

The Path Traveled: The Progress of a STEM Institution to Increase ADA Understanding and Compliance

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Americans with Disabilities Act Amendments Act of 2008

1. Definition of disabilities
2. Activities of a person's life covered by the Act
3. Who is covered by the Act
4. Way's Congress helps disabled through this law.



We are a STEM School we don't have disabled students

Students on the autism spectrum gravitate towards STEM careers

Students with ADD, ADHD, Dyslexia, Dysgraphia, Vision impairment, hearing impairment

- Mobility
- Manual dexterity
- Physical coordination
- Ability to lift, carry or move everyday objects
- Speech, hearing or eyesight
- Memory or ability to concentrate, learn or understand
- Understanding of the risk of physical danger.

Meeting with Departments on Campus

Wellness Center

Academic Success
Center

Information
Technology

Disability Matters
Student Group

CETL - Disability Class

Library

Disability Statement

Kettering University:

The University will make reasonable accommodations for persons with documented disabilities. Students need to register with the Wellness Center every term they are enrolled in classes. To be assured of having services when they are needed, students should contact the Wellness Center the first week of each term. Note that it is the student's responsibility to arrange accommodations with each professor. For more information on "Disability Services," refer to the Student Life section of the Undergraduate Catalog or the Student Life webpage. This information is also noted in the student handbook.

Disability Statement

Villanova University:

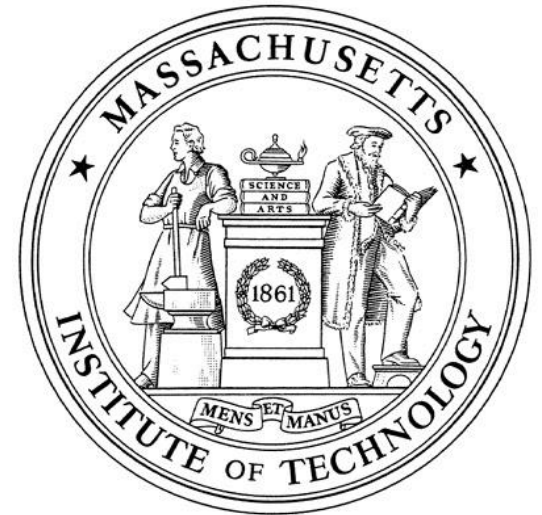
Strives to provide an environment for personal and intellectual growth of all its students, and also complies with the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973. In order to meet these commitments, Villanova offers educational opportunities and reasonable academic accommodations for the needs of qualified students with disabilities. The standards for academic credit should not be modified for students with disabilities. Students with disabilities have fulfilled the same entrance requirements, have the same range of backgrounds and experiences as other students at Villanova, and should be fully capable of meeting Villanova's standards. The University's goal is to provide access and reasonable accommodations in helping the students achieve those expectations.

Disability Statement

Berea College

Will provide reasonable accommodations for students with disabilities to make all learning experiences accessible. If you feel you may need accommodations based on the impact of a disability or health condition, please contact Lisa Ladanyi (DAS - Disability & Accessibility Services, 111 Lincoln Hall, 859-985-3237, lisa.ladanyi@berea.edu) to initiate a conversation about your options. Please know that accommodations are not retroactive, so avoid any delays.

We don't want to be forced to comply



Where can the Library go for help?

Association of College & Research Libraries' (ACRL) Universal Accessibility Interest Group (UAIG) serves as a resource



Impact of Library doing this?



How a dyslexic person sees print

Rehissan and Conway (1988, unpublished) reported significant improvements in subjects using Demand based in which the 90-ward error, basic academic subjects, reading comprehension, reading accuracy, but not in rate of reading. Additionally, Wood (1987) evaluated the results of fifteen cases of 23 remedial high school students and a matched control group. Significant improvements for the experimental group was noted for time needed to locate words on a printed page, timed reading scores, length of time for sustained reading, and span of focus, as well as other perceptual tasks. Additionally, seven of the 23 experimental found employment, but none of the control group was employed by the end of the semester.

In contrast, Winans (1987) was unable to find differences in this study. Winans gave 15 elementary school children four minutes to locate and circle 68 examples of the letter "b" on three pages, each page of which contained 600 random letters in 20 lines of

Help: fonts for people with dyslexia

This font is one example of fonts designed for people with dyslexia. When they use it, they make fewer errors whilst they are reading. It makes reading easier for them and it takes less effort.

Examples:

- Open Dyslexic (shown)
- Dyslexia Font

Which is easier to read?

Does our choice

of background colors

and text colors

Help or hurt our users

Staff awareness training

My disability is only one part of who I am!



What measures can the Library take to help?

Dragon Naturally Speaking software loaded on four computers in the Library and on a laptop.



<https://shop.nuance.com>



MacSpeech Scribe



<https://www.macupdate.com/app/mac/34121/macspeech-scribe>

Livescribe Smartpens

<https://www.livescribe.com/en-us/smartpen/>

Livescribe Smartpens

What starts on paper, doesn't have to stay there. Livescribe smartpens bring your words and ideas into your digital world.



 livescribe.

SMARTPEN
3

Turn Your Words into Action.

Watch your notes appear instantly on your iOS and Android mobile devices. Paired with the Livescribe+ mobile app, notes become more useful when they are organized, tagged, searchable and converted to text.

LEARN MORE

Capture it. Replay it. Send it.

Echo connects easily to your laptop or desktop by USB cable to transfer your interactive notes. Search, organize and share replay your notes with Echo Desktop.

LEARN MORE



Help for Hearing Disabled

<https://www.ada.gov/>

SuperEar Plus Sonic Ear Personal Sound Amplifier

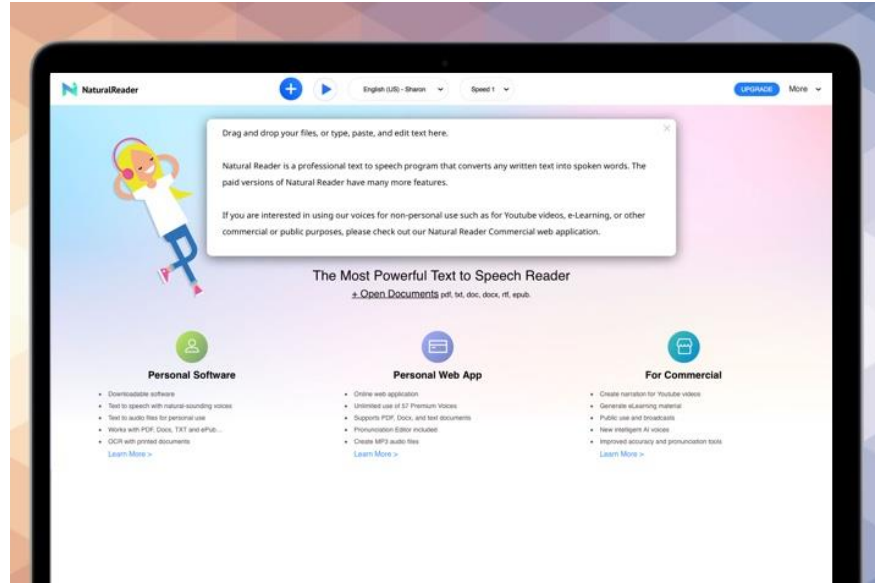
Personal Sound Amplifier



Reading Material to Students

Natural Readers Software:

<https://www.naturalreaders.com/online/>



Text to speech software

Balabolka



<http://www.cross-plus-a.com/balabolka.htm>

Zabaware



<https://www.zabaware.com/reader/>

Word Talk



The screenshot shows the homepage for WordTalk, a free text-to-speech plugin for Microsoft Word. The page features a dark grey background with white and yellow text. At the top, the 'WordTalk' logo is displayed in blue and black, accompanied by a small circular icon. Below the logo, the text reads 'Free text-to-speech plugin for Microsoft Word'. A navigation menu includes links for 'INSTALLATION', 'TOOLBAR GUIDE', 'SUPPORT', 'DOWNLOAD', and 'CONTACT'. The main content area is titled 'A free text-to-speech plugin for Microsoft Word' in yellow. It describes the plugin as a 'text reader' that creates a spoken sound version of the text and reads it back as words are highlighted. A yellow callout box shows a Microsoft Word toolbar with the plugin's icons highlighted. A red circular badge with the word 'free' is positioned over the text. A yellow speaker icon is also visible. At the bottom, there is a red 'Download now' button and the text 'A CALL Scotland product'.

WordTalk 

Free text-to-speech plugin for Microsoft Word

🏠 INSTALLATION TOOLBAR GUIDE SUPPORT DOWNLOAD CONTACT

A free text-to-speech plugin for Microsoft Word

It will act as a 'text reader' and create a spoken sound version of the text in the document and read it back to you as it highlights the words.

🕒 Over 165,000 downloads to date!

[Download now](#)

free



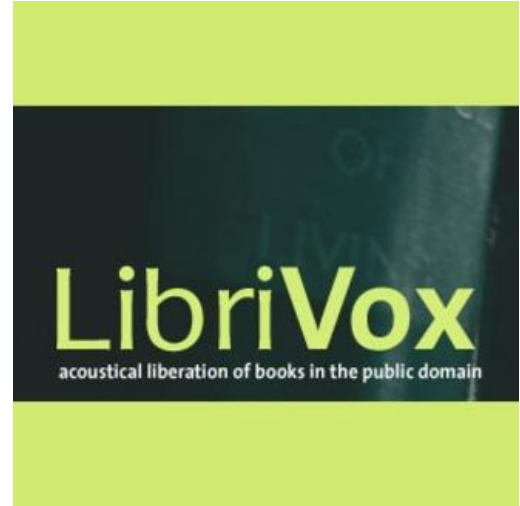
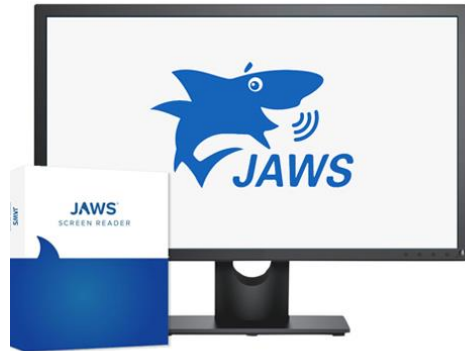
A [CALL Scotland](#) product

or, read on...

<https://www.wordtalk.org.uk/Home/>

Other sources to help with reading

Braille and Audio Reading Download (BARD)



Machines that will read to you:

Intel Reader



Kurzweil Reader



Proofreading software



Proofreading software



Online Proofreading Service

Easily proofread your texts with a single click!

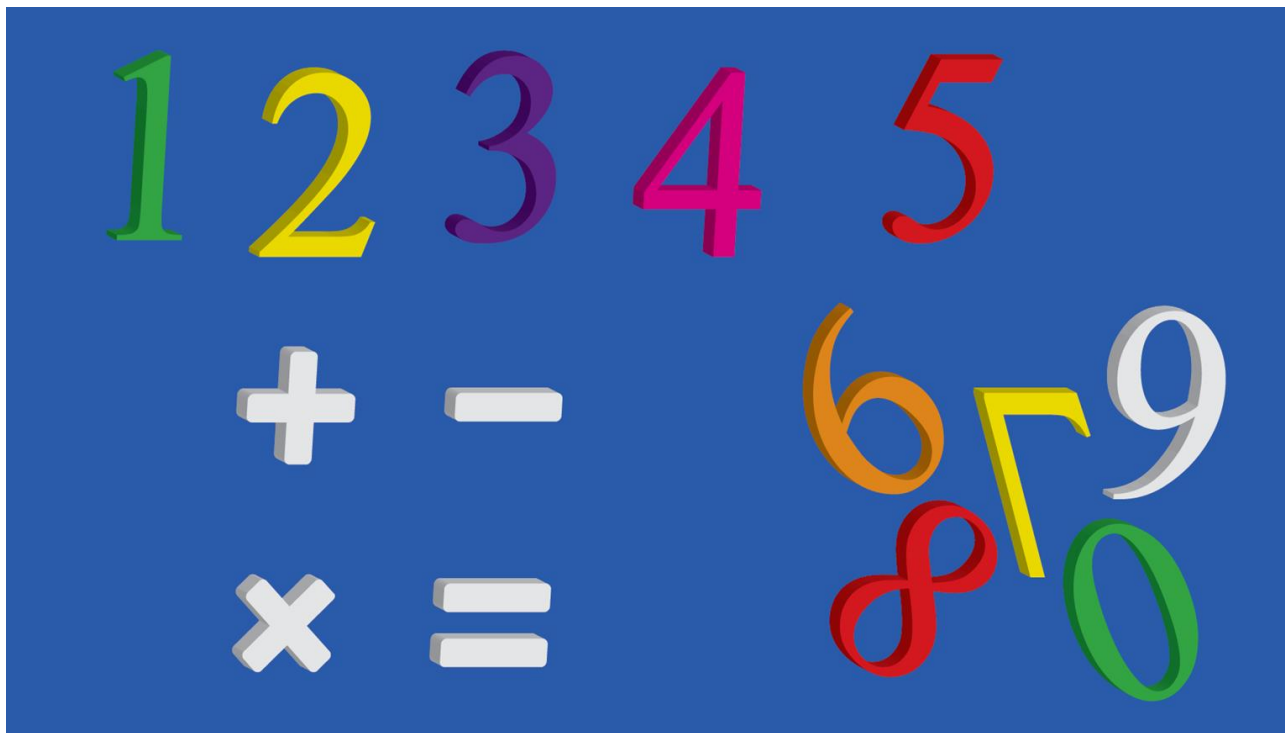
<https://www.gingersoftware.com/proofreading>

ASSISTIVE TECHNOLOGY THAT UNDERSTANDS YOU



<https://www.ghotit.com/>

Math tools



Math Talk

The logo for Math Talk, featuring the word "MATH" in blue and "TALK" in orange, with a trademark symbol (TM) to the upper right of "TALK".

MATH TALK™

<https://mathtalk.com/>

Screen readers



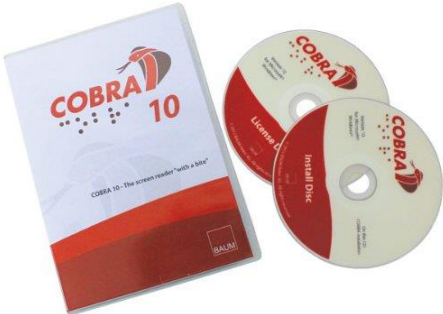
NonVisual Desktop Access



Window Eyes Screen Reader



Jaws Screen Reader



Cobra Screen Reader



VoiceOver Screen Reader



Orca Screen Reader

Sign language converted into speech

<http://globalaccessibilitynews.com/2017/01/27/students-invented-gloves-that-convert-sign-language-into-speech/>

GAN

Global Accessibility News

<https://youtu.be/O0rxxJvD5Rw>



Computer Aided Real-Time Transcription (CART)

- An instant translation of the spoken word into English text using a stenotype machine, a notebook computer and real-time software.
- The text appears on a computer monitor or some other type of display
- The Americans with Disabilities Act recognizes CART as an assistive technology that provides “effective communication access”



Assistive Listening Devices



ASSISTIVE LISTENING DEVICES (ALDS)

The three common ALDs are:

- Inductive loop systems
- FM systems
- Infrared systems



Need compliance in our websites and databases

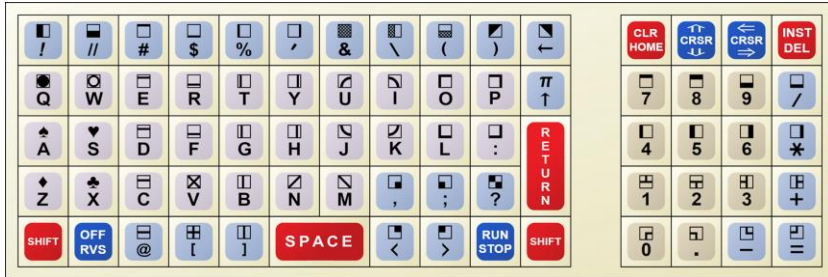
We have web accessibility in mind

Our mission is to empower organizations to make their web content accessible to people with disabilities.

<https://webaim.org/>



Issues found with many websites and databases



The screenshot shows the Lynda.com website interface. At the top, there is a search bar with the text "Search for the software or skills you want to learn" and a magnifying glass icon. To the right of the search bar, it says "Hi Dawn" with a user profile icon. Below the search bar, there are several sections:

- Continue Watching:** A list of courses with progress indicators. One course is "Excel 2013 Essential Training" (22% Complete) and another is "Advertising Foundations" (0% Complete).
- My Playlists:** A section with a "See All" link and a playlist titled "Excel" with 1 item.
- Popular Learning Paths:** A grid of eight cards representing different career paths: "Become a User Experience Designer", "Become a Manager", "Become a Project Manager", "Become a Front-End Web Developer", "Become a Digital Marketer", "Become an Excel 2013 Microsoft Office Specialist", "Become a Network Administrator", and "Become a Project Coordinator".
- Recommended:** A section with tabs for "New", "Popular", "Recommended", and "Popular at Your Organization". It features two video thumbnails with titles and descriptions:
 - Excel 2007: Creating Charts with Dynamic Data** with Curt Frye. Description: "Shows how simple data in Excel can be used to build exciting and updateable charts." 40m 47s, Intermediate, Views: 64,322.
 - Excel 2010: Managing Multiple Worksheets and Workbooks** with Dennis Taylor. Description: "Excel tutorials that show how to share data between multiple worksheets and workbooks, including tips for adding, moving, and navigating worksheets and workbooks efficiently." 1h 29m, Intermediate, Views: 107,809.

Our Databases Websites

60 Minutes Collection

Access Engineering

ACM Digital Library

(Assoc for Computing Machinery)

American Chemical Society

ArXiv

ASME Digital Collection

ASTM Compass Standards

Business Source Premier

CRCnetBASE (Engineering ebooks)

Digital Thesis Archive

Engineering Case Studies

Engineering Village—Compendex

GrantForward

Google Scholar

HathiTrust Digital Library

IEEE Xplore

IOPscience (Institute of Physics)

Journal List A-Z

JSTOR Global Plants

JoVE (Journal of Visualized
Experiments)

Kanopy (Films)

Kettering University Archives

Knovel Science & Engineering

Datasets

LibGuides

Lynda Course Tutorials

Mango Languages

MiTracking - Michigan Environmental

Health Public Health Tracking

Michigan Academician

ProQuest Global

PubMed

PubMed Central

SAE Mobilus

ScienceDirect

SciFinder: A CAS Solution

SPIE Digital Library (Society for
Optics + Photonics)

Springer Journals

Statista Statistics Portal

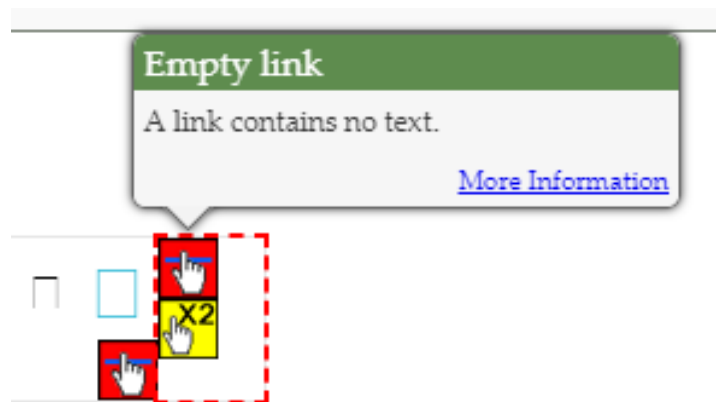
Web of Science

What I found out using Wave

Checked our ebook package ENGnetBASE.

The screenshot displays the Wave web accessibility evaluation tool interface. On the left, the 'Summary' panel indicates that 10 errors, 7 alerts, 2 features, 9 structural elements, 2 HTML5 and ARIA issues, and 2 contrast errors were detected. The main content area shows the Taylor & Francis Group logo with several accessibility icons overlaid: a red 'X' icon, a yellow 'alt' icon, and a yellow 'alt=alt' icon. A search bar is visible with the text 'Search for keywords, authors, titles, ISBN' and a 'Search all titles' button. The top right corner of the page shows a notification: 'The following apply to the entire page:' with a yellow 'X' icon. A 'Login' button is also present in the top right corner.

Wave results continued



Documentation



Errors

Empty link

What It Means

A link contains no text.

Why It Matters

If a link contains no text, the function or purpose of the link will not be presented to the user. This can introduce confusion for keyboard and screen reader users.

Distance Learning



Library Staff in Distance Learning

- **The person dealing with disability support services should be involved in the planning of library services for distant learners.**
- **Dedicated staffing for library services shows the Library is willing to meet their needs and to help them with whatever they need.**
- **This is essential when planning for the future, discussing potential purchases, creating budgets, and so on.**

Library policies

- Written policy and support for users with disabilities needs to be present in the library and at the library's home institution.
- Library must provide a personal touch for these users by having an individual directly responsible for distant and/or accessible services.

Physical building for ADA compliance



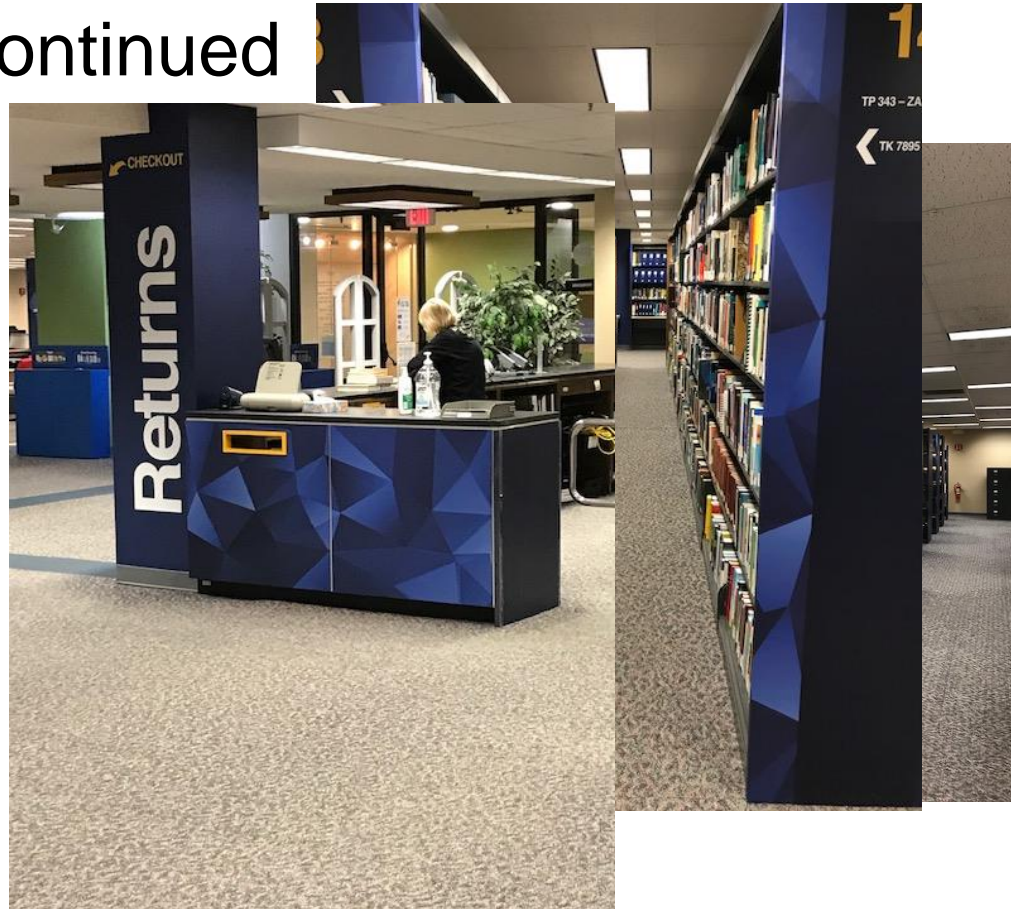
Rules to adhere to:

- Main entrance and door openings
 - Book returns
- Floors



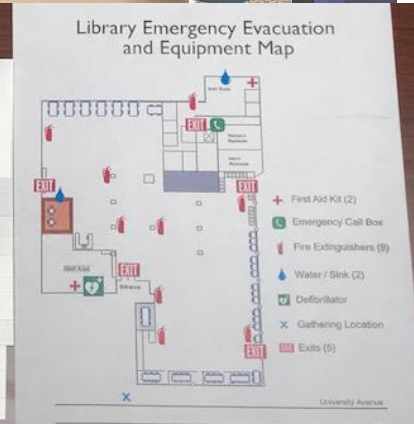
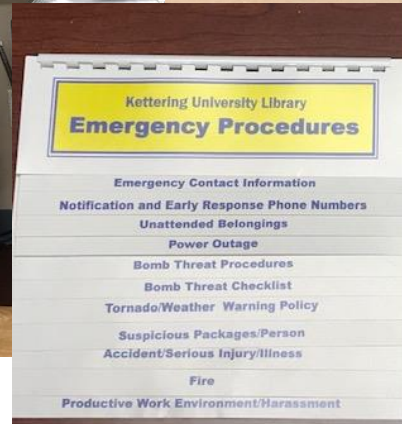
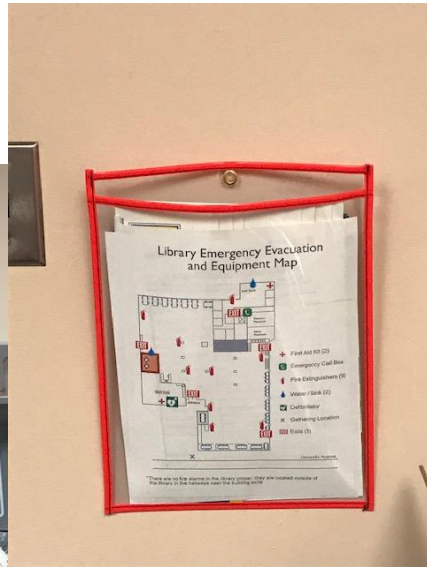
Physical building continued

- Lighting
- Aisles
- Furniture and tables
- Computer stations
- Checkout counter



Physical building continued

- No cords across the floor
- Signs
- Water fountains
- Emergency preparedness



How do we define disabilities

<ul style="list-style-type: none">• Disability results from an individual's "deficiencies" or "abnormalities"	<ul style="list-style-type: none">• Disability results from interactions between individuals and society
<ul style="list-style-type: none">• Individuals should adapt to societal norms and expectations	<ul style="list-style-type: none">• Society should adapt to allow individuals to flourish
<ul style="list-style-type: none">• The remedy for disability is the cure or normalization of the individual	<ul style="list-style-type: none">• The remedy is a change in the interactions between individuals and society
<ul style="list-style-type: none">• Accommodations and access for individuals with official diagnoses so that their basic, legally defined needs are met	<ul style="list-style-type: none">• Access benefits everyone
<ul style="list-style-type: none">• Disability is a problem and should be eliminated or hidden	<ul style="list-style-type: none">• Disability is difference that should be valued

Bibliography

- Brannen, Michelle H., Steven Milewski, Thura Mack. (2017) "Providing Staff Training and Programming to Support People with Disabilities: An Academic Library Case Study", *Public Services Quarterly*. 13:61–77.
- Coonin, Bryna & Hines, Samantha (2012) "Reference Services for Distant Students With Disabilities", *Internet Reference Services Quarterly*, 17(1), 7-12.
- Daniels-Bacchus, G. (2018). "Ensuring accessibility is everyone's responsibility". *Community College Journal*, 88(4), 31.
- Lipkin, Adam. (Sept. 15, 2018). "Accessibility on Campus", *Library Journal*, 143(15), 24-26.
- McManus, Molly Signs. (Winter 2005). "Web Accessibility: What Your Library Can Do", *Mississippi Libraries*, 69(4), 87-89.
- Mátrai, Rita Kosztyánné. (2018) "How to make an electronic library accessible", *The Electronic Library*, Vol. 36 Issue: 4, pp.620-632, <https://doi.org/10.1108/EL-07-2017-0143>
- Pulsifer, Rebecah. (2018) "Creating accessible classrooms", Handout given at a CETL event.
- Willis, Samuel Kent and Faye O'Reilly. (September 2018). "Enhancing Visibility of Vendor Accessibility Documentation", *Information Technology and Libraries*. 12-28.

Your Next Steps

What will you do now?

What strategies for inclusion are you going to put into effect at your Library for those with disabilities?

Which principles discussed can you adopt at your Library?

Are you going to strive for accommodation (extras we give to the students so they can be successful), or are you going to provide access which is rethinking how we will provide for diverse bodies, minds, learning styles, backgrounds, etc?