CITES | Virtual Learning Project

Aligning IT, AT & Accessibility for Virtual Learning

The CITES Virtual Learning Project focused on promising practices related to educating and supporting students with disabilities and their families in virtual school programs. Central to this work was identifying what technologies are used in these settings and how students who require assistive technology (AT) to access instruction are supported.

Providing high-quality, accessible learning opportunities to all students proves imperative for success. To achieve this, students with disabilities must receive access to the same information, engage in the same interactions, and enjoy the same services as students without disabilities, with substantially equal ease of use (Office for Civil Rights).

Virtual school programs that prioritize accessibility ensure Information Technology (IT) structures enable students with disabilities to access courses and learning materials as soon as they're available to all students. When teams review and select devices for students, they prioritize considerations regarding the abilities and disabilities of all students in the program.

For some students, a customized setup of embedded accessibility options lowers barriers that may prevent effective use of educational materials. Following best practices for providing interoperable devices with assistive technology (AT) and built-in accessibility features minimizes the need to provide alternative solutions for students with disabilities.

Please note:
Examples listed should not be considered an endorsement of any device, tool, resource, or company.

Considerations

Questions to consider when students require devices that include AT:

- **Who determines which device is best for the student?**
  Usually, either the virtual school or the school of record recommends the devices. In some instances, it is another agency. For example, in the state of Pennsylvania, 26 Intermediate Units across the state support students with disabilities who require AT, and they usually make the recommendations. In addition, some virtual schools contract with agencies who provide ancillary services, including which AT device students should use.
- **Who purchases the device(s)?**
  Regardless of who recommends the device, usually the virtual school or the school of record purchases the device.
- **Who provides the training of the accessibility features or AT device to the student, educators, and family?**
  Usually, whoever recommends and purchases the device is responsible for training. All educators involved with the student should be trained on the device's features, functionality, and how and when the student should be using the device.
- **Who is responsible for maintaining the device and ensuring access to the accessibility features?**
  Typically, whichever group recommends and purchases the device is responsible for maintaining the device.
- **Who will serve as liaison with virtual school staff and family if the school of record is responsible for overseeing the device?**
  If personnel from the school of record are responsible for overseeing the device, a liaison from that school should be identified to communicate with the virtual school personnel, the student, and the family for technical support.

Device & Tool Selection

At Mountain Heights Academy (Utah), Julia Reardon successfully completed high school using augmentative and alternative communication devices, modified sign language, keyboards and fingerspelling. Learn more about Julia's success.

Select devices with accessibility features, such as enlarged text, touch screens, text-to-speech, voice-to-text, and high-contrast options. Devices should be interoperable with AT, such as single switches or expanded keyboards.

Embedded AT & Accessibility Features

- Chrome OS
- iPad OS
- iOS
- Windows 11

Assistive Technology Options

Students with physical or sensory impairments may require an alternate or additional device(s) or alternate software to access learning, known as AT. Such devices include single switches, expanded keyboards, screen readers, or captioning programs. Tech Matrix is an online database that can be used to learn more about available AT.

Systems & Programs

In the Garnet Valley School District, Glen Mills, PA, a robot with an iPad attends live classes, allowing a student who is unable to attend school in-person to interact in real time with teachers and classmates.

Most Learning Management Systems (LMS) have some level of accessibility built in. Some are more robust than others, so it's important for decision makers to research the accessibility options available in an LMS during the procurement process. Additionally, teachers need to be trained to use the accessibility features to ensure students who need accommodations or who use AT are able to access all areas of the LMS and the instructional content and materials. Learn about the accessibility built into common LMSs and related platforms:

- Canvas Accessibility
- Blackboard Accessibility
- Google Classroom Accessibility
- Schoology Accessibility

Select a LMS with its own accessibility checker. Examples include

- UDoIt: A checker to identify accessibility issues in Canvas courses
- Blackboard Ally: A tool for LMS checker to identify accessibility in uploaded content, which supports multiple LMS products, including Blackboard, Canvas, OpenLMS, and D2L

Accessibility Content Checkers

All content should be built with accessibility considerations from the onset. A variety of internal tools and independent vendor products review content for accessibility. While accessibility checkers have limitations, they typically help content creators resolve the most common issues. Learn more about this topic by accessing Designing for Accessibility and Vetting for Accessibility at the National AEM Center at CAST. Examples of checkers include, but are not limited to the following:

- Adobe
- Microsoft Office
- Google Docs
- Grackle Plugin for Google Docs
- Grackle Plugin for Google Slides

Other Programs

Blind or visually impaired students use screen readers to successfully participate in virtual lessons.

Many virtual schools support all learners from the start by providing a toolkit of features or programs with built-in accessibility, such as text-to-speech or dictation. These features may be documented as AT in a student's Individual Education Plan, or they may be provided for all students as universal tools for learning.

Examples are:

- Texthelp
- Read & Write for Google
- Microsoft Office Accessibility Suite

For more information on how virtual schools can leverage accessibility built into learning tools, see the following resources from the National AEM Center at CAST:

- Personalizing the Reading Experience
- Personalizing the Writing Experience
- Teaching with Accessible Math

Family Communication & Support

Schools that provided virtual learning prior to the pandemic used a variety of technologies to communicate with and provide support to families, such as:

- Apps and texting via mobile devices
- Online webinar platforms
- Parent apps within the LMS
- Help desk tools

Support in the Home

Virtual school programs often identify and train Learning Coaches (usually a caregiver in the home) to ensure devices are properly implemented and maintained. Learning Coaches may participate in orientation programs and receive training on devices, accessibility features, and AT. If no one is available in the home, then a staff person from the school of record or the virtual school should be available to provide real-time support as needed.

Resources

- Assistive Technology Industry Association (ATIA): The mission of the ATIA is to serve as the collective voice of the assistive technology industry to help ensure that the best products and services are delivered to persons with disabilities. This organization provides resources as well as courses offered through their training center. An annual conference highlights the most current trends in assistive technology.
- The National Center on Accessible Educational Materials (National AEM Center at CAST): The AEM Center provides technical assistance, coaching, and resources to increase the availability and use of accessible educational materials and technologies for learners with disabilities. Resources focus on various topics including IEPs and the leveraging and procurement of accessible materials.
    - AEM in the IEP Guide: The two purposes of this guide are to (1) help families and educators understand the importance of including AEM in the IEPs of students who require them, and (2) to discuss locations in the IEP where it may be appropriate to refer to a student's need for and use of AEM.
    - Using Accessible Formats: Provides guidance for leveraging accessible materials.
    - Procuring Accessible Digital Materials and Technologies for Teaching and Learning: Presents five guidelines used to ensure successful procurement of accessible digital materials and technologies.

    - Communicating Digital Accessibility Requirements: Provides examples of clear language as part of the curriculum adoption or procurement process, or to use in RFPs, Instructional Materials Adoption, and in contracts.
- Center for Online and Distance Learning: Offers resources and guidelines related to the development of accessible courses and media.
- CoSN: State of EdTech Leadership: The results of this 2022 survey provide an overview of the state of information technology in education.
- Welcome to TechMatrix: American Institutes of Research (AIR) developed an extensive database of assistive and educational technologies.

Center on Inclusive Technology & Education Systems

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