Accessible COURSE ASSET Challenge
Hello and welcome to the Accessible Course Asset Challenge. My name is Katie Bush and I am an instructional technologist at the Rochester Institute of Technology.
Goals

- Grow accessibility mindset
- Be familiar with WCAG
- Discover needs of diverse students
- Think critically about assets
- Share tools to fix barriers
In this session you will start to grow your **accessibility mindset**.

One way to do this will be by becoming more familiar with the **WCAG**, which are guidelines for accessible design.

Together we will think **critically** about our course assets and share tools to **fix barriers** within those assets.

And through the whole thing you will discover the needs of **diverse students**.
Accessibility Mindset

Understanding and meeting diverse needs

ADA, Section 508  Right thing to do  Benefits other users too
Let's start with what we mean by accessibility mindset.

Raise your hand if you have attended an accessibility or Universal Design for Learning (UDL) session in this conference. [pause]

[*] You’re all probably familiar with the basics of accessibility, such as the legal mandate to meet ADA or Section 508 requirements, or wanting to provide equivalent experiences because it’s the right thing to do. You may have also heard that making your content accessible benefits more than people with disabilities. For example, students learning English as a second language can use captions on a video to better understand that spoken language.

[*] All of these are important ways to look at accessibility, but the underlying theme with all of these is understanding and meeting the diverse needs of your students. Not all students interact with course materials in the same way and we don't want to define the method of interaction for them. We want to enable students to use the tools that work for them and participate fully in our courses.

Now you can definitely add accessibility after the fact or advertise it as a “feature”. But if you are consistently thinking about your student’s needs and have empathy for the barriers they can experience with your content, you can intentionally create accessible materials from the start.

So how do we find out these needs?
Web Content Accessibility Guidelines (WCAG)

• Meets auditory, cognitive, neurological, physical, speech, visual needs

• Guidelines and success criteria

• 2017 Section 508 Refresh

↓

WCAG 2.0 as standard

http://bit.do/WCAG21
Luckily the World Wide Web Consortium, or W3C, has developed a set of standards called the Web Content Accessibility Guidelines, or WCAG. These guidelines are well-aligned to the needs of the people they aim to support. Even though the name is “web content,” the guidelines really apply to any digitized content. The WCAG cover how content should be created to assist with different auditory, cognitive, neurological, physical, speech, and visual needs. It includes guidelines for what should be done and success criteria, or what meeting the guideline looks like.

The other benefit of following these guidelines is that the 2017 Section 508 Refresh adopted WCAG 2.0 as the U.S. government standard for accessibility. Having an understanding of WCAG can help in creating more accessible courses while also complying with the law.

I encourage you to pull up this guide to understanding the WCAG by scanning the QR code with your phone’s camera or entering the short URL. And yes, capitalization matters with these links. This document is for the 2.1 version of the WCAG which was released in June 2019. It can be helpful for our game today.

I’ve also provided a paper copy of an excerpt of the WCAG at your tables. Definitely use this excerpt in our game today. It also has a link to that same WCAG documentation.
WCAG Principles

Perceivable: people can access content using multiple senses

Operable: people can access content by keyboard, mouse, and voice

Understandable: clear language, easy-to-learn user interface

Robust: people can use different (and assistive) technologies
The WCAG is organized around four principles. It follows a pour acronym or P-O-U-R.
• Perceivable. People can access content using multiple senses, such as sight, touch, and hearing. Content is not limited to one sense to consume.
• Operable. People can access materials through different methods of interaction such as keyboard, mouse, and voice.
• Understandable. This often is described as clear language and an easy-to-learn user interface.
• Robust. Content can be interpreted by assistive technologies or different technologies like mobile and desktop.

You will notice the web documentation and your excerpt are organized around these same principles.

Now that we know a bit about the WCAG, let’s get into our game.
IN TEAM

1. Explore asset to identify barriers
2. Pick one barrier as answer

PRESENTER

3. Assign points for answers
4. Short training on fixing barriers
Our game today embraces the reality that we all have course assets that were not created with accessibility in mind. We need to retroactively fix these assets. The game will help you become more familiar with barriers that exist in course assets. It will also help you think critically about how your students will interact with your materials.

Let’s go through the rules. You have a printed copy at your table if you need to refer back to it.

You will compete in the game as teams; the people at your table.

I will start each round by sharing an inaccessible course asset.

[*] As a team, you will need to quickly explore the asset and determine what barriers are present. You may consider barriers to access, barriers to use, and barriers to understanding. You will only have 3 minutes. I encourage you to use the WCAG Excerpt you have, but you are welcome to use any other resources you wish. Your team members with their diverse perspectives can be helpful in revealing some of the less common or less obvious barriers. I challenge you to think about why does removing that barrier matter, as well as identifying the barrier itself. Your team needs to decide which one barrier you want to share as your answer. Write it on your paper.

[*] In the answer sharing part of the round, we will have all teams hold up their answer papers at the same time. On my side I have a hidden list of barriers that I know exist in that content item. I will reveal if your answer appears on my list and award points to each team. You will earn more points for harder to identify barriers or less common barriers. So try to find the less-obvious things when exploring as a team. Of course, I may not have listed all possible barriers. You can get points by sharing a barrier I have not included in my list. Also teams identifying the same barrier will both get the designated points.

Once the points are tallied, I will do a short training on improving this course asset. Since there are a lot of great resources out there on the steps to fix the barriers, most of the focus will be general strategies or tools you can use to help you.

[*] Then we will move to the next round with another course asset, repeating finding barriers as a team, tallying up points, and a quick training. There are different barriers in each asset, so there is lots to discover. We have 3 assets, so there will be 3 rounds. As you can see, this is a very fast-paced game.

The team with the most points at the end of the game will be the winner and everyone in that team will get a prize.

[ask for questions on rules]
Attend the live session to explore the assets.
Our first round is a course video. This video is a snippet of a larger video for a “using data in health care” course. It’s a fairly dense clip, but it’s a good example of how making something accessible improves the content for everyone.

Have at least one person at your table open the video from the QR code or URL. If you have trouble viewing any of these course assets, raise your hand and I will come over and troubleshoot.

Watch the video individually or in groups. Discuss it with the people at your table, find at least one barrier, decide on your answer. You have 3 minutes. Ready, go! [start timer]

[once time is up] Okay, time is up. Hold up your answers.
Video Barriers

Attend the live session for the answers.
Collect answers, reveal points, ask why each is important, correlate it to WCAG. For ones people don’t find, show it in video asset.

****Answer information has been removed in this pre-conference version of the document. Attend the live session for the answers.****
Removing Video Barriers

• Include descriptive commentary in script

• Adjust images

  • Use WebAIM Contrast Checker (color contrast ratios)

  • Preview as grayscale (differentiation without color)
Now that we have collected some barriers, let’s go through how to fix them.

One thing to keep in mind is that there are often many ways to meet each WCAG success criterion. Depending on the tool you used to create it and what the exact content item is, your process can be different. After all, the WCAG describe what success looks like not technology-specific techniques.

Some of the barriers in this video can be overcome by including more descriptive commentary in your script. That way the audio better describes the visuals. People consuming only the audio track or caption track will have the information you want them to have without needing to see the graphics. This is a good example of the perceivable principle because you can hear the audio, read the captions, and see the visuals, and they all contain the core information.

For some of the color issues, there are tools to help you.

One I like is the WebAIM Contrast Checker. You insert the color codes and it tells you if the contrast is good enough. [switch to WebAIM tab] For example, the original dark green background #70AD47 with dark gray text #404040 gives us a contrast ratio of 3.83:1. This fails WCAG AA and AAA for normal sized text and fails WCAG AAA for large sized text. We would need to increase the contrast, perhaps changing the text to black [show change in tab], which now passes.

The nice thing is that when you start to have better contrast, you will also help reduce issues for those with color-blindness. If you want identify areas of concern, you can temporarily turn your whole monitor to grayscale. [do this, use finder and enable it to show it] This lets you see if there is enough differentiation between items without color being a factor. It can reveal some of the larger issues for you to then investigate using other tools. And you can see many combinations at once. This grayscale feature works on Windows, Macs, and many kinds of mobile devices. Search the web for instructions for your device. [switch back to PPT]

These are just a few ways you can make this video more accessible. There are other things you will want to do and the WCAG can help guide you there.
Attend the live session to explore the assets.
Now for Round 2! Our next asset is a Syllabus for a Web Page Production class.

Download it and explore it as a group. I encourage you to open it up with Microsoft Word if possible, but you can try it in other programs if that’s what you have.

Your 3 minutes starts now! [start timer]

[once time is up] Okay, time is up. Hold up your answers.
Word Document Barriers

Attend the live session for the answers.
[Collect answers, reveal points, ask why each is important, correlate it to WCAG. For ones people don’t find, show it in Word.]

****Answer information has been removed in this pre-conference version of the document. Attend the live session for the answers.****
Removing Word Document Barriers

• Use built-in checker
  • Results include method for fixing each
  • Can’t catch everything (e.g. conveyed only by color)
  • Can’t interpret meaning (e.g. alternative text)
Now let’s go through fixing some barriers we identified.

For documents created with Microsoft Word, we have the advantage of a built-in accessibility checker. It even describes why you should fix that item with instructions for how. I won’t spend time here going through them all today because there is a lot of good documentation linked from here and generally on the internet about resolving these barriers.

One thing to know with checkers like these is that they are automated, so they can’t programmatically catch everything, like things being conveyed only by color. And they definitely cannot interpret meaning. For example, the checker only verifies that alternative text is present on images and tables. It cannot determine if the words there are helpful or not. For example, the word “table” as the alternative text for the schedule table in the syllabus. It doesn’t convey any helpful details but the checker will still pass it because words are there. You, as the document creator, know what you intended with the structure so you need to ensure helpful alternative text exists on the table to convey the intended structure.

This is another reason to build your accessibility mindset because you can think of these things when creating the document and not have to hunt for them after the fact.
PowerPoint Asset

Attend the live session to explore the assets.
Let’s move on to Round 3, our final round. This time we will look at a PowerPoint file, Specifically the Week 1 Lecture 2 slidedeck in a Computing Security course.

Explore this as a group and find one barrier to report as your answer. Again, I encourage you to open it with Microsoft PowerPoint if you can.

Your 3 minutes starts now! [start timer]

[once time is up] Okay, time is up. Hold up your answers.
PowerPoint Barriers

Attend the live session for the answers.
[Collect answers, reveal points, ask why each is important, correlate it to WCAG. For ones people don’t find, show it in PPT.]

****Answer information has been removed in this pre-conference version of the document. Attend the live session for the answers.****
Removing PowerPoint Barriers

• Use slide masters
  • Slide decorations hidden from screen readers
  • Starting point for reading order
• Use built-in checker
Okay, this one may have been easier because you just learned to use that built-in checker. However, you may have seen some unexpected things pop up.

PowerPoints are complex because they are often highly decorative and the order that content gets read by screen readers is based on the “stack” order. By default, the order you put things on the slide is the stack order, but this order is often changed by clicking things like Bring Forward and Send to Back.

One technique to help with both of these is to use the slide masters. [switch to asset PPT, open slide master]

- Drawing objects and images placed on the slide master fall into the background of the slide and are ignored by screen readers. This can be helpful for anything that doesn’t add any additional meaning to your slide such as the orange and yellow lines on this slide. If something does have meaning, like the graphics we have on slides 5 and 6, you will want to put it on the slide itself and use alternative text to describe it.
- Using the default template pages in a slide master can also give you a head start on things being in the right reading order for a screen reader. All of the pre-built slides for the different Microsoft themes always go in the order of Title, content 1, content 2, footer details, etc. Placing your content into those placeholders will keep that same reading order. If you move things around the slide without clicking Send to Back or Front it will keep that same reading order. If you use the Send to Back or Front buttons, you should re-check the reading order. To do this [show as you narrate], open the Home tab. Then under Editing, click Select, then Selection Pane. This lists all items on the slide. Content will be read by a screen reader from the bottom of the list to the top. Since stack order and reading order are tied together, you may find conflicts with how you want things layered versus the order you want them read. You may have to do some other tricks to sort that out, but that’s another type of tutorial.

- [switch to present PPT]
Prize for the WINNERS!
It’s now time to tally up the scores.

IF TIE = ask follow up question, first to answer or closest

[announce winner, hand out prizes]

Highest possible is 15 points.
More Information

Questions?

http://bit.do/AccessResources
There is way more to learn than we can possibly cover in this 45-minute session. Luckily there are a lot of great resources out there to help you. I’ve curated a list for you of checklists, tutorials, tools, and more. Feel free to bookmark this and share it with others.

With the time we have left, I’ll answer any questions you have.

[take questions]