



Ensuring Accessibility In OER

www.amacusg.org

AMAC



AMAC was created in 2005, as an initiative of the Board of Regents University System of Georgia, to help post-secondary disability services offices provide complete, timely, and efficient accommodations to the print-disabled students they serve.



Accessibility



Students with disabilities should be able to perceive and manipulate information provided by and referred to by the instructor with equivalent access to content and ease of use of materials as non-disabled students.

A (Brief) Accessibility Framework



Framework	Keywords
Legal	Non-discrimination
Social	Diversity, Inclusion
Technical	Universal Design
Education	Motivation, Opportunity

Thinking Accessibly 1



Information Carriers for Teaching

- Text - alphabetic, numeric, symbolic, annotated, structured
- Images - static, sequential, continuous
- Audio
- Tactile
- Mixed media

Thinking Accessibly 2



Information Carriers for Assessment

- Interaction and expression - handwriting, text, graphics, forms, typing, mouse, gestures, speech, presentations...
- Kinesthetic - drawing, sculpting, movement...

Accessibility in the Marketplace



Accessible Media Sources

- Non-profit
- Government
- In-house
- Commercial

Accessibility and OER



Pros and Cons

- Partnerships with non-profit agencies
- Files are usually unsecured
- Mostly non-proprietary formats
- Rights and permissions well defined
- Limited resources for remediation
- Issues around standards and version control

Resources



Where to Start

- ALG Website
- USG, Accessibility, and The Law
- AMAC

Universal Design



Design for all users / Build it in from the start

- Documents that are designed using accessibility standards and guidelines are beneficial for all users.
- Documents designed using accessibility standards translate to mobile and other platforms more easily.
- Build accessibility into source documents.
- Make accessibility part of your workflow.

Who Are the Users?



Consider **USERS** with a variety of abilities and needs:

- Blind or visually impaired
- Motor disabilities
- *Learning disabilities – largest group of students served in GA
- Deaf or hard of hearing and require multimedia to be captioned

- Secondary group that can benefit – English language learners

What makes a Document Accessible?



Works with Assistive Technology

Screen readers rely on document markup language for navigation.

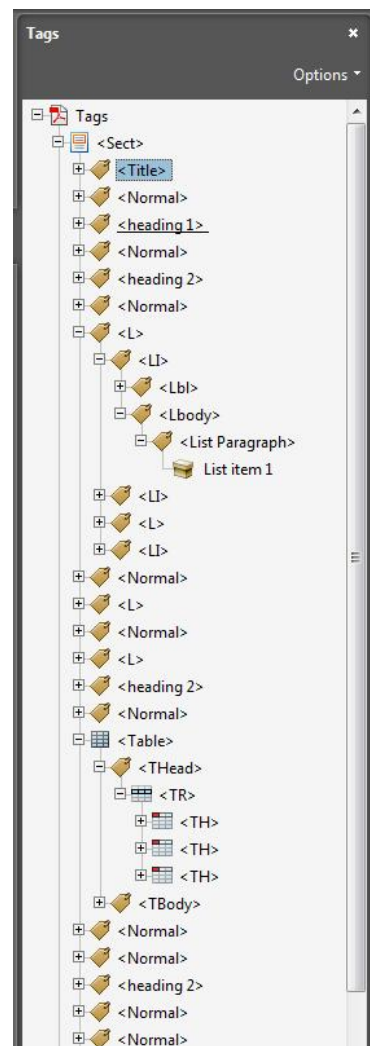
- JAWS
- NVDA
- Window-Eyes
- Magnification / Text enlargement
- Keyboard Access
- Text-to-Speech software

Assistive technology becoming mainstream:

VoiceOver – iPad and iPhone

Markup Language

```
<HTML>
<HEAD>
<TITLE>The University of Georgia</TITLE>
</HEAD>
<BODY>
<P>
<IMG SRC="ugaseal.gif">
<H1>University of Georgia</H1>
<P>
The University of Georgia is located in
Athens, Georgia, 75 miles east of Atlanta.
It was founded in 1785 and is the oldest
state university.
</BODY>
</HTML>
```



Test document

This document is intended to test the qu
many of the styles and elements as I usu

Main heading

Some more text.

Lists

Get ready for some other elements, first

- List item 1
- List item 2
 - Sub item 1
- List item 3

A numbered list, from the numbering bu

1. Numbered item 1
2. Numbered item 2
 - a. Sub item 1 (using tab)
3. Numbered item 3

Trying the new multi-level list button:

- 1) Item one.
- 2) Item two.
 - a) Sub item (using tab)
- 3) Item three.

Table

Coffee and tea consumption per day:

Incorporate Standards



Web Content Accessibility Guidelines WCAG 2.0

Framework

- Content must be **perceivable**.
- Interface components in the content must be **operable**.
- Content and controls must be **understandable**.
- Content should be **robust** enough to work with current and future user agents (including assistive technologies).

Use same standards and general techniques across formats

- MS Word Doc
- PDF
- ePub
- html
- xml

Main Features of Accessible Documents



- **Text** – not an image
- Document is structured with **Headings** for navigation – use **Styles**
 - **Headings** levels (<h1>, <h2>, <h3>)
 - Screen reader users use quick key commands to navigate documents by Heading levels. Screen readers rely on document markup language to identify Headings, links, etc.
- Images include **alternative text descriptions**.
- Charts, graphs, and tables include appropriate **alt text**.
- Provide **logical reading** order by properly formatting columns.
- Incorporate accessibility into Style Guides.

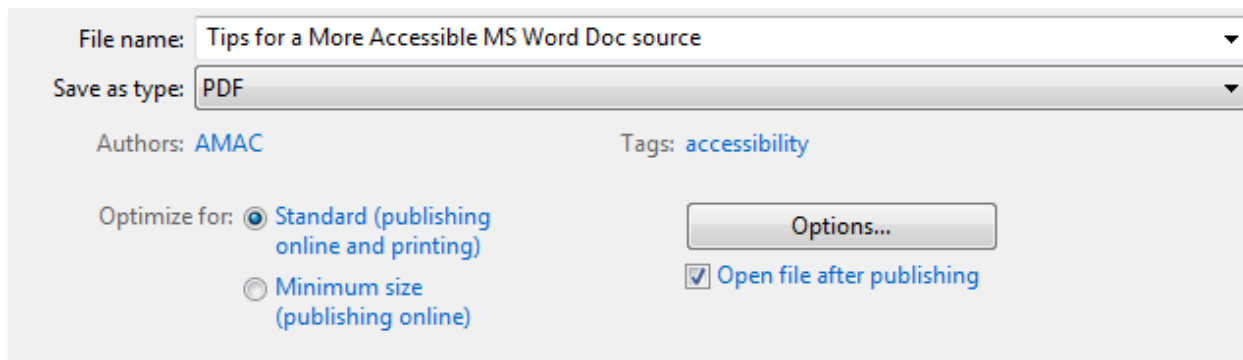
Use the built in tools of your authoring software – use Styles*

- Microsoft Word – Use Styles to add Headings
- iBooks author - Use Styles to add Headings
- Adobe InDesign - Map styles to PDF tags
- Dreamweaver – Format Headings



PDFs

- Create Accessible PDFs from accessible source files.
- Export tagged PDFs.



File name: Tips for a More Accessible MS Word Doc source

Save as type: PDF

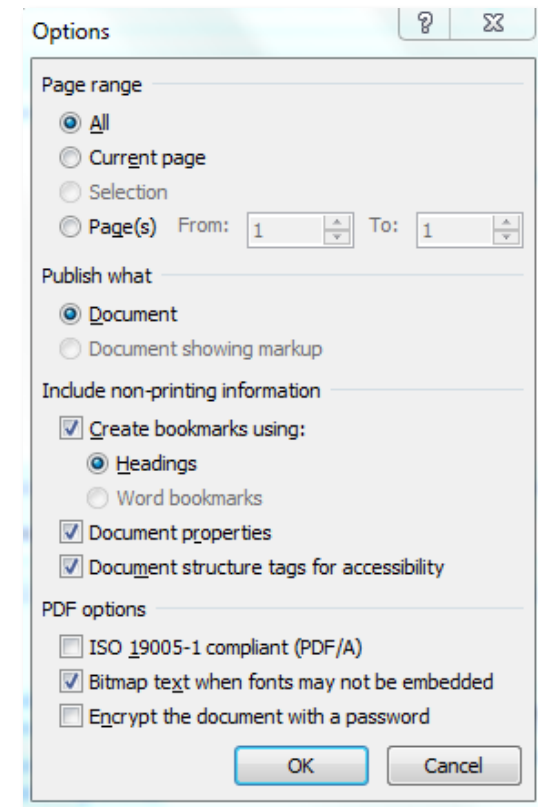
Authors: AMAC

Tags: accessibility

Optimize for: Standard (publishing online and printing)
 Minimum size (publishing online)

Options...

Open file after publishing



Options

Page range

All
 Current page
 Selection
 Page(s) From: 1 To: 1

Publish what

Document
 Document showing markup

Include non-printing information

Create bookmarks using:
 Headings
 Word bookmarks

Document properties
 Document structure tags for accessibility

PDF options

ISO 19005-1 compliant (PDF/A)
 Bitmap text when fonts may not be embedded
 Encrypt the document with a password

OK Cancel

Text alternatives



Alternative text descriptions

- Provide complete figure descriptions and captions – benefits all users.
- Identify the purpose of the image and convey that information.
- Give images accurate/contextual titles.

Complex Data

- Simple tables
- Alternative text, summaries, comprehensive captions
- Provide source data
- MathML
- LaTeX

$$\sum_{k=1}^n k = \frac{n(n+1)}{2} \approx \int_0^n x dx$$

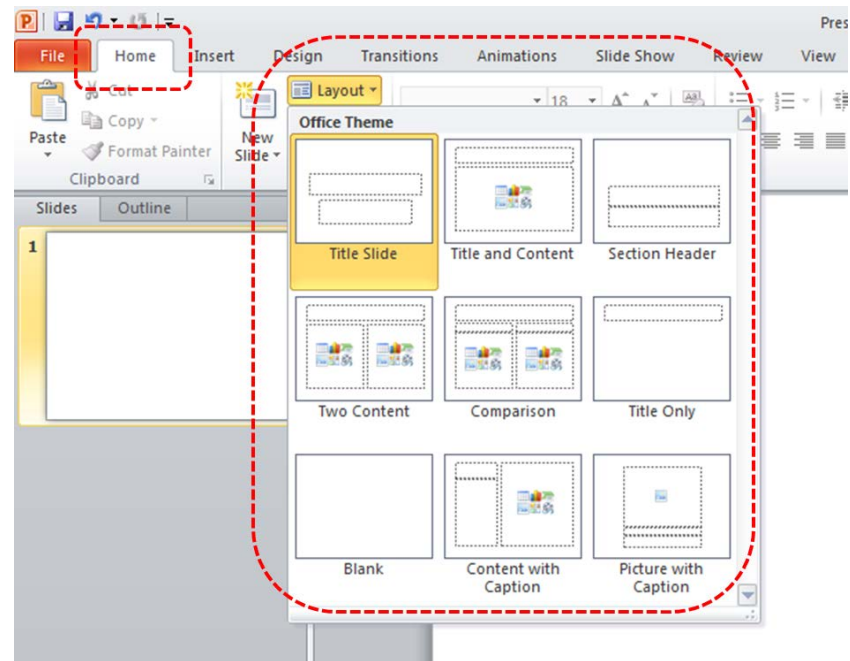
Supplementary Materials

PowerPoint Slides

- Templates
- Layout
- Reading order
- Outline view
- Export to PDF

Multimedia and Video

- Closed Captioned



Distribution and document management

- Method of distribution can take a reasonably accessible document and make it less accessible
 - Scanned documents uploaded to LMS
 - Locked content
- Remediation is time consuming
- Alternative format may not be quickly or easily available to the student – student may get behind
- Alternative format may not be available in the format the student prefers or that works with their preferred AT.

Resources



- [Creating Accessible MS Word Documents](#)
- [Adobe Indesign Character and Paragraph Syles](#)
- [PDF Accessibility Standards](#)
- [NCAM Image Description Resources](#)
- [WCAG 2.0 Guidelines Overview](#)

Contact



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AMAC Accessibility Solutions and Research Center

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