Assistive Technology Resource Guide
For Arkansas Schools

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Foreword

Technology allows individuals to perform skills and tasks once thought to be difficult or impossible. Technology is more prevalent today than ever before and is rapidly changing, more available and affordable for users. Individuals live in homes and drive cars infused with smart technology, and their places of work use technology of all levels to make job tasks more efficient and effective.

In schools, technology used to increase or improve the independence of a student with a disability is called assistive technology. When assistive technology was first included in educational law as part of the Technology-Related Assistance for Individuals with Disabilities Act (Tech Act, 1988), it was generally focused on technology created for a specific disability such as a communication device for nonverbal students or a magnification product for students with low vision. With the advancement and infiltration of technology into all education, the gap has significantly narrowed between technology used by students with disabilities from that of their nondisabled peers. With an increased focus on personalized learning in education, assistive technology can be applied to a Universal Design for Learning Framework that benefits all students.

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Overview

In keeping with the vision and mission of the Arkansas Department of Education/ Special Education Unit (ADE/SEU), the Assistive Technology Resource Guide for Arkansas Schools was developed by the Arkansas Assistive Technology workgroup. This project was coordinated by the Easterseals Arkansas Outreach Program and Technology Services which is funded in part by the ADE/SEU. The purpose of this resource guide is to:

- Identify the legal requirements for AT in public schools;

- Provide clear guidance and useful resources to IEP and Section 504 teams on the consideration of AT for all students with disabilities;

- Provide clear and consistent definitions of AT devices for use statewide, as well as an understanding of low tech and high tech AT options;

- Provide practical and useful descriptions of AT services;

- Promote the use of AT across all environments through a collaborative approach with parents and professionals, leading to greater independence for the student; and

- Provide IEP or Section 504 teams, administrators, education professionals, related service providers, and families with appropriate resources to make informed decisions.

Introduction to Assistive Technology

Introduction

In the Preamble to the Individuals with Disabilities Education Improvement Act (IDEA), 2004, Congress stated: "Almost 30 years of research and experience has demonstrated that the education of children with disabilities can be made more effective by supporting the development and use of technology, including assistive technology devices and assistive technology services, to maximize accessibility for children with disabilities." Since that time, awareness of the significant role that technology plays in the education of all children has increased dramatically.

The National Education Technology Plan (NTEP, Office of Educational Technology, 2017) states that one of the main goals of education is that "All learners will have engaging and empowering learning experi ences in both formal and informal settings that prepare them to be active, creative, knowledgeable, and ethical participants in our globally connected society." The NTEP goes on to point out the numerous ways that technology makes this possible, including the importance of assistive technology in making learning accessible to all students. The first recommendation is: "States, districts, and post secondary institutions should develop and implement learning resources that embody the flexibility and power of technology to create equitable and accessible learning ecosystems that make learning possible everywhere and all the time for all students." (Office of Educational Technology, 2017, p. 25).

That powerful recommendation is backed up by research. The National Longitudinal Transition Study-2 (NLTS2) looked at post-secondary outcomes for students nationally and found that students with high incidence disabilities who received AT performed significantly better than those that did not receive AT (Bouck, 2016). Table 1 compares those outcomes.

Table 1. *Post-secondary outcomes for students with high incidence disabilities*

Outcome	Students who Received Assistive Technology	Students without Assistive Technology
Graduation	99.8%	79.6%
Post-Secondary Enrollment	80.9%	40.1%
Paying Job	80%	50.8%

NLTS2 indicated that only 7.8% of students with high-incidence disabilities reported receiving AT in high school.

Watson, Ito, Smith & Anderson (2010) found that initiating the use AT resulted in improvement in meeting IEP goals and objectives by students who were having difficulty achieving progress with stand ard classroom interventions. The study also suggested that the contribution of AT as an intervention strategy is greater

than any of the nine other possible intervention strategies they identified.

AT is an important part of the tools and strategies available to educators as they strive to provide an effective education for students with disabilities. Unfortunately, AT is often misunderstood, overlooked or under-utilized in schools.

Assistive Technology and Federal Law

The provision of AT devices and services is required by federal law and is specifically addressed in the Individuals with Disabilities Education Improvement Act (IDEA). IDEA clearly requires each public agency (that includes school districts) to ensure that AT is made available. The law states:

34 C.F.R § 300.105 Assistive Technology

(a) Each public agency must ensure that assistive technology devices or assistive technology services, or both, as those terms are defined in §§ 300.5 and 300.6, respectively, are made available to a child with a disability if required as a part of the child's:

(1) Special education under § 300.36;

(2) Related services under § 300.34; or

(3) Supplementary aids and services under §§ 300.38 and 300.114(a)(2)(ii).

(b) On a case-by-case basis, the use of school-purchased assistive technology devices in a child's home or in other settings is required if the child's IEP Team determines that the child needs access to those devices in order to receive a Free Appropriate Public Education (FAPE).

AT was first defined in law in the Technology Related Assistance for Individuals with Disabilities Act of 1988. The definition was incorporated in 1990 into the Individuals with Disabilities Education Act (IDEA) in 1990. Since that time, the responsibility to provide AT devices and services has been mandated in every IDEA revision, revisions of the Rehabilitation Act, and in the Americans with Disabilities Act. In stating that AT can be part of special education, related services, or supplementary aids and services, the intent was to make it clear that AT can be included in any part of a school district's services to their students with disabilities. There is no one "correct" place to address it, but rather, many ways to do it well.

A Free Appropriate Public Education (FAPE) has been the standard to which school districts are held since 1975. In 2017, the Supreme Court ruled in *Endrew F. vs. Douglas County School District* that schools must offer "an IEP reasonably calculated to enable a child to make progress appropriate in light of the child's circumstances." The program should be "appropriately ambitious" and "every child should have the chance to meet challenging objectives" (Howe, 2017). In many instances, the provision of AT devices and services would provide the access a student needs to meet more challenging objec tives and experience an appropriately ambitious program.

In IDEA 2004, AT is defined in the following ways:

34 C.F.R. § 300.5 Assistive Technology Device

Assistive technology device means any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of a child with a disability. The term does not include a medical device that is surgically implanted, or the replacement of that device.
(Authority: 20 U.S.C. 1401(1))

This definition is intended to be very broad, to communicate that it is really any "thing" that improves the function of a student. AT devices can fall within a wide spectrum of choices from low-tech items to high-tech items. Some items considered to be low-tech might include items that do not require power,
are easily programmed, and typically inexpensive, such as communication boards, pencil grips, high lighters, planners, etc. AT devices can also be high-tech items that usually have a power source, typically require programming, and are often expensive, such as dedicated speech generating devices, comput ers, tablets, power wheelchairs, etc. The law clearly states an item that is surgically implanted is not considered AT. Therefore, anything that requires a medical doctor to surgically embed something below skin level, such as a cochlear implant, is not AT and does not need to be provided or replaced by the school district.

The AT can be homemade, purchased, or adapted and highly customized. AT can be a system of items working together or a product system. AT can also be a mixture of low- and high-tech items in different environments/situations.

AT in Action

Lisa completes her academic work through Google Class room. She uses a tablet with a touch screen and an on screen keyboard.

Her tablet is connected to a printer through iOS AirPrint. For shorter writing assignments like multiple choice tests, Lisa uses a pencil grip with a slant board.

Lisa is using an assistive technology product system.

AT in Action

Sam uses a dedicated speech-generating device as his primary communication system in all environments, but during field day, Sam's speech-language pathologist made a laminated communication board.

Sam uses both high-tech and low-tech options for communication.

The table below provides a general idea of the scope of AT devices and the types of tasks they address. A comprehensive list of assistive technology devices can be found in Appendix A.

Table 2. *Examples of Assistive Technology*

Content Area	Low Tech to Mid Tech	High Tech
Motor Aspects of Writing	Easel Raised-lined paper	Word processing Word prediction
Communication	Communication boards, books, wallets, cards, etc. e-Tran board Step by Step Switch	Dedicated speech generating device Products from: PRC Saltillo Tobiidynavox
Computer Access	Keyboard template Alternative mouse	Head mouse Eye gaze interaction
Seating and Positioning	Non slip seat cushion Footrest	Adaptive positioning chair Stander
Mobility	Cane Wagon	Gait trainer Power wheelchair
Activities of Daily Living	Non slip mat Dressing aids	Power link/switch adaptation for appliances Environmental control system
Composition of Written Material	Dictionary/thesaurus Paper outline/organizer	Word prediction software Spelling and grammar check software
Reading	Slant board Reading strip Color overlay	Audio or e-books Refreshable Braille display
Math	Modified paper Graph paper	Talking calculator Math apps
Organization, Studying and Learning	Visual supports Sticky notes/index cards Study guide	Recorders/smart pens Electronic information system/app Computer
Recreation and Leisure	Large knobs Adapted books	Battery interrupted/switch controlled toys Sports wheelchair
Vision	Large print books Task lighting Bold line/high contrast	Screen readers Speech recognition/dictation software Braille technology systems
Hearing/Listening	Visual supports	Classroom sound system Closed captioning CCTV
Transportation	Sunglasses	Wheelchair lift

AT in Action

Kylon is a 1st grade student with a diagnosis of autism. Kylon uses a Handi writer to encourage a functional grasp. He uses Hi-Write paper to improve alignment and sizing when writing. Kylon is using AT devices.

There are many tasks a student must complete in their educational environment such as writing, moving, communicating, and reading. IDEA intends for AT to be considered and used, with students who require it. Another important component of IDEA is the definition of AT services.

34 C.F.R § 300.6 Assistive Technology Service

Assistive technology service means any service that directly assists a child with a disabil ity in the selection, acquisition, or use of an assistive technology device. The term in cludes: (Authority: 20 U.S.C. 1401(2))

- *The evaluation of the needs of a child with a disability, including a functional evaluation of the child in the child's customary environment;*

- *Purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices by children with disabilities;*

- *Selecting, designing, fitting, customizing, adapting, applying, maintaining, repairing, or replacing assistive technology devices;*

- *Coordinating and using other therapies, interventions, or services with assistive technology devices, such as those associated with existing education and rehabilitation plans and programs;*

- *Training or technical assistance for a child with a disability or, if appropriate, that child's family; and*

- *Training or technical assistance for professionals (including individuals providing education or rehabilitation services), employers, or other individuals who provide services to, employ, or are otherwise substantially involved in the major life functions of that child.*

AT in Action

Brylie is a low-vision student learning Braille at Mountain View Middle School. Brylie is using a Perkins Brailler and an electronic Mountbatten Brailler to write braille.

She also uses a portable and foldable video magnifier called a VisioBook. The Visiobook also has a pivoting HD camera to help her with both close range and distance viewing.

Brylie uses a Draftsman Tactile Drawing Board that is used in combination with special film and a stylus that allows her to create and label a raised line drawing.

In order to effectively get Brylie's AT devices being utilized in the educational setting, Brylie required AT services such as assessment, acquisition, and training.

34 C.F.R § 300.324 Development of the IEP

The IEP Team shall take the following special factors into consideration: *(Authority: 20 U.S.C. 1414 (d)(3) and (4) (B) and (e))*

- *in case of a child whose behavior impedes learning...appropriate strategies, interventions, and supports;*

- *in the case of a child with limited English proficiency, language needs…;*

- *in the case of a child who is blind or visually impaired, provide for instruction in Braille and the use of Braille unless the IEP Team determines...that instruction in Braille is not appropriate;*

- *consider the communication needs of the child, and in the case of a child who is deaf or hard of hearing, consider the child's language and communication needs, opportunities for direct communication with peers and personnel…;*

- *consider whether the child requires assistive technology devices and services.*

In the 2017 update of the school-age IEP in Arkansas, AT devices and services are on the Consideration of Special Factors page.

AT in Action

Ella is a 5th grader with a diagnosis of Autism. Her IEP team meets annually to discuss progress towards her goals and objectives and develop a new IEP for the upcoming school year. Ella's

IEP team consists of her parents, special education teacher, general education teacher and related service providers. These individuals combine their knowledge, experience and commitment to design an educational program that must help

Ella be involved in, and progress in, the general education curriculum. The IEP guides the delivery of special education and related services and supplementary aids and supports for Ella.

Assistive technology consideration is documented on the Special Factors page of the IEP. AT consideration requires that the team participate in a consistent decision-making process in relation to her goals and objectives that facilitate access and progress in the general curriculum. Ella's assistive technology needs may be documented in her student profile, goals and objectives, supplementary aids and services, and as part of her transition plan.

Arkansas Policy and Procedures for Special Education

Effective July 1, 2015, Arkansas implemented the following policy and procedures for special education:

A. The District makes assistive technology devices or assistive technology services, or both, available to a child with a disability if required as a part of the child's special education, related services or supplementary aids and services.

B. For children who require assistive technology to communicate, assessment is an ongoing process. Initial assessment can only provide good baseline information and allow the assessment team to make reasonable hypotheses about where and how to begin intervention.

The goals of communication assessment are to enable the team to:

1. Determine the current and future communication needs of the child and those interacting with him/her;

2. Identify the communication capabilities of the child and the child's partners, as well as the characteristics of his/her environments and tasks;

3. Reach a consensus on communication goals and prioritize these goals;

4. Develop and revise plans that allow these goals to be implemented and that increase the child's involvement in activities and interactions; and

5. Monitor the success and/or failure of intervention approaches, including the use of assistive technology.

C. The LEA must make available assistive technology devices purchased by the school for use in a child's home or in other settings when the child's IEP team determines that the child needs access to those devices to receive a free appropriate public education.

D. District policy governs:

1. Liability, if any, for the loss or damage of assistive technology devices; and,

2. Transfer of an assistive technology device when a child with a disability using the device ceases to attend school in the District that purchased the device. "Transfer" means the process by which a school District that has purchased an assistive technology device may sell, lease or loan the device for the continuing use of a child with a disability who is ceasing to attend school in the District.

Citations:

34 C.F.R. § 300.105

Code Ark. R. 005.18.5-5.08.2

Code Ark. R. 005.18.5-5.08.1

Retrieved from Arkansas Department of Education Website

Code Ark. R. 005.18.5-5.08.4

Interventions Related to AT

Universal Design for Learning (UDL) and Accessible Education Materials (AEM) are two concepts includ ed in federal law that align with AT to help students with special needs. It is important to recognize the symbiotic relationship between UDL, AEM, and AT. UDL is a practice of adapting the curriculum at the planning stage to consider the widest possible range of learners so that all instructional activities pro vide multiple means of:

- accessing information,
- staying engaged in the learning process, and
- demonstrating (expressing) knowledge gained.

UDL was included in No Child Left Behind 2001, IDEA 2004, and the Every Student Succeeds Act (ESSA) of 2015 with the goal of bringing general education and special education closer together. In a class room using UDL, all students have access to a variety of technologies and accessibility features. Many school districts across the United States are implementing UDL at multiple grade levels. When UDL is in place, a student with a disability may find that the barriers they experienced in previous settings are removed. The student who acquires meaning from text more easily by listening to it can choose a vari ety of text-to-speech options, a student who better demonstrates what he has learned from text by creating an audio-visual depiction can create a short video about the key concepts. If at sometime in the future every classroom in every school district utilizes UDL principles, there will be less need to identify and use AT. Until that time, IEP teams must use performance data to identify these accessibil ity features that are removing learning barriers for students with disabilities and document them as part of AT consideration.

Table 3. *Brief Comparison of Assistive Technology and Universal Design for Learning*

Assistive Technology Universal Design for Learning

Assistive Technology	Universal Design for Learning
Specifically considered for an individual student.	Makes the general education curriculum accessible to students with varying needs.
Used by a student to meet the expectations of the general education curriculum.	Use by all students with diverse learning needs.
Monitored by special educators, but also used by general education teachers.	Implemented by general and special education teachers.

Retrieved from Maryland Learning Links, http://marylandlearninglinks.org/3385

AT in Action

Abby is a 6th grader with bilateral, profound sensorineural hearing loss. She has two cochlear implants. Abby uses a personal remote microphone system (FM/DM) coupled to her implants.

In addition, the teacher microphone is also coupled with a speaker in the room thus broadcasting the teacher's voice to Abby and all of the students in the classroom.

IDEA (Section 300.172) requires that states and districts provide Accessible Educational Materials (AEM) to students who are unable to utilize print-based materials, whether due to blindness or another print disability. IDEA created the National Instructional Materials Access Center (NIMAC), a federally funded electronic file repository to receive and distribute specialized files that meet a standard for accessibil ity, the National Instructional Materials Accessibility Standard (NIMAS). The NIMAS files are received by the NIMAC and then distributed to states to be converted into specialized formats for students who are blind or have another print disability. The NIMAS source files come from textbook publishers, but are not ready to use by school districts. Each state identifies authorized users who can convert the NIMAS files into Braille, audio, large print or digital text formats and distribute the accessible versions to eligi ble students.

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Table 4: *Authorized NIMAC Users*

Authorized User Contact Information

- Lisa Tyler (501) 682-4322

- Anglyn Young (501) 379-8387

Students receiving AEM often need AT in order to access and use the materials. In that case the AEM and AT work together to allow the student to access instruction, meet IEP goals, and/or make meaning ful progress in the curriculum.

AT in Action

Macy is a freshman at Calico Rock High School. Macy uses many pieces of assistive technology. She uses a desktop computer with Jaws screen reader, a laptop with voice over and a Braille Sense. Her primary AT device is a Braille Sense Polaris.

Macy has all her textbooks, with the exception of math (Geometry) uploaded onto her Braille Sense Polaris. She is able to gain access to Bookshare and download reading materials of her choice.

Teachers can email Macy's assignments to her in word documents, and she uses the word process of BS Polaris to read and complete assignments in Braille. Then she emails the documents back to the teacher for grading.
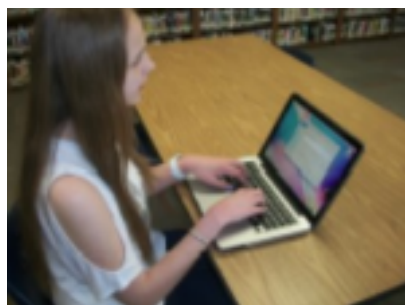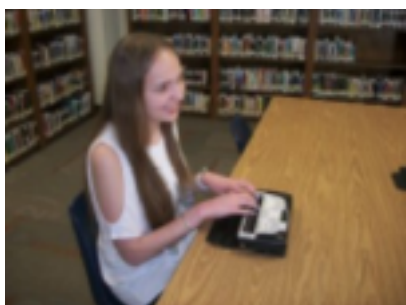
Learning Resources for UDL and AEM

The Center for Applied Special Technology (CAST) provides a range of resources and information on both UDL and AEM at http://www.cast.org. For a quick overview of UDL view the video UDL at a Glance at http://www.cast.org/our-work/about-udl.html#.WS7tlsm1uRs. There are many other resources on the CAST website. To learn more about AEM go to aem.cast.org which is a rich source of information.

Another resource for UDL is the Universal Design for Learning Implementation and Research Network udl-irn.org. It provides many opportunities to connect with others interested in and currently implementing UDL.

Other Laws that Require AT

Not all students with disabilities need specially designed instruction. Students with disabilities who do not require specially designed instruction are not eligible under IDEA and will not have IEPs. These students may still need AT in order to access or participate in their education and may receive it under the provisions of Section 504 of the Rehabilitation Act of 1973 or the Americans with Disabilities Act of 1990 (Title II).

Section 504 is a civil rights law that guarantees that no student with a disability will "be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance" (Rehabilitation Act of 1973, Section 504, 1977).

Education agencies that receive federal funds must provide accommodations, including assistive technology, to students with disabilities if needed, so that they will receive an education equal to that of their peers. There is no required schedule for the consideration or assessment of the needs for assistive technology under Section 504 or Title II. The education agency should have a procedure in place to address the need for AT for students who receive services under Section 504.

The Americans with Disabilities Act (ADA) of 1990 (Title II) is also a civil rights law that prohibits discrimination on the basis of disability. Students with disabilities are covered by Title II and Section 504 regardless of their eligibility for special education and related services under the IDEA. Students who qualify under Section 504 and the ADA are those who: (1) have a physical or mental impairment that substantially limits one or more major life activities; (2) have a record of such an impairment; or (3) are regarded as having such an impairment. State and local education agencies have an obligation under Section 504 and Title II to ensure an equal educational opportunity to students with disabilities, including the timely provision of AT.

There are differences between IDEA and the Title II regulations. Title II regulations require that public schools provide appropriate "auxiliary aids and services" when necessary to afford an "equal opportunity" to participate in and benefit from the district's services, programs, and activities. AT may be part of those "auxiliary aides." Title II specifically requires that a student with disabilities have the opportunity to be as effective at communicating as a student without disabilities (U.S. Department of Justice and U.S. Department of Education, 2014a). This is a more stringent requirement than IDEA requires.

AT in Action

Brad is a student with low vision. He receives assistive technology services under Section 504.

Brad uses an iPad to enlarge the print on his work for near viewing.
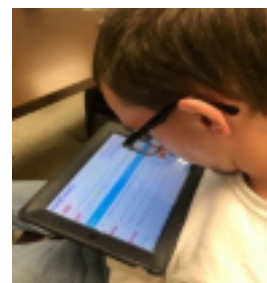
Assistive vs. Informational Technologies Used in Schools

There are many devices which are designed for students with disabilities (wheelchairs, communication systems, etc.), but in many cases, standard technology in schools has applications that can be impera tive for a student with a disability. In this instance, AT and standard school information or instructional technology can be one and the same. If deemed necessary, the standard school technology can be identified as AT for a student with a disability because it "increases, maintains, or improves a function al capability".

Information technology plays an increasingly important role in our lives today. In schools, technology provides a wealth of unparalleled opportunities for students. Schools incorporate many types of tech nology ranging from virtual field trips, to video links with classrooms across the globe, to high-powered microscopes. With the plethora of smart phones, laptops, tablets and other user-friendly mobile devic es, the use of technology is becoming standard and routine.

Students use this "everyday technology" to do research, create videos, post blogs, explore the arts, engineer prototypes, discover solutions, design presentations and otherwise complete assignments. However, federal law requires IEP teams to "consider whether the student *needs* AT devices and ser vices." How does the IEP team decide that the student *needs* specific technology? The answer lies in the student's ability to successfully complete the necessary tasks, make progress in the least restrictive curriculum, and participate in extra-curricular activities. In order for IEP teams to determine necessity, the AT *consideration process* is key.

Students with disabilities often experience barriers to learning, participation, and independence that can be eliminated, or lessened, through appropriate AT devices and services. Although technology is becoming commonplace in a classroom, some students' success *depends* on that technology. A loss of that tool or feature, would prove to be a detriment to the student's performance. In this case, even a readily available tool would be considered necessary AT for this student. Furthermore, the tool/ feature would need to be documented in the IEP to ensure the provision of the necessary AT.

AT in Action

Michael is a 7th grade student who attends general education classes with the exception of resource literacy. Michael is able to understand grade-level material but has a specific learning disability, which impacts his reading and writing. In addition, Michael has a subtle fine motor deficit.

Michael's history teacher, Mrs. Beach, provides universal design strategies for all students in her class room. Mrs. Beach notices that Michael's work, using a Chromebook and cloud based dictation feature, are markedly better than his responses when using a keyboard or paper/pencil.

Mrs. Beach collects samples of Michael's work and notes that both length and complexity are significantly better using a dictation feature. Furthermore, Michael indicates that he prefers a speech to text feature because he is free to express his knowledge without barriers to spelling and finger dexterity. Although other students in her class are able to satisfactorily express their understanding using a variety of methods, Mrs. Beach notes that Michael's success is largely dependent on the use of a tool.

In this example, the IEP team would convene to consider the data collected by Mrs. Beach. They would determine the widely used, readily available Chromebook feature as necessary AT, and would docu ment these tools in Michael's IEP. In this manner, Michael is guaranteed the use of a dictation feature and can experience success across settings, classrooms and schools.

Funding Assistive Technology

Funding can be an obstacle to the acquisition of AT for children with disabilities. Judge (2000) and the National Task Force on Technology and Disability (2004) found lack of funding to be a major barrier to the procurement of AT.

Over the last decade as school budgets have shrunk, districts have been increasingly challenged to fund AT devices and services. The substantial gap between possible AT use and actual implementation in schools is the lack of funding (Dell, Newton, & Petroff, 2008).

However, there is a broad range of possibilities for meeting a child's need for AT. IEP teams should not overlook the many "no-," "low-," and "mid-" tech possibilities, as well as, increased access to technology already available in the classroom or school. In addition, many AT devices may be borrowed or rented for short-term or ongoing use. Resources for borrowing or renting equipment in Arkansas are listed in Table 6.

Table 5. *AT Resources*

Resource	Contact Information	Comment
Easter Seals Arkansas Outreach Program and Technical Assistance	www.eastersealsopts.org	Variety of AT equipment for six-week loan
ICAN Tools for Life	www.ar-ican.org	Variety of AT equipment for loan
Arkansas Department of Career Education	www.arcareereducation.org	Student must be 16 years or older and have vocational goals
Division of Developmental Disabilities Services	www.humanservices.arkansas.gov/dds	Part B Early Childhood
Arkansas Spinal Cord Commission	www.spinalcord.ar.gov	Will only loan to students, not to directly to schools
Educational Services for the Visually Impaired (ESVI)	www.esvi.org	Equipment for low vision and blind students
Children and Youth with Sensory Impairments (CAYSI)	https://arksped.k12.ar.us/caysi/index.html	Student must be on CASYI registry
Telecommunication Access Program	(800) 981-4463	Provide Arkansas residents who have a disability with adaptive communication technology
Muscular Dystrophy Association	www.mda.org/office/little-rock	Student must be on MDA registry
ALS Association	www.als-arkansas.org	Student must be on ALS registry
Saltillo	www.saltillo.com	Short term rental of communication devices
Prentke Romich Company	www.prentrom.com	Short term rental of communication devices
Tobii Dynavox	www.Tobiidynavox.com	Short term rental devices communication devices
Ablenet	www.ablenetinc.com	Short term loan of equipment
Adaptive Switch Labs	www.asl-inc.com	Short term loan of equipment for evaluation purposes

School District Funding Responsibility

IDEA requires AT to be provided as part of early intervention services and special education, related services, or supplementary aids and services by local school districts. School districts have a responsi bility to make AT devices and services available to students with disabilities in order to benefit from the student's special education program. If AT is needed to accomplish the goals and objectives listed in the child's IEP, AT must be provided (Hager & Smith, 2003). AT cannot be denied while funding is being determined. School districts can from seek funding from other sources to purchase the AT devices necessary for students with disabilities. The school district may borrow, rent, or seek a third-party funding source for AT. When the AT is purchased by a third-party, the AT generally belongs to the student. Student owned AT is beneficial when the AT is needed in all settings. If the district purchases the AT, AT belongs to the district.

Funding Options Outside of the School District

It is most appropriate to seek outside funding for AT when it is desirable for the device to belong to the family rather than the school district. This allows the device to go with the student if the student moves to another district or graduates. Applying for funds from any of these sources takes hours of Staff time to obtain forms, fill them out, copy existing reports or write new ones, gather any addition al information that is needed, and submit the final packet of documentation. In some cases, for both entitlements and other funding sources, medical information, personal information about the family such as their income may also be necessary in order to complete the forms. When that is the case, The family must be involved in completing the application.

The primary sources of funding for AT for students in addition to school district special education budgets include:

- Medical Assistance/Medicaid

- Vocational Rehabilitation

- Private Health Insurance

- Grant Sources

- Service Clubs

Medicaid

Medicaid, also referred to as "Medical Assistance," was created in 1965. The Medicaid program (Title XIX of the Social Security Act) is a program of medical assistance for low-income individuals and fami lies. Medicaid is the second largest provider of AT devices after school districts. However, their focus is different than that of the school district. Medicaid services must correspond specifically to medical necessity and be prescribed by a physician. Medicaid will not pay for any services that are covered by a family's private insurance.

Medicaid will purchase, rent, or lease some types of AT for children who receive Medicaid benefits. Medicaid provides medical services and "durable medical equipment" (DME). AT is frequently considered DME when deemed medically necessary. Arkansas' Medicaid guidelines outline the funding requirements of DME. Prior authorization from a Medicaid provider is required before purchasing a device or receiving a service through a provider.

Vocational Rehabilitation

The original purpose of the Vocational Rehabilitation (VR) Act was to ensure that all individuals with disabilities are able to live their lives as independently as possible. The 1993 revisions added AT and a presumption of ability, meaning that VR counselors must assume that all individuals, regardless of the severity of their disability, must be regarded as being able to work. Every state VR plan must describe how a broad range of rehabilitation technology services will be provided at each stage of the rehabilita tion process. The VR plan must also describe the manner in which AT devices and services will be provided, or work site assessments will be made as part of the assessment for determining eligibility and the vocational rehabilitation needs of each individual.

AT is an important part of the VR process and may be provided as part of employment or independent living. The key to obtaining funding is the inclusion of AT in the Individualized Written Rehabilitation Program (IWRP). Briefly, the technology must be needed to enhance or improve independent skills in working or living. VR should become involved through transition planning that is required to start at least by the time the student is 16 years old.

If AT is obtained from VR, the VR counselor will be the primary person helping with coordinating, pur chasing, and following up on the AT. A study in Wisconsin by Noll, Owens, Smith, and Schwanke (2006) found that while VR counselors expressed confidence in performing these overall functions, they reported a lack of confidence in their ability to identify the need for AT in the first place. This means that the family and school district may need to play a primary role in identifying that need.

Private Health Insurance

Private health insurance (PHI) companies represent a major source of third-party funding. PHI coverage varies by insurance agency and between policies within a single company. Insurance plans and policies often refer to AT as DME.

Grant Sources

There are few grant sources for funding AT. A national example of grant funding is through United Cere bral Palsy (UCP). The UCP Elsie S. Bellows fund is a program operated by UCP that provides grants for purchasing or repairing AT equipment for individuals with cerebral palsy. Individuals and their families who are in financial need and do not have other funding resources are eligible.

For children with a diagnosis of autism, the iTaalk Autism Foundation is a resource. The website includes a list of resources for obtaining iPads and other interactive technology. The website has a searchable grant list for funding therapies, equipment, and services not covered by insurance.

Service Clubs

Service clubs provide financial support for the purchase of many different AT devices. A service club is most often a source of funding when a family member or friend is a member of the group (Cook & Pol gar, 2008). The club may take on a service project for one or more years to help raise funds for students who need help with funding a specific AT device or for a parent group or school group that is seeking funding for several AT devices. Examples of service clubs include: Elks, Kiwanis, Knights of Columbus, Lions, Moose, Optimists, Rotary, and Shriners.

The Assistive Technology Industry Association (ATIA) has a comprehensive AT Resources Funding Guide at www.atia.org/at-resources/what-is-at/resources-funding-guide/

Learning Resources for AT Funding

The AAC Report Coach at www.aacfundinghelp.com offers Speech/Language Pathologists a unique and supportive tool to guide them through the process of writing a funding report to support an SGD recommendation. The AAC Report Coach was developed by Pam Mathy, Ph.D., Clinical Director, Arizona State University.

There are also many options for making very inexpensive low-tech AT tools, such as the universal cuff demonstrated by Therese Willkomm at https://www.youtube.com/watch?v=o70d1pJuB4c

Appendix A: AT Continuum of Resources

Wisconsin Assistive Technology Initiative (WATI) Continuums

SEATING, POSITIONING AND MOBILITY

Seating and Positioning
- Standard seat/desk at correct height and depth
- Modifications to standard seat or desk
- Alternative chairs
- Adapted/alternate positioning devices
- Custom fitted wheelchair or insert
- Custom wheelchair for alternative
- Positioning
- Non-slip surface on chair (dycem)
- Blocks for feet
- Bolster or rolled towel for positioning
- Side-lying frames
- Standing frame
- Floor sitter
- Chair insert
- Wheelchairs
- Custom-fitted wheelchair
- Straps
- Headsupports
- Trays
- Adapted desk/table
- Bean bag chairs

Mobility
- Ambulation aids - crutches/walker
- Grab bars and rails
- Manual wheelchair
- Powered scooter, toy car or cart
- Power wheelchair w/joystick or other control
- Adapted vehicle for driving
- Powered recreational vehicles
- Building modifications/adaptations

MOTOR ASPECTS OF WRITING
- Special seating adaptations
- Variety of pens/pencils
- Adapted pen/pencil
- Adapted paper
- Slant board
- Writing templates and graphic organizers
- Prewritten words/phrases (word book, word wall, etc.)
- Notetaking tools
- Computer/mobile word processor
- Computer/mobile word processing with spell/ grammar checking and text to speech
- Electronic/computer based dictionary and spell checker
- Computer/mobile device using accessibility features
- Text to speech software or features (voice recognition)
- Alternative keyboards
- Computer/device w/word prediction
- Computer/device w/speech recognition

READING

- Change in text size and color, spacing, background color
- Adapted page turning
- Book stands
- Talking electronic dictionary
- Scanner with talking word processor
- Book adapted for access
- Highlighted text
- Recorded material and books
- Multi-media presentation formats
- Low-tech modifications to text
- Handheld scanner to read individual words
- Use of pictures/symbols with text
- Electronic text and textbooks
- Modified electronic text
- Text reader
- OCR and text reader
- Text reader with study skill support

COMMUNICATION

- Real objects/tangible symbols
- Communication board or book, wallet, etc.
- Eye-gaze board
- PECS
- PODD
- Simple speech generating device
- Electronic or computer/tablet based Speech generating device with levels
- Electronic or computer/tablet based Speech generating device with icon sequencing
- Electronic or computer/iPad based Speech generating device with dynamic display
- Electronic or computer/tablet based Text based device with speech synthesis

COMPOSITION OF WRITTEN MATERIAL

- Picture Supports to write from/about
- Pictures with words
- Word Cards/Word Banks/Word Wall
- Pocket Dictionary/Thesaurus
- Written templates and Guides
- Portable, talking spellcheckers/dictionary/ thesaurus
- Word processing software
- Word prediction software
- Digital templates
- Abbreviation expansion
- Word processing with digital supports
- Talking word processing
- Multimedia software with alternative expression of ideas
- Tools for citations and formats
- Speech recognition software

MATHEMATICS

- Low-tech tools for reading/writing math
- Physical manipulatives
- Adapted math paper
- Adapted calculator (large key, talking)
- Math tool bars
- On-screen calculator
- Graphing calculator
- Audio graphing calculator
- Virtual manipulatives
- Basic math software/app
- Advanced math software
- Web simulations
- 3D geometry modeling software
- Speech recognition math software

COMPUTER/DEVICE ACCESS

- Special positioning of student or equipment (arm supports)
- Standard keyboard/mouse using accessibility features built into the operating system
- Standard keyboard/mouse with adaptations
- Trackball/trackpad
- Joystick with onscreen keyboard
- Mouthstick/headpointer
- Headmouse/headmaster, tracker
- Onscreen keyboard/mouse keyguard
- Rate enhancement
- Speech recognition software
- Eye gaze
- Morse code
- Switch access (scanning)
- Screen reader
- Word prediction/abbreviated expansion

ORGANIZATION

Self-Management
- Sensory regulation tools
- Movement and deep pressure tools
- Fidgets
- Auditory tools
- Visual tools

Information Management
- Tabs
- Sticky notes/index cards
- Highlighters
- Key words
- Study guide
- Task analysis
- Digital highlighters and sticky notes
- Handheld scanners/electronic organization
- Study grid generators/grading rubric
- Online search tools
- Online web trackers
- Online sorting file tools
- Digital graphic organizers
- Online manipulatives, interactive tutorials

ORGANIZATION - Cont

Time Management
- Calendars/planners
- Checklists
- Schedules (visual)
- Portable, adapted timers
- Electronic reminders
- Digital planners on mobile devices
- Web-based planning/management tools
- Digital graphic organizers
- Online manipulatives, interactive tutorials

Material Management
- Low-tech organizers
- Checklists
- Container system
- Coding system (colors, numbering)
- Portable electronic storage (device/apps)
- Electronic filing and storage (cloud base

RECREATION AND LEISURE

- Typical toys/balls/puzzles/utensils/instruments with adaptations
- Specially designed utensils/equipment (scissors, crayons, markers, cards, etc.)
- Electronically/mechanically adapted utensils and equipment (sports, crafts, beeping balls, etc.)
- Electronic aids (e.g., remote controls, timers, speech-generating devices)
- Computer/device based activities
- Online and virtual recreational experiences
- Switch activations with battery interrupter
- Positioning aides (arm support for drawing)
- Drawing software
- Adaptive computer games

VISION

General
- Increased contrast
- Enlarged images
- Tactile and auditory materials
- Scanner

Computer Access
- Color scheme
- Enlarged operating system features
- Built-in magnification
- Fully-featured magnification
- Magnification with screen reader
- Screen reader with OCR
- Screen reader with Braille device

Reading
- Glasses
- Color filter
- Slantboard
- Large print
- Optical magnifier
- Electronic magnifier
- CCTV
- Monocular
- CCTV with distance camera
- Audio text
- Screen reading software/app
- Electronic Braille notetaker

Writing/Note Taking
- High contrast pen
- Slate and stylus
- Portable tablet/device
- Computer device with audio support
- Braillewriter
- Computer/device with Braille and printing ability
- Electronic Braille note taker
- Digital recording device
- Speech recognition

VISION-Cont

Mathematics
- Large print measuring tools
- Large key calculator
- Tactile measuring devices
- Abacus
- Talking calculator
- Talking color reader
- Talking measuring tools
- Models or 2D and 3D geometric shapes
- Tiger embossed, PIAF tactile representation

Pictorial Information
- Enlarged format
- CCTV
- 3D models or objects
- Tactile graphics
- Tactile-audio graphics
- Audio described videos

Mobility
- Cane
- Monocular
- Braille/talking compass
- Electronic travel device
- GPS device
- Electronic image sensory
- Telescopic aides

HEARING

Hearing Technology
- 1:1 communicators
- Infrared
- Induction loop
- FM-sound field
- FM-personal
- FM with direct audio input
- Adaptive digital wireless technology
- Bluetooth streaming technology
- Personal amplification
- Hearing aids
- Captioning
- TDD/TTY (Telecommunications device for the deaf/teletypewriter

HEARING-Cont

Alerting Devices
- Amplified environmental devices (cell phone)
- Visual environmental devices
- Vibrating alerting devices
- Smart phone with alerting feature
- Screen flash on computer
- Classroom/group activities
- Voice to text/sign
- Real-time captioning
- Reading machine

Communication
- Pencil and paper
- Portable connected devices (UbiDuo)
- Telecommunication supports (captioning, relay service, video phone, video relay)
- Closed captioning

ACTIVITIES OF DAILY LIVING
- Adapted eating utensils
- Adapted drinking devices
- Adaptive dressing devices
- Specially designed toilet seats
- Restroom modifications
- Aides for grooming
- Robotic or electronic feeders
- Adapted cooking tools
- Universal cuff to hold items

ENVIRONMENTAL CONTROLS
- Switch interface for appliances
- Adaptable on/off switches
- Remote control switch access
- Switch latch timers
- Switch interface for battery-operated devices
- Universal cuff to hold items