Risk Research Bulletin

Understanding Your Institution's Duty to Make Technology Accessible

Is all of the electronic information technology (EIT) on your campus accessible to students with disabilities? For most institutions, the answer is no. However, under the Rehabilitation Act and the Americans with Disabilities Act (ADA) institutions have a legal responsibility to ensure that students with disabilities can have access to electronic information, such as Web pages. Over the past five years, the federal government has pushed toward enforcing several EIT accessibility laws on campus.

A student's day revolves around technology, whether he or she is completing an assignment on a laptop, watching a video in class, reading a professor's notes on a learning management system, or taking an online course. Without full access, students with disabilities are denied important educational tools and opportunities.

This guide is intended to help college administrators, risk managers, and EIT coordinators better understand accessibility. It provides recommendations for writing EIT accessibility policies, implementation plans, and guidelines.

What Is EIT?

Electronic information technology consists of data and any equipment used to convey it. It includes computers, websites, telephones, software, learning management systems (e.g., Blackboard), videos, apps, and electronic documents.

Understanding the Legal Framework

The National Landscape

1973	1990	1998	1999	2008
Rehabilitation Act: Section 504	**Americans with Disabilities Act (ADA)**	**Rehabilitation Act: Section 508**	**Web Content Accessibility Guidelines (WCAG) 1.0**	**Web Content Accessibility Guidelines (WCAG) 2.0**
▪ Equal access to Programs receiving federal subsidy	▪ Limits discriminatory practices against people with disabilities	▪ Supports Section 504 and encompasses web accessibility ▪ Standards set out in a checklist ▪ Applies to websites	▪ International accessibility standard ▪ Standards set out in a checklist ▪ Applies to websites	▪ Update of WCAG 1.0 ▪ Based on principles that can be applied across various platforms ▪ Conformance levels: A (lowest), AA, AAA (highest)

Institutions have been responsible for making their programs accessible for over 40 years. Section 504 of the Rehabilitation Act of 1973 (Section 504) and Titles II and III of the ADA provide that covered institutions should make reasonable modifications for students with disabilities to provide them a full and equal education.

In 1998, Section 508 of the Rehabilitation Act (Section 508) was amended to encourage the development of accessible technologies for people with disabilities. Around the same time, the World Wide Web Consortium released the Web Content Accessibility Guidelines (WCAG). WCAG and Section 508 are similar in purpose. Section 508 applies to all federal agencies. Though it does not regulate educational institutions, it can be used as a guideline to comply with Section 504 and the ADA. Similarly, courts and federal agencies see WCAG's influential guidance as instructive for setting the standard of care for how colleges should make their technology accessible to those with disabilities. See the appendix for a summary of litigation and decrees that cite WCAG as a standard-setting source.

Unfortunately, both Section 508 and WCAG 1.0 checklists applied only to technology that existed at the time they were created and quickly became obsolete. In 2008, WCAG 2.0 was released to provide flexible guidance for changing technologies. Its guidelines are organized around four Web content design concepts: perceivable, operable, understandable, and robust (POUR). Conformance with the guidelines is broken down into three levels: Level A (lowest), AA, and AAA (highest).

Additionally, Section 508 is currently undergoing revisions to adopt conformance levels and design concepts similar to those used in WCAG 2.0.

Until the Section 508 revision is complete, educational institutions should follow WCAG 2.0 standards and strive to attain as much Level AA conformance as possible.

EIT accessibility seeks to support four major disability types: blindness, deafness, motor, and cognitive. Use the POUR principles to assess the modifications that can be made for each disability type. Some of these modifications are listed in the table below.

WCAG 2.0 Web Content Design Principles

Perceivable. Web content must be perceivable through users' five senses. Text is the most easily transformable format. It can be relayed through a screen reader for the blind and in closed captioning or audio transcript for the deaf. Use text to convey the main messages of your institution-developed Web content and ensure that the text can be understood without visual representation.

Operable. User interface components and navigation must be operable or navigable by alternative hardware. For example, keyboard accessibility is important because it cuts across disability types and technologies. Most of the alternative and adaptive devices used by people with disabilities, such as a voice recognition software and mouth sticks, emulate keyboard functions.

Understandable. Content and the user interface must be understandable. Providing alternative or supplemental representations of information can often increase understandability. For example, text can be supplemented with illustrations, videos, animations, audio, and other alternative formats.

Robust. Content must be robust enough to be interpreted reliably by a variety of software employed by users, including assistive technologies. The goal is to maximize compatibility with current and potential future users and technologies. For instance, use conventional and accurate coding to make it more likely that Internet browsers and other technologies will recognize and correctly display the content.

POUR in Action

Blindness

- Text descriptions for photos, graphs, tables, buttons, and links (descriptions must be more specific than "click here") **P**
- Use keyboard alternatives for mouse usage (drag and drops) **O**
- Don't rely on color to provide meaning **P**
- Provide audio descriptions for events in video **P**

Deafness

- Provide transcripts for all audio and video **P**
- Provide synchronous captioning for video clips **P**

Motor Disabilities

- Use keyboard alternatives for mouse usage (drag and drops) **O**
- Provide method for skipping over long lists, redundant links, or other lengthy content **O/U**
- Allow unlimited amount of time for each interaction **P/O/U**

Cognitive Disabilities

- Simplify the layout as much as possible **P/U**
- Keep navigation and design as consistent as possible **U**
- Organize information in manageable chunks **U**
- Avoid strobing, flickering image **O**
- Avoid optical illusion image (do not use lines that appear to be in motion) **O**

Chart Key: P=Perceivable, **O**=Operable, **U**=Understandable

Promoting Accessibility

Section 504 requires institutions to provide students with disabilities appropriate educational services to the same extent as students without disabilities. In the past, institutional responsibility centered on providing individual modifications. Once individuals reported their disabilities, the institution was on notice and had to provide reasonable modifications to enable the student to participate equally.

However, individual modifications alone do not satisfy current accessibility requirements. Rather than relying on students to report disabilities to receive services, the departments of Education and Justice expect institutions to take practical steps to make all technology equally accessible. Each institution should aim to produce everything from online courses to teacher Web pages using the WCAG 2.0 standards. Each institution should create a policy, implementation plan, and guidelines outlining plans for making campus technology accessible.

Form a Stakeholder Team

A team of campus stakeholders should create the accessibility policy and an implementation plan. Ideally, participants should include:

- **Administrators with technological backgrounds.** Chief information officers and IT managers provide guidance on products, capabilities, and implementation.

- **Disability services.** Heads of the disability services team report on trends or issues affecting students with disabilities, the institution's responsibilities, and how to make disability services available.

- **Business outreach.** Purchasing and procurement employees advise on an institution's buying practices and relationships with vendors.

- **Student leadership.** Members of student government and disability-related campus organizations provide valuable insight on student accessibility needs and implementation problems.

- **All department chairs.** Department chairs or other faculty representatives help devise plans to get the full participation of faculty.

George Mason University's EIT Policy Stakeholders

George Mason University (GMU) implemented an Electronic and Information Technology Accessibility policy in 2008 that assigns responsibilities by employee category.

The senior vice president, provost, vice president of IT and CIO, or designee, will ensure that personnel responsible for electronic and information technology procurement, programs and services will have the necessary technical knowledge related to accessibility standards.

Deans, directors, and managers will provide oversight of training and education of all staff and ensure compliance with federal and state laws, regulations, and GMU policies governing accessible technology.

Teaching faculty will ensure accessibility of instructional materials to allow for equally effective access for all faculty and students, as documented in the campus guidelines and plans for accessible technology.

Purchasing and procurement will ensure conformance with the guidelines for electronic and information technology procurement, including the acquisition of all technology with a user interface.

Developers and content managers will ensure accessibility of campus websites, and Web applications and content, as documented in the campus guidelines and plans for accessible technology.

Create an EIT Accessibility Policy and Implementation Plan

The stakeholder team's first duty is the creation of an EIT accessibility policy. These policies consist of one to two paragraphs documenting the institution's commitment to conforming to the ADA, Section 504, and using the WCAG 2.0 AA standards as compliance guidelines. The policy can help memorialize the taskforce's purpose. Any policy inclusions outside of those mandated by law may create additional duties the institution must uphold. For this reason, the institution should practice all tenets adopted in the EIT accessibility policy.

After creating a policy, the stakeholder team should evaluate the existing technology's accessibility to determine the major actions needed to meet its standards. The team will prioritize those actions in a rating system and timetable. Determine priorities by considering the following factors:

- Number of people the change affects

- Whether the audience can use other options while changes are made, such as an external captioning vendor during creation of an internal captioning process

- Time and costs required to implement the actions

Consider the following recommendations for prioritizing actions:

1) Immediate. Create a usability study, stakeholder team, and campus policy

2) Immediate. Make all new and currently used content accessible

3) Immediate. Name an EIT coordinator

4) Not immediate. Make archived content accessible

See the Resources section for sample accessibility policies and plans.

Appoint an EIT Coordinator

Recent resolution agreements indicate that the federal government expects institutions to assign an EIT coordinator. Typically, coordinators are members of the IT or EIT departments, not disability services. The EIT coordinator is charged with overseeing the campus EIT accessibility program and website. Specifically, the coordinator ensures that the website displays the EIT accessibility policy, implementation plan, accessibility guidelines, coordinator's contact information, and a list of stakeholder team participants. This website should also house, or link to, checklists and resources for WCAG 2.0 AA conformance. Coordinators are also responsible for training staff and department heads on accessibility recommendations and requirements.

Draft EIT Accessibility Guidelines

The EIT accessibility guidelines, created by the EIT coordinator, provide instruction for making various types of technology accessible. Areas that may require focus include web-based learning, in-class technology, and document preparation.

See the Resources section for sample accessibility guidelines.

Major Accessibility Considerations

Web-based Learning

Types: Videos, online courses, content and learning management systems

- Provide closed captioning for video
- Include descriptive transcripts for all audio and video
- Provide read-only pages for inaccessible interactions
- Make keyboards accessible
- Allow users to control timing of interactions

In-Class Technology

Types: Clickers, SMART boards, overhead presentations

- Provide equivalent alternative methods for interactive technology
- Include closed captioning for video
- Provide descriptive transcripts for all audio and video
- Allow people with disabilities to review accessible versions prior to class (for example, provide a transcript to blind students in advance of showing a video in class)

Document Preparation

Types: PDFs, Microsoft Office Suite

- Correct table structure
- Correct heading styles
- Correct paragraph tools
- Proper table of contents
- Alternative text and long descriptions for images
- Accessibility checker to test PDFs

Each section below lists several general considerations for the types of technology used. See the sample accessibility guidelines in the Resources section below for step-by-step procedures organized by technology type.

Accessible Web-based learning design and development may require more time, money, and resources. Depending on the level of output, the institution may need to outsource video captioning and transcripts. The institution is still responsible for making sure vendors provide a fully accessible product. The institution may be responsible for defective or late products such as inaccurate captions or captions received after a video is presented to the class.

- Videos

  - Does the institution have software for adding captions or subtitles or should this task be outsourced? What is the time and cost for vendors to complete outsourced tasks?

  - When is a descriptive transcript recommended? What is the process for obtaining a transcript?

- LMS

  - What steps must employees follow to make an accessible course page on your institution's LMS?

  - If using a vendor, does it provide:
    - Accessibility tools or recommendations?
    - Accessibility training?

  - Will the EIT coordinator review LMS pages for accessibility?

  - Are course discussion pages accessible?

  - Are uploaded documents accessible?

- Online courses or presentations

  - Does the institution require all vendors to present a Voluntary Product Accessibility Template (VPAT) ensuring the technology is accessible? (See "Third-Party Vendors" for more information.)

- Website

  - Are employee Web pages tested for accessibility using free online tools such as website validators and contrast checkers?

In-class technology preparation requires planning. Lecturers may need to provide additional notes, transcripts, or advanced reading to people with disabilities. It is particularly important to have in-class technology accessible when class begins; unlike documents and Web content, much of this content is only available live. If a student cannot access technology during class, such as being unable to see a visual presentation or read clicker buttons when submitting answers, it can be difficult to replicate the information afterward.

- Videos

  - Does the institution have software for adding captions or subtitles or should this task be outsourced? What is the time and cost for vendors to complete outsourced tasks?

  - When is a descriptive transcript recommended? What is the process for obtaining a transcript?

- Clickers

  - Are all handheld voting remote controls, such as clickers, provided with Braille indicators or verbal identifications of each button's response?
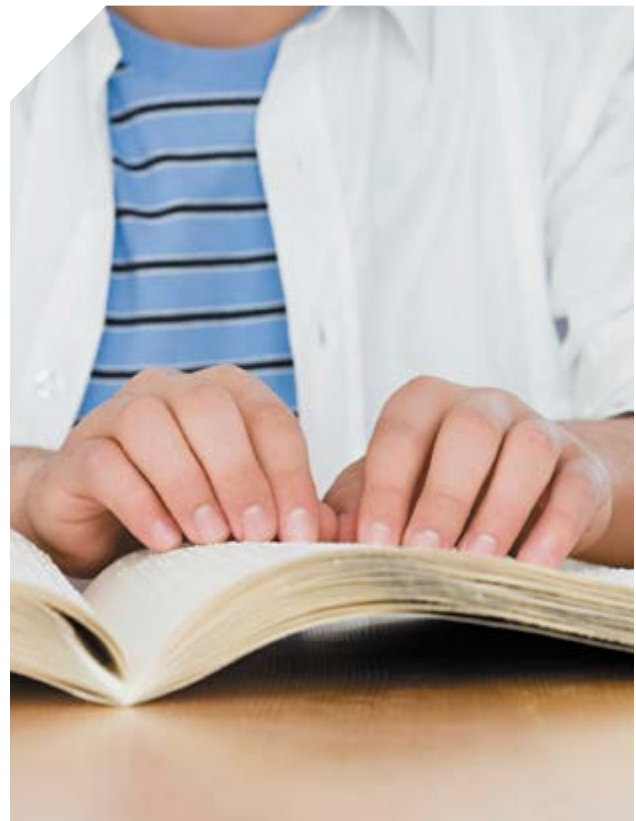
Third-Party Vendors

Institutions should hold the vendor responsible for ensuring the technology it delivers is accessible. The vendor's Voluntary Product Accessibility Template (VPAT) should be required and reviewed to validate conformance to all Section 508 guidelines. In the VPAT, vendors identify the level of support products have for each of the 508 criteria. For any criteria that are not fully met, vendors should state why and when they intend to achieve full support. The vendor should also note any 508 criteria that are not applicable to the product.

Unless otherwise indicated through a VPAT or other contractual means, the distributor (in this case the institution) may be held responsible if technology is not accessible. During the contracting and procurement process, someone, usually in the procurement office, should be charged with ensuring all third-party contracts include adequate accessibility provisions.

- Overhead slides

  - Are accessible slides provided in advance of class?

  - Does the instructor verbally explain each slide?

- SMART Boards

  - Does the instructor verbally explain the visuals as they appear?

  - If using a vendor, does it provide:

    - Accessibility tools or recommendations?

    - Accessibility training?

Document preparation can be quick if the Microsoft Office Suite tools are used. Encourage making documents accessible—even if they are not intended to go on the Web, because they may be transferred electronically later.

- PDFs

  - Does the EIT coordinator provide or link to pdf accessibility checklists?

- Microsoft Office Suite

  - Does the EIT coordinator provide instructions for using the built-in Microsoft Office Suite accessibility tools available in most suite products, such as the tools in Word, Excel, and PowerPoint?

  - Does the EIT coordinator provide or link to Microsoft Office Suite accessibility checklists?

Training

Everyone developing online content should receive the EIT coordinator's contact information and training on the WCAG standards and the repercussions of inaccessible content.

> Youngstown State University established a technology and training coordinator who meets with staff in their offices and provides accessibility training to fit their job duties. The Youngstown State EIT team also provides a popular brand of assistive technology software to all students and employees, enabling them to learn how the tool works and test their content's accessibility.
>
> George Mason University established an Assistive Technology Initiative website that provides extensive guidelines and a video training library with more than 30 short videos. Its purpose is to ensure that staff who do not receive personalized training still have access to robust training resources.
>
> Sample training materials are provided in the Resources section.

Solicit Feedback

Institutions should consider implementing an annual usability report, with the results of studies revealing whether students and faculty with disabilities can successfully use campus EIT. Participants are given specific tasks, such as accessing a teacher's Web page, and then report on their experiences. The stakeholder group uses the results to guide EIT policy, plan, and guideline updates.

Sample usability studies are provided in the Resources section.

Conclusion

Full campus EIT accessibility is possible with extensive planning and participation. Creating a policy, implementation plan, and guidelines puts the stakeholder team and coordinator on the right path.

Acknowledgment

Understanding Your Institution's Duty to Make Technology Accessible was written by Melanie Bennett, associate risk management counsel, and Erica Ellis, e-learning instructional designer.

Resources

WCAG 2.0

Section 508 Checklist

WebAIM, Constructing a POUR Website

Sample Accessibility Policies

- Maricopa Community College
- Youngstown State University
- University of Montana
- George Mason University
- University of Wisconsin-Madison

Sample Implementation Plans and Prioritization Guides

- Youngstown State University
- University of Montana
- University of California
- University of Wisconsin-Madison

Sample Accessibility Guidelines

- Youngstown State University
- George Mason University
- University of Washington

Sample Training Materials

- Youngstown State University EIT Training
  (scroll halfway down the page)
- George Mason University Video Training Library

Sample Usability Studies

- University of Montana
- George Mason University
- Colorado State University
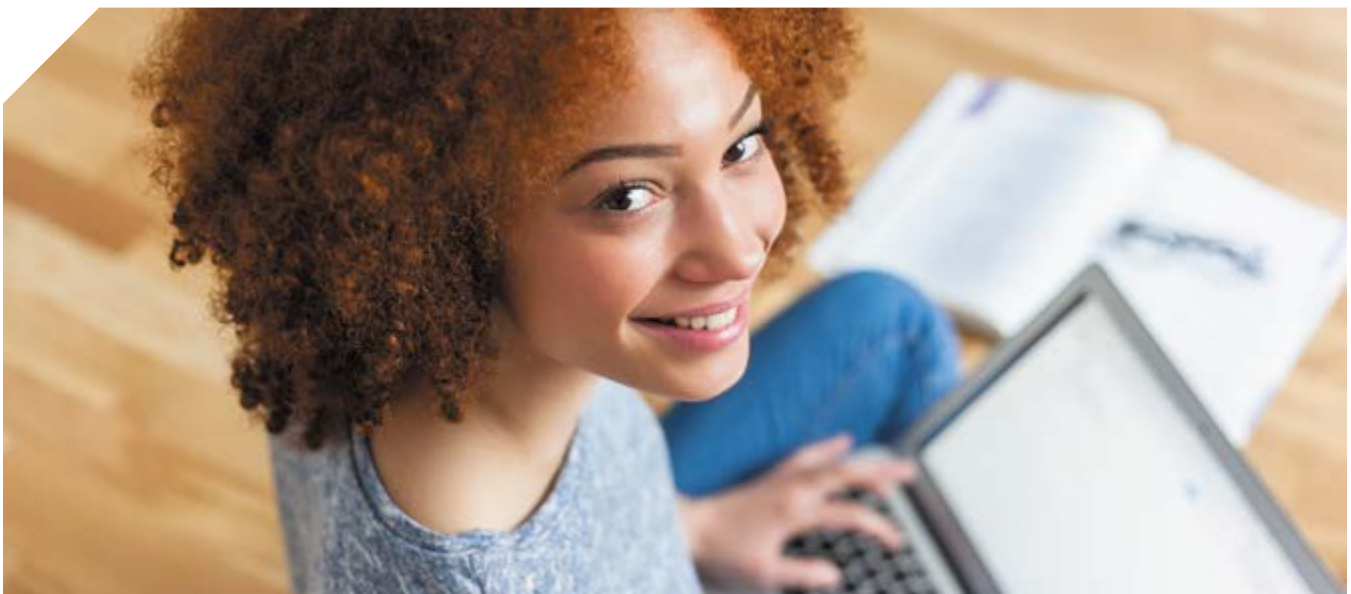
Appendix

2010–2016 Major Electronic Information Technology Accessibility Guidance and Legal Agreements

Document Type	Party 1 (Plaintiff) Department of Justice (DoJ) Department of Education (DoE)	Party 2 (Defendant)	Summary
2010			
Settlement agreement	DoJ	Arizona State University	Only use e-book reading devices that are accessible to blind students.
"Dear Colleague" letter (DCL)	DoJ and DoE	College presidents	**Do not purchase, require, or recommend use of any e-book readers unless the device is fully accessible to blind students. Students with disabilities must be able to receive all the educational benefits provided by the technology in an equally effective and equally integrated manner.**
2011			
Frequently asked questions	DoJ and DoE	College presidents	**Confirmed that the 2010 DCL applies to all operations, not just e-readers.**
Voluntary resolution agreement	DoE	The Pennsylvania State University	**First agreement to require an accessibility audit of the institution's electronic information technology (EIT). Required conformance with WCAG 2.0 Level AA for university websites.**
2012			
Settlement agreement	National Federation of the Blind	Florida State University	Two students were unable to complete courses related to their majors due to a lack of accessible technology.
2013			
Resolution agreement	DoE	South Carolina Technical College System	DoE Office for Civil Rights (OCR) found that the campus website was not readily accessible to blind people and was therefore not in compliance with Section 504 of the Rehabilitation Act and Title II of the Americans with Disabilities Act (ADA).
Settlement agreement	Disability Rights Advocates	University of California, Berkeley	Provides step-by-step guidelines for alternative media use.
Settlement agreement	DoJ	Louisiana Tech University	A blind student was not provided with exam prep materials and lacked access to course materials created using an inaccessible learning product.
2014			
Resolution agreement	DoJ and DoE	University of Montana	**Provides a blueprint for both web and nonweb technology accessibility. It directly addresses the accessibility of classroom technology.**
Settlement agreement	National Federation of the Blind	Maricopa County Community College District and Mesa Community College	Hurdles a blind student faced included: 1) An inaccessible website barred registration for classes or use of student email account 2) Inaccessible learning management systems blocked access to class readings
Note: Institutions should pay particular attention to the items in bold type.			

Document Type	Party 1 (Plaintiff) Department of Justice (DoJ) Department of Education (DoE)	Party 2 (Defendant)	Summary
Appendix *(continued)*			
Resolution agreement	DoE	Youngstown State University	OCR identified compliance violations relating to the institution's nondiscrimination notice, as well as the accessibility of particular pages on the institution's website.
Resolution agreement	DoE	The University of Cincinnati	OCR identified compliance violations relating to the designation of a Section 504 coordinator.
2015			
Settlement agreement	DoJ	EdX Inc.	**For the first time, the Department of Justice found a major educational vendor responsible for conforming to WCAG 2.0 AA guidelines. The EdX MOOC platform was identified as a public accommodation that falls under Title III of the ADA.**
Resolution agreement	DoE	The University of Phoenix	OCR identified a plan for achieving Section 504 compliance.
Ongoing lawsuit	National Association of the Deaf (NAD)	Harvard & MIT	NAD claims these institutions violated the ADA and Rehabilitation Act by not captioning all of their online course content.
2016			
Settlement agreement	Student DoJ	Miami University of Ohio	Blind student claimed Miami violated the ADA. **The Department of Justice joined the existing lawsuit in 2015.**
Note: Institutions should pay particular attention to the items in bold type.			