

Designing Learning Materials to Work with Technology

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Assistive Technology Resource Center (ATRC)

- Direct Services for CSU Students & Employees with Disabilities
 - Ensure Equal Access to Technology & Electronic Information
 - Assistive Technology (AT) Assessments
 - AT Accommodations
 - AT Training
- Campus Consultation and Education
 - Accessibility & Universal Design of Mainstream & Instructional Technologies



Allison Kidd
Assistive Technology IT Coordinator
Accessibility Specialist and Trainer

Types of Disabilities

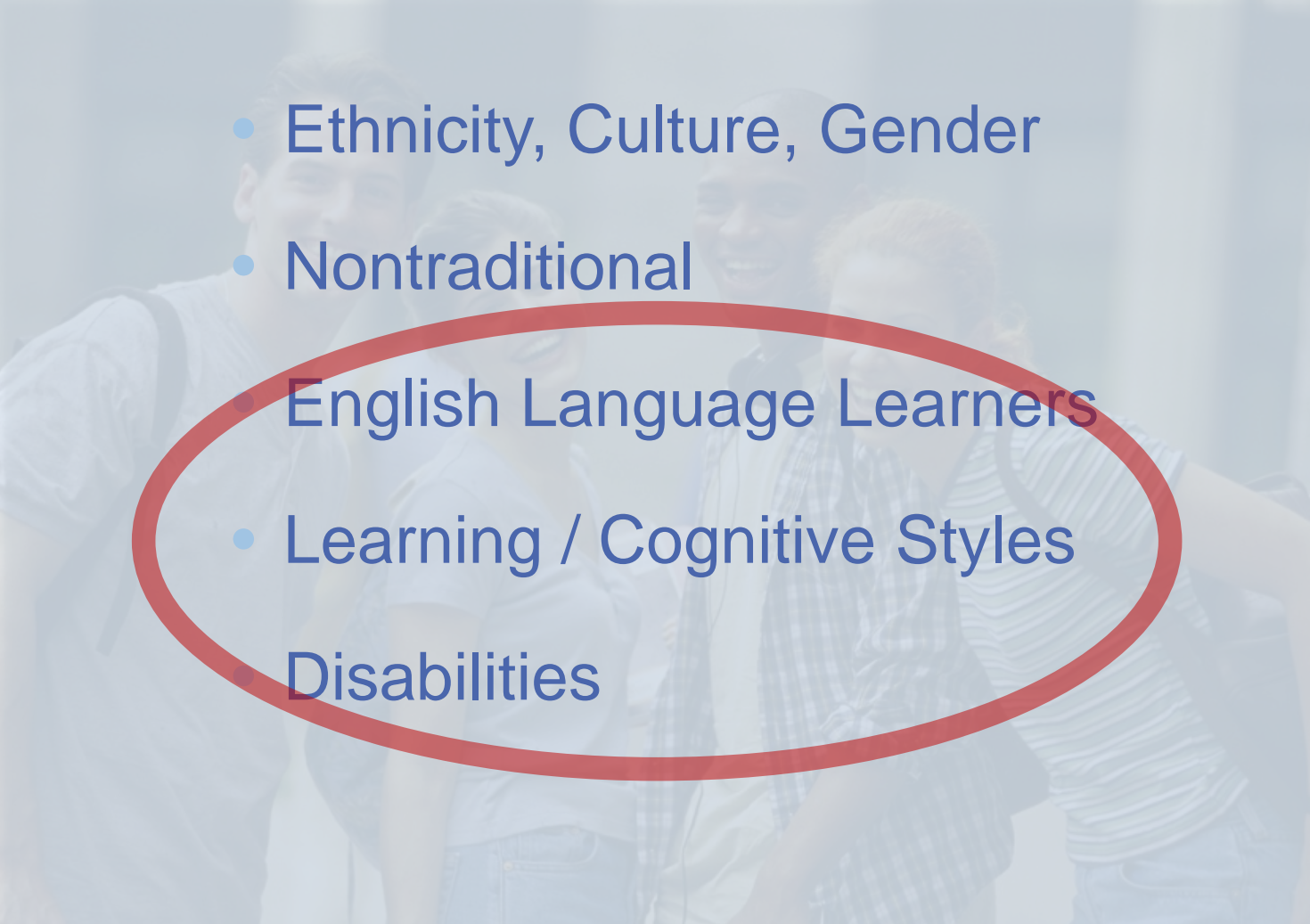
Apparent

- Mobility Impairments
- Visual Impairments / Blindness
- Hearing Impairments / Deafness

Non-Apparent

- Learning Disabilities
- Attention Deficit Disorder (ADD/ADHD)
- Autism Spectrum Disorder
- Traumatic Brain Injury (TBI)
- Post Traumatic Stress Disorder (PTSD)
- Mental Illness

Students Today Are Diverse

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- Ethnicity, Culture, Gender
 - Nontraditional
 - English Language Learners
 - Learning / Cognitive Styles
 - Disabilities

Students Use Diverse Technology

- Mobile Devices
- Text-to-Speech Software (Listening to text)
- Voice Recognition Software (Dictation)
- Literacy Support Software (Study skills, highlighting, dictionaries, etc.)
- Screen Magnification (Low vision, Mobile devices)
- Screen Reader Software (Used by students who are blind)

CSU Student Experience

- Let's hear from a current student who uses Assistive Technology

Universal Design in the Electronic World

- Can a wide variety of technologies interact with the electronic content?
 - **Not Automatically!**
- Content must be specifically designed to work with technology
- Adding steps to your workflow is better than scrambling to fix a problem afterwards



Top Steps for Materials that Work with Technology

1. Make PDFs Searchable

- Scanned PDFs

2. Use Headings & Layouts to Create Outline Structure

- Word
- Canvas
- Web Content
- PowerPoint

Make PDFs Searchable (or What is OCR?)

- OCR stands for “Optical Character Recognition.”
- Software that takes an image, finds the text, and converts it to computer-recognized text.
- Creates a document with text that users can:
 - Search
 - Select
 - Copy and Paste
 - Use Text-to-Speech
 - Resize Text for Various Screen Sizes

Demo: Image-Only vs. Searchable PDF

Using Read & Write Gold – Popular Literacy Support Software

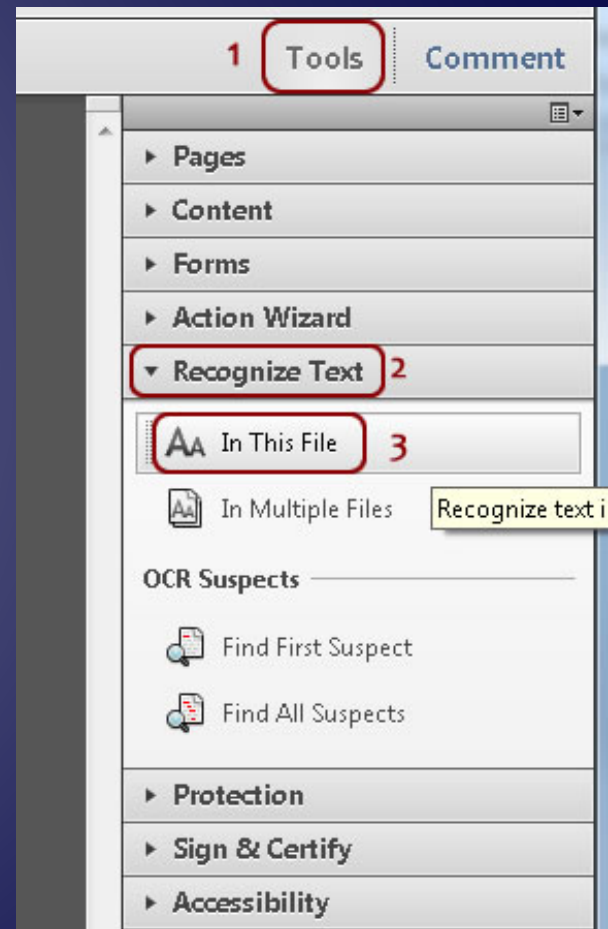
- Search
 - Highlight, Copy, Paste
 - Text-to-Speech
 - Optical Character Recognition (OCR) / Making it Searchable
- ❖ OCR can't fix everything – Make sure your original copy is actually readable!

Ways to Create a Searchable PDF

- OCR at the Scanner or Copier
 - Look for “Searchable PDF” or “OCR” options before saving.
 - Morgan Library Course Reserves (<http://lib.colostate.edu/>)
 - Requested articles are OCR'd for you and posted online for your entire class.
 - Click on the “Reserves” tab on the Library Homepage and login as an instructor using your eid.
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- Save Existing PDF to Google Drive
 - Google Drive OCRs documents during conversion
 - Drawbacks: the document is no longer a PDF, formatting may be poor, and other accessibility is limited. Google Drive itself is not very accessible.
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- Edit Existing PDF with Adobe Acrobat Professional
 - One simple step after the PDF has been created
 - CHHS has a site license for Acrobat Professional

Making PDFs Searchable with Acrobat Pro

- Use the “Text Recognition” or “Recognize Text” Tool
- Menu name depends on your version



Word: Benefits of Using Styles

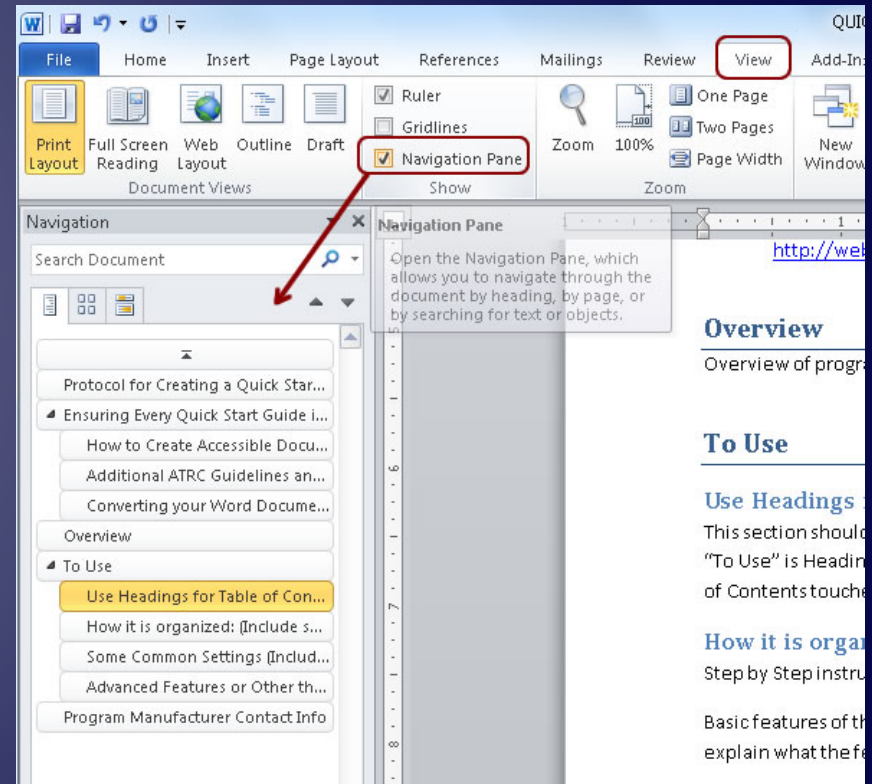
- Using Headings generates a Table of Contents
 - Navigation through the document – skip to specific section by mouse or keyboard
 - Scan for an overview of the contents before reading
 - Screen reader user can listen to a list of sections and jump to one
- Styles Give Documents Consistency
 - Using styles is faster than setting the font, size, boldness, etc.
 - Provide visual cues on relative importance of information
 - Provide audio cues for screen reader users as well
 - Create a professional standard for all documents – APA, etc.

Demo Accessible vs. Inaccessible Word Doc

- View Table of Contents
- Navigate using headings
- Navigate by listening with a screen reader (JAWS Software)

View the Table of Contents

- Click on “View”
- Check the box labeled “Navigation Pane”
- The Table of Contents window appears on the left



Using Headings and Styles in Word



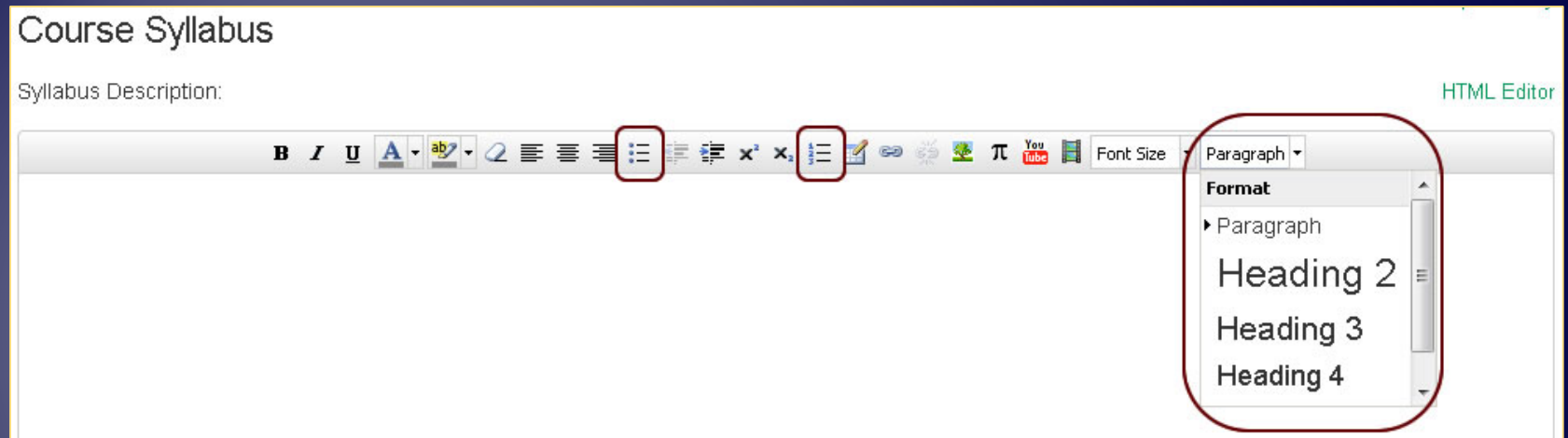
- Use Headings to Provide Document Structure
 - Indicate Level of Importance
 - Don't Skip Heading Levels
 - Check Your Table of Contents in the Navigation Pane
- Use numbered lists, bullet lists, etc., on the Home Tab

Choose a Style or Theme



- Click on “Design”
- Choose a Theme
- Save Your Own Theme

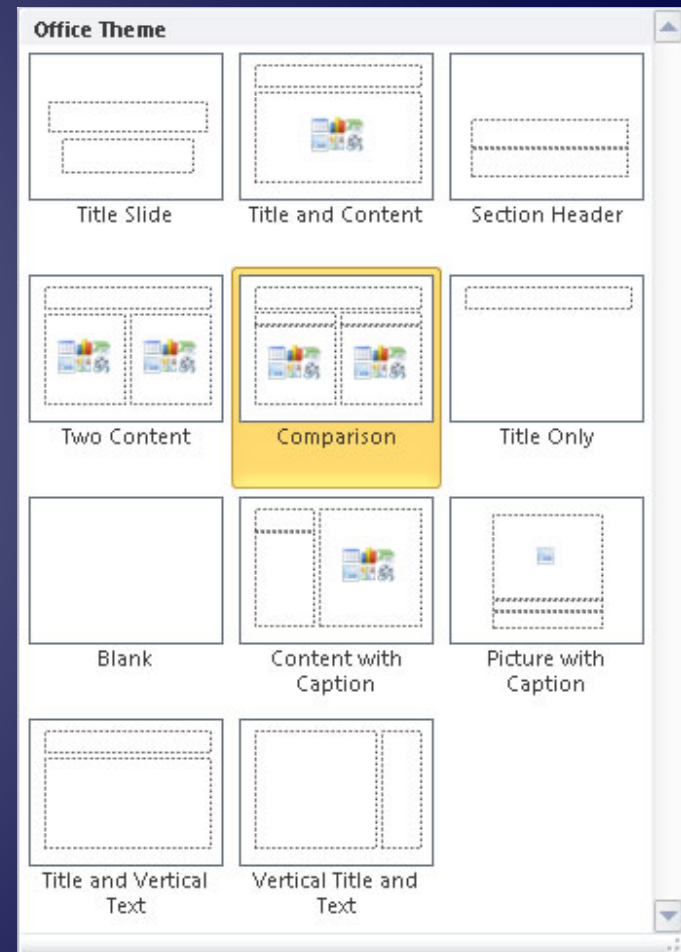
Use Headings in Canvas / Web



- Format text using the provided styles for headings, lists, and paragraph text
- These choices are common in many html editors
- Start with the biggest heading available, and don't skip levels

Use Slide Layouts in PowerPoint

- Use Slide Layouts instead of drawing text boxes
- Give Every Slide a Unique Title
 - Generates Table of Contents
 - Check Your Outline View
- Caution: If you add Text Boxes, slide reading order needs to be checked using **Home > Arrange > Selection Pane**



Thank You!

CSU Online Resource featuring today's materials and more:

Accessibility By Design Website

<http://accessibility.colostate.edu>

Other Online Tutorials and Resources

The Access Project (Step-by-Step Tutorials)

<http://accessproject.colostate.edu/udl>

WebAIM Tutorials

<http://webaim.org>

Atomic Learning (Short Video Tutorials)

<http://www.atomiclearning.com/highed/>

– Login Required (Contact the ATRC for Account Access)

Information on ATRC Services and Presentations

ATRC Website (<http://www.atrc.colostate.edu>)