

CHAPTER
3

Taking a Closer Look at Assistive Technology Devices

As defined in IDEA 2004, the term 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 [IDEA 2004, Part B, Section 612, (1)].

Beginning as it does with the words “any item,” the definition of an AT device is meant to be inclusive, embracing a wide range of devices, from inexpensive manual items to complex, computer-based technology. The only exception is for those students who require surgically implanted devices. This definition includes devices that were originally developed as assistive technologies, such as mobility and positioning systems, voice output communication devices, and adaptive computer access tools. It also includes a range of other common tools that were not designed to be AT, but are recognized as AT when they have an impact on the functional capability of a student with disabilities. They may include common tools such as a calculator, or instructional software such as a content outlining or mapping software for students who have difficulty organizing ideas, creating outlines, and finding key comprehension points in text.

The range of functional areas for which support may be provided through AT is broad. Examples of functional areas in which students may have difficulties are found in Figure 1. While the scope of the definition of AT may seem confusing, the definition is quite clear that for an item to be AT it must be used to increase, maintain, or improve an academic and/or functional area identified for a student with disabilities.

(v) consider whether the child needs assistive technology devices and services, with the exception of surgically implanted devices.

As stated above, AT is one of five special considerations in the IEP process. The new language regarding AT consideration changed from considering whether the child “requires” AT (1997 IDEA) to considering whether the child “needs” AT (IDEA, 2004). Also, unlike the previous IDEA (1997), there is an exception to AT with respect to surgically implanted devices. While consideration of these five factors is still for all children and youth with disabilities who qualify for services under IDEA 2004, the first four considerations apply to specific populations of students. The consideration of AT, however, applies to *all* students and, therefore IEP teams should consider the full range of AT devices and services that may be needed by a student for all academic and functional areas of disability.

Although several of the special considerations can be made at any point in the IEP process, educational goals must be established before it is possible to accurately determine whether a student requires AT devices and services. IEP goals should be linked to the state- and/or school system-identified curriculum on an individual basis and grade level. All AT used to accommodate a student in accessing the general education curriculum should be linked to an individualized goal.

IEP teams should consider both the computer access and the instructional software necessary for students with disabilities to participate in the general education curriculum. IEP teams also should consider instructional interventions that require the use of a device, strategy, or tool in the accommodation.

Although assistive technology may be needed as a part of a student’s special education or related services, IEP teams must be aware that it also can be a part of supplementary aids and services—aids, services, and other supports that are provided in regular education classes or other education related settings—that enable children with disabilities to be educated with nondisabled children to the maximum extent appropriate in accordance with Part B, Section 614, D (IV).

Regardless of how AT is identified, IEP teams should follow state and district guidelines for where AT is documented in the IEP. For example, if an IEP team identifies an instructional software program that is needed for a student to access the general education curriculum and this is seen as a supplementary aid or service, the IEP should also identify this needed software as AT. The IEP team also should note that there are typically state-identified accommodations that can be used for statewide testing, and it should ensure that those accommodations are familiar and available to the student at all times during classroom assessments as well as formal testing situations.



Figure 1: Functional Areas That May Be Supported Through the Use of AT

<ul style="list-style-type: none"> • Activities of daily living • Control of the environment • Mobility • Position and seating • Recreation 	<ul style="list-style-type: none"> • Communication • Motor aspects of writing • Composing written material • Vision • Hearing 	<ul style="list-style-type: none"> • Reading • Study skills • Math • Computer proficiency
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A broad range of devices is available to support students who need them for these functions, as illustrated in Figure 2. While considering the student's functional capabilities, it is helpful to consider AT devices along a continuum that ranges from the most simple low- or no-tech devices (such as pencil grips) to the most complex, high-tech alternatives (such as voice recognition). Each step along the continuum is characterized by the degree of complexity of a device and the amount of training and maintenance required to support its effective use.

It is important to review the AT continuum since many technologies and strategies used by general and special education teachers are actually AT often have not been identified or documented as such. Consider the information in Figure 3.

Consider the italicized lines in Figure 3. Each of these items may be used to support a student's functional need to gain meaning from text. A highlighter is a no-low-tech option that can be used to identify and recall vocabulary, main characters, or main concepts in a text passage. A reading pen is a mid-tech option that can be used to scan words in text that are not recognized to provide the student with the pronunciation and definition of the word. A computer-based software program that highlights words as it reads them aloud is a high-tech option that enables the student to see highlighted words as the words are read aloud.

Figure 2: The Assistive Technology Continuum




<p><i>Low-Tech</i>    <i>High-Tech</i></p>		
<ul style="list-style-type: none"> • Simple training • Little maintenance • No electronics 	<ul style="list-style-type: none"> • Minimal training • Basic maintenance • Simple electronics 	<ul style="list-style-type: none"> • Extensive training • Ongoing maintenance • Complex electronics

Figure 2: Adapted from: Texas Assistive Technology Network (2002). Considering assistive technology in the development of the IEP: A training module in the Assistive Technology in Texas Schools Series.

Figure 3: Examples of Assistive Technology

No-Low-Tech	Mid-Tech	High-Tech
<ul style="list-style-type: none"> • Print or picture schedule • Aids to finding materials (i.e., color coding) • Colored highlighters • Recorded material 	<ul style="list-style-type: none"> • Voice output reminders • Electronic organizers • Reading pen • Single word scanners 	<ul style="list-style-type: none"> • Voice recognition software • Concept development software • Text reading software • IDEA organization software

Frequently Asked Questions About AT Devices

As IEP team members consider each student's possible need for AT, they often have questions about AT devices. Here are some of the most frequently asked questions and their answers.

Q. *Is it possible for the same device, piece of equipment, or software to be AT for one student and not AT for another student?*

Yes. If a tool or device is required for a student to access the curriculum and achieve in school, or, more globally, to receive the free and appropriate public education that is guaranteed by IDEA 2004, then that device or service functions as AT. For example, a device (a speaking spell checker, for example) may be used by all the students in a fifth grade class, and all may find it helpful. For some students, that application is simply an optional learning tool. It becomes AT if it improves performance on written assignments for other students whose disability interferes with the ability to write.

Q. *Do IEP teams need to think about AT if a district is committed to universal design?*

Yes. When seeking appropriate assistive technology, it is important to remember that many features that are "assistive" in nature are now

universally designed into standard technology. Appropriate configurations of these features can sometimes reduce or eliminate the cost of adding additional technology. However, if particular settings of the universal features are necessary for a student to use the technology, those settings and the subsequent software must be considered assistive technology and included in the student's IEP. This will ensure that there is a trail of information that documents the identification, acquisition, use, and configuration of any necessary AT as students move into new environments, work with new teachers, and experience success. For example, the IEP team may determine that when a student with poor vision is working at a computer, the preferences built into the operating system must always be adjusted to create a large cursor and a 20-point type size. Even though every computer has these settings built into its operating system, specific features still need to be configured to support the student. As the student accesses new environments, there must be sufficient information in the IEP to ensure a seamless transition.

Q. *Is it permissible for a school district to seek external funding for an AT device that a student requires?*

Yes. The district may seek funding through a third party (e.g., medical assistance, other

programs for which the student is eligible, or a grant or donation from an organization or foundation). However, the district is obligated to supply the device in a timely fashion so that the IEP can be implemented. A district can choose to borrow or rent a device so that it is available for use by the student until sufficient funding is available.

Q. *Can a person such as a scribe be considered AT?*

No. A person is never AT. A crucial component of the definition of an AT device is the word “item.” While an IEP team may recommend an accommodation that involves the services of a person such as a scribe for a student who has difficulty writing, that service is not AT.

Q. *Can a parent be required to use insurance or other private funds to purchase a required AT device?*

No. Once it is determined that a student requires an AT device, the school district must provide it at no cost to the family. The school district may rent, purchase (with special education or general funds), or use a device that is obtained through some other source. If a family already owns the device or chooses to use other funds to acquire it, the parents may give permission for the device to be used at school, but they cannot be required to do so. If a school owns a device, the IEP team needs to consider *all* environments in which a student will use the device to receive a free and appropriate public education, including the home, and make the device available to the student based on his/her needs. IEP teams also should consider the licensing requirements of instructional software to ensure that legal copies are available as needed so that it is available wherever the student needs it.

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