used with the specific purpose of enhancing the instruction of content or specific skills. Teachers must analyze the potential benefits of technology and select the appropriate learner standards based on academic learning goals. This purposeful use enables the achievement of both adult literacy learning outcomes and technology competencies.

The Adult Education Teacher Technology Standards specify what a teacher should know and be able to do to implement the full range of adult learner technology standards in instruction. The teacher standards are meant to provide a guide and ensure consistency across programs and classrooms. While the standards guide instruction, the integration of technology will be individualized to achieve learner and local program goals.

Technology is an area in which teachers may find themselves beyond their own comfort level. It is essential for teachers to take advantage of professional development and other opportunities to expand their knowledge base. Instructor hesitation and limitations in the area of technology need not limit learners.

The teacher standards are designed to provide teachers and educational decision makers with the standards and performance indicators to guide the development of skills teachers need to effectively use technology to enhance instruction. To create technology supported learning environments appropriate to the skills and instructional needs of adult learners, teachers should be able to:

1. Understand technology concepts and effectively utilize a variety of technologies
2. Explore, evaluate and use technology resources including applications, tools, educational software and electronic resources
3. Use technology to communicate information in a variety of formats
4. Demonstrate an understanding of the legal, social, ethical, and safety issues related to technology
5. Integrate technology into instruction
6. Understand issues surrounding the use of assistive technology to enhance student learning
7. Identify activities and resources to support regular professional growth related to technology

Adult Education Teacher Technology Standards and Competencies

The *Teacher Technology Standards* are designed to support teachers in implementing the Learner Standards. This is not a checklist of what each teacher should accomplish. Instead, standards should be selected based on skills and knowledge needed to implement appropriate learner standards to meet student needs.

Standard	Indicator of Competency
1. Technology Operations and Concepts Educators understand technology concepts and effectively utilize a variety of technologies.	A. Demonstrate knowledge of common uses of computers and technology in business, industry and society
	B. Use terminology related to computers and technology appropriately in written and oral communication
	C. Access and use a variety of currently available technologies
	D. Operate computers and peripherals
	E. Demonstrate healthy computer ergonomics such as appropriate posture and hand/wrist positions when using any type of keyboard
	F. Evaluate the usefulness of available technology for the specific purpose and context
	G. Select technology that is most useful for the specific purpose and context
	H. Apply basic troubleshooting strategies for hardware problems
	I. Access help or support resources in solving problems
2. Information Access, Evaluation and Application Educators explore, evaluate and use technology resources including applications, tools, educational software, and electronic resources.	A. Access and use a variety of technology resources to support instruction
	B. Use basic computer operations such as editing, file management and printing
	C. Understand the concept of networks and how to access them
	D. Use Internet applications such as Web browsers and search engines
	E. Evaluate the different types of available educational software and electronic resources for the specific purpose and content
	F. Select technology resources that are most useful for the specific purpose and context
	G. Evaluate software and electronic resource information critically and competently
	H. Understand and apply the accessible technology standards as required by ADA and Maryland State Law.
3. Communication Educators use technology to communicate information in a variety of formats.	A. Use technology to interact electronically
	B. Use Internet applications such as listservs, newsgroups and E-mail
	C. Use productivity tools to publish information

Adult Education Teacher Technology Standards and Competencies

Standard	Indicator of Competency
4. Legal, Social and Ethical Issues Educators demonstrate an understanding of the legal, social, ethical, and safety issues related to technology.	*A. Understand and uphold current copyright laws, rights and responsibilities*
	B. Design student learning activities which foster equitable, ethical and legal use of technology by students
	C. Develop and adhere to appropriate use policies as they apply to chat rooms, Web sites, etc.
	D. Make students aware of the dangers of some Internet resources to themselves and their families
5. Integrating Technology into the Curriculum and Instruction Educators integrate technology into instruction.	*A. Demonstrate knowledge of and use learner technology standards*
	B. Minimize the apprehension and intimidation students may experience when first exposed to computers
	C. Apply an understanding of the characteristics of adult learning in the selection and use of technology-based instructional strategies
	D. Select and use technology to support the implementation of effective teaching and learning strategies for addressing the diverse needs of learners
	E. Use multimedia and telecommunications as available to support instruction
	F. Plan, develop, assess, and implement instruction utilizing technology based on student needs
	G. Use technology to develop/enhance higher order thinking skills including problem solving, critical thinking, informed decision-making, and knowledge construction
	H. Manage a technology-enhanced environment to maximize student learning
6. Assistive Technology Educators understand issues surrounding the use of assistive technology to enhance student learning.	*A. Identify assistive technology resources that accommodate individual student learning needs*
	B. Use assistive technology in instruction
7. Professional Growth Educators identify activities and resources to support regular professional growth related to technology.	*A. Identify and use current curriculum and educational technology standards at the local, state and national level*
	B. Pursue and schedule opportunities for professional development
	C. Engage in ongoing professional development and growth using appropriate technology resources
	D. Identify resources and materials to support professional growth in the use of technology
	E. Participate in professional organizations, groups, training, conferences, etc. that enhance the use of computing and technology in instruction

Notes