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PowerPoint Design for *Aesthetics* & Accessibility

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Introduction

The purpose of this workshop is to teach attendees how to make existing slides accessible. There is an assumed level of knowledge for participants in the workshop. An overview of that knowledge is given in the Slide Design Fundamentals section of this document. The workshop begins at the Create a Handout Document from an Existing Slide Deck.

Slide Design Fundamentals

Accessible slides don't have to be boring. In fact, there are typically only a few extra steps you need to take to make your slides accessible if you follow good design practices while creating your slides.

Basic Slide Setup

The general rules for the amount and presentation of information on slides are:

- Plain, solid-colored backgrounds are best for viewing content.
- Use one idea per slide.
- Put no more than six or seven words on a line.
- Put no more than six or seven lines or bullets on a slide.
- Don't limit the number of slides in a deck.
- Avoid paragraphs; quotes or excerpts would be exceptions.

- Avoid animation as it presents problems for screen reader users.
- Avoid blinking or flashing.
- Don't use color as the only way to convey information.

Font Selection and Size

In general, san-serif fonts are easier to read for most people than serif fonts. Verdana, Arial, and Tahoma are good choices. Larger fonts are easier to read for everyone. Remember, even the person in the very back of the room needs to be able to read everything on your slides. The minimum size of a slide font is hard to gauge because of the variables when slides are projected, but 32 point as a minimum is a good rule of thumb if slides are to be projected.

Formatting Text

Italics, all capital letters, and large blocks of bold can all be hard to read. Save italics for when they are grammatically necessary. Reserve all capital letters for acronyms. Use bold sparingly in the text of a slide for emphasis. Bold may be used for slide titles.

Text is easiest to read when it is left aligned. Small blocks of text may be centered or right aligned without issue. Avoid justified text alignment as the extra spacing between words and letters makes it harder to read for everyone.

Color Contrast

Use the [Colour Contrast Analyser](#)¹ or the [Web AIM Color Contrast Checker](#)² to verify that the color contrast between the text and background colors on your slides meet Web Content Accessibility Guideline AA requirements for normal text. Both of these programs will give you a pass or fail rating when you use them.

So what's a good way to select a color scheme? [Canva](#)³ has a color palette generator that uses images to select colors. [Colors](#)⁴ has 90 combinations available on their site with color contrast ratios listed for each. We caution you to avoid any contrast ratios lower than 4.5:1 even if they appear on the Colors site.

Templates and Slide Layouts

It is not necessary to use one of PowerPoint's built-in templates to create accessible slides. In fact, many of the templates have their own accessibility issues because of color contrast and font choice. It may, however, be convenient to choose a template and edit it according to accessibility guidelines. To do this, go to the Design tab and select a template. Then go to **View > Slide Master** to edit the elements. For keyboard users, Alt, G accesses the Design tab. Alt, G, H shows the themes dropdown to access other theme choices. Alt, W, M selects the Slide Master View. When you are finished editing, close the Slide Master view.

Regardless of whether or not you use one of the built-in templates, you should use the slide layout feature to set up the items on your slides. The easiest way to see the layouts is to right click on a slide and hover over

1 <https://github.com/ThePacielloGroup/CCA-Win/releases/tag/2.3.0.5>

2 <http://webaim.org/resources/contrastchecker/>

3 <https://www.canva.com/color-palette/>

4 <http://clrs.cc/a11y/>

Layout in the resulting menu. The options may not be exactly what you want, but you will have the building blocks of the slide and can arrange them accordingly.

If you need extra text fields in a slide that are not provided in one of the layouts, create a new master slide with those fields. Then, when adding information or objects to a slide, use the placeholders that are in the slide layout. This ensures that screen readers recognize all content on a slide.

Titles

Each slide should have a title and that title should be unique to the slide. If you have multiple slides on the same subject, name them sequentially. For example, "Fonts (1 of 3)," "Fonts (2 of 3)," "Fonts 3 of 3." If you don't want a title to be visible on a slide, it can easily be hidden by changing the font color to match the slide background.

Objects

All objects (tables, images, graphs, etc.) should be added from either the Insert tab or by using a placeholder. All objects need alternative text. To add alternative text, right click on the image, select **Format Picture** from the resulting menu. Select **Alt Text**, then type in the **Description** field.

It is best to present simple objects on slides because complex objects can be hard to view. Sometimes a complex object can be simplified by splitting the information into two or more objects.

Complex image tips:

- Ensure that the text is large enough to see. If the image is too complex to ensure everyone can see it, a handout (and electronic equivalent) can be given to participants so they can access the details of the information.
- Use pattern for differentiation. For graphs or charts, use different patterns for each section. For line graphs, choose different styles for each line.
- Add a text explanation to ensure the information is accessible to all. This can be added to the Notes section of the slide

Reading Order

The reading order is the order that screen readers read the items on a slide. The reading order can be viewed on the Selection pane (**Home > Arrange > Selection Pane**). All elements on the slide appear in the Selection pane. Screen readers read elements from bottom to top. Reorder elements as needed by selecting an element and using the arrow keys on the pane.

Outline View

The Outline view contains the text of each slide. This view is helpful to verify that each slide has a unique title and that the content on your slides is presented in a logical manner. Information in text boxes that are not part of the slide's layout will not appear in this view.

Accessibility Checker

The Accessibility Checker (**File > Check for Issues > Check Accessibility** or keyboard **Alt, F, I, I**) is a great way to check some aspects of accessibility on your slides. Just like the Spelling & Grammar checker, the Accessibility Checker will not catch all issues.

Create a Handout Document from an Existing Slide Deck

The Accessibility Team recommends distributing materials in document format (Word or PDF) and using the PowerPoint presentation only as an aid during the presentation. In other words, we recommend distributing a version of your content formatted as a document and not sharing your PowerPoint. No matter what format you choose, ensure that all distributed event materials are accessible.

We often get pushback about this approach, so if you're hesitant, see below for frequent questions we get about handouts:

1. **Is there a precedent for creating a separate accessible version of something?** Sure! If you've ever created a trifold brochure, you know that format doesn't really make sense when viewed electronically. It can't truly be made accessible, partially because it doesn't work well unless you have your hands on the printed brochure itself. If you want to share the information from a brochure electronically, you'll probably create a webpage or a linear document that says the same thing.

A PowerPoint is a lot like a brochure: a very useful way of presenting information in one context (during a presentation), that can't truly be made accessible, largely because it isn't a format designed for

independent study. So, make a separate document. This frees up your PowerPoint to be beautiful and your handout to be informational leaving them both to be the best possible resource they can be.

2. **How much time will it take to make a handout?** Many slides are so full of information that the content could be directly copied into a document with a little minor editing. A handout does not have to be a 30-page book; the length should be based on your presentation's takeaways. If the information is already available somewhere else, you could merely provide a list of links with a quick synopsis of what's to be found in each.
3. **How will people react when I buck the trend?** You may be presenting somewhere that it is the norm to have 10 bullets per slide and a ton of text. It's hard to be the odd duck who has a few words per slide in that case. Refer to [10 tips on how to make slides that communicate your idea, from TED's in-house expert](#)⁵, [TED's Create + prepare slides](#)⁶, and [Visual simplicity: Steve Jobs does it again](#)⁷ to back you up.
4. **How will attendees get all the information if it's not on the slides?** Unfortunately, when your slides are packed, no one can get all that information unless they take pictures of each slide. Do you want your attendees to pay attention to you or focus on taking pictures of each slide? For the old-school note takers, their focus will be on writing the text, not on what you are saying.

5 <https://blog.ted.com/10-tips-for-better-slide-decks/>

6 <https://www.ted.com/participate/organize-a-local-tedx-event/tedx-organizer-guide/speakers-program/prepare-your-speaker/create-prepare-slides>

7 http://presentationzen.blogs.com/presentationzen/2005/09/visual_simplici.html

If your answer is to print slide handouts from PPT, you're doing everyone a disservice. The typical 3-slides-per-page view (Figure 1) makes the text tiny and the space to take notes is also lacking. If you really want people to take away highlights and key points, write them into a nicely formatted document that they can refer to in the future.



Figure 1 – Example of the PPT Handout (3 slides per page) Print Option – Don't do it!

5. **I need my slides to keep me on topic. How will I know what to say next?** Practice! Many presenters use wordy slides as a crutch which keeps them from truly learning their presentations. It also puts the focus on the slides and not on the presenter. If the presenter is constantly looking at the slides, the audience will focus on them too. You should be able to present all of your presentations without any media at all, or as Fr. Aidan Wilcoxson said, “Anything could happen. The power could go out. You need to be able to deliver your presentation in a dark room.”

To create a handout from an existing slide deck, copy the text from each slide and paste into a Word document. Slide headings will become headings in the document. Informational images should be included in the handout. Decorative images in the handout are at the presenter’s discretion. Make the document accessible as you go.

After all the text is copied and pasted, evaluate the material to ensure that the heading levels fall in order. Take some time to expand upon the content. Remember that this is material the participants will refer to in the future. At the very least, ensure all the text appears in full sentences, is grammatically correct. Do a last check for accessibility and the handout is finished!

Designer Tip 1: Before adjusting any information on your slides, edit the slide template to reflect good color contrast, adequate text spacing, and accessible font choices. This will make future slide layout decisions easier.

Adjust Text on Slides to Follow Presentation Best Practices

Now that you have created a handout with all the essential information, you are free to create visually appealing slides with minimal text. The Basic Slide Setup subsection outlines best practices for text on slides. Before deciding

how to adjust the text on existing slides, decide on the main ideas in the presentation (typically the headings in the handout). Does all the text in the slides really need to be there? There is a tendency for presenters to put everything they are going to say on the slides. Now that there is a detailed handout for the presentation, there is no need for wordy slides.

Use key words, main ideas, and other essential information as the text in the slides. Leave supporting information in the handout and let the audience hear it from you instead of reading it on the slides. Formatting the slides in this way may increase the number of slides in the deck, but it will make for a cleaner look for the presentation. Modern PowerPoint experts rarely recommend a maximum number of slides. The focus is on visually pleasing slides.

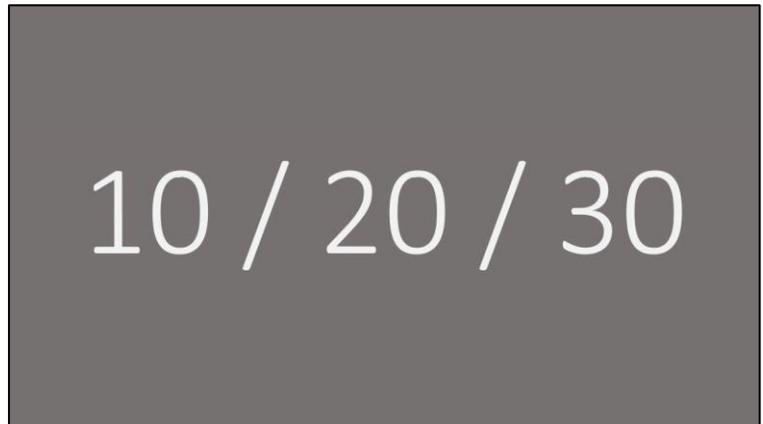


Figure 3 – Wordy Slide Before and After

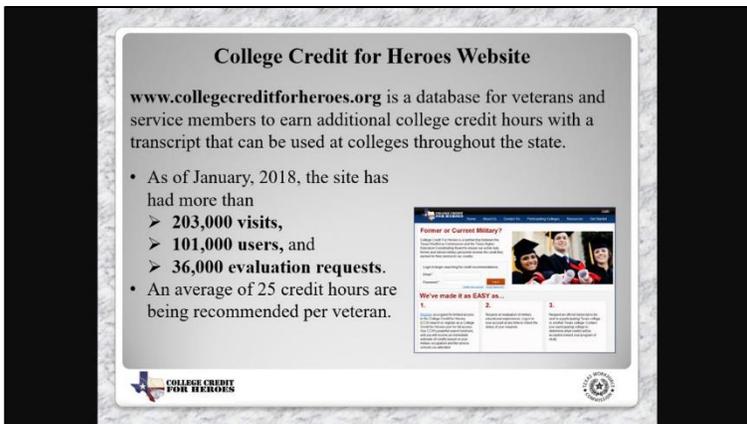


Figure 2 – Wordy Slide with Image Before to Image Only After

Designer Tip 2: Before making any edits to the original slides, copy the slide deck and save it as a working copy. Now you won't be afraid to make major changes and you'll have a quick reference of what the slides looked like before. Better yet, ditch the original slides all together and rethink your slide design from a visual perspective instead of a text one.

Use PowerPoint Designer

If you have an Office 365 subscription, PowerPoint Designer is an awesome feature that helps you create visually interesting layouts on your slides. For it to work, you need to use one of the built-in templates and slide layouts. Ensure any design option you choose meets accessibility guidelines (or edit the design you like to meet them). For more information, visit [Create professional slide layouts with PowerPoint Designer](https://support.office.com/en-us/article/create-professional-slide-layouts-with-powerpoint-designer-53c77d7b-dc40-45c2-b684-81415eac0617#bkmk_nosuggestions)⁸.

Edit Complex Graphics to Meet Accessibility Standards

Slide graphics are often complex, either by poor design or by necessity. Complex graphics are harder for participants to understand, harder for the presenter to explain, and often harder to make accessible. Many complex graphics that appear in slides are actually multiple graphics layered on top of each other. This presents an accessibility challenge because adding alt text to each part won't explain the relationship between the parts.

Before attempting to make graphics accessible, evaluate whether all the information presented in the graphic is necessary for your audience. If the graphic can be simplified, now is the time to do it. That may mean

⁸ https://support.office.com/en-us/article/create-professional-slide-layouts-with-powerpoint-designer-53c77d7b-dc40-45c2-b684-81415eac0617#bkmk_nosuggestions

rethinking the way the information is presented, recreating the graphic, or deleting parts of the graphic.

Once the graphic is as simple as possible while still meeting your needs, you can flatten the parts of the graphic into one image. One of the easiest ways to do that is to select all the parts (**Shift + click**) then right click somewhere on the selected images and select **Save as Image**. Now you can delete the layered images from your working copy and replace them with the flattened one. Don't forget to enter alt text.

Designer Tip 3: Keep a folder of images for each presentation on your computer. Then, if you need to use the image or parts of the image again, they are readily available.

Edit Tables to Meet Accessibility Standards

Tables are used either for formatting or data. Tables used for formatting can be made accessible, but they are not recommended. It is much easier to use placeholders to get the look you want for the text than it is to make a format table accessible.

Data tables can be a great way to present information. PowerPoint only supports simple data tables, meaning tables with multiple layers of headings aren't supported. Most complex tables can be simplified and still meet the needs of the presenter. Once your simple table is ready, follow the tips below to maximize its presentation:

1. Add some space before and after the text (select the cells, **right click > Format Table > Text Box > Internal Margin**). Even a .1" on each side makes a difference.

2. Use color wisely. Format the table headings to stand out. Use banded rows or columns to help differentiate table data. Table Styles (Table Tools Design tab when the table is selected) are a great way to do this).
3. Use larger fonts or bold for emphasis of table headings. This helps the heading text stand out from the data text. Edit fonts after you apply your table style.

Designer Tip 4: Coordinate your table style with the color scheme of your slide template by editing the theme and line colors in the style.

Edit Charts to Meet Accessibility Standards

Charts are also a great way to show information visually. Often charts have more information than the presenter needs, though. Before changing the look of the chart, evaluate the data to see if you can reduce the amount that is shown. Does the chart show 5 areas of concern when you're only going to address 3? If so, delete the other 2.

Once the data has been evaluated for necessity, you can edit the look of the chart. Some tricks you can use are:

1. Use colors or patterns to differentiate between chart data. Many of the default charts provide colors that have similar saturation. These are hard to differentiate for people who are color blind. The properties of each data series will let you change the way it is presented. Double click on the series you want to change to open the Format Data Series dialog. The Color tab will give plenty of choices to customize the chart.
2. Change the width and spacing of the data series. When presenting, lines and bars that are wide are easier for everyone to see. Bars in

bar graphs are easier to differentiate when they have spaces between them. To edit either of these features, double click on the series you want to change to open the Format Data Series dialog and go to the Style tab.

3. Add legend information to the data series on the chart. Use of this depends upon the type of chart you are using, but it often works well. Go to **Chart Tools > Layout > Data Labels > More Data Label Options**. There you can choose what the data labels show and their placement.
4. Hide the legend if you're showing the data information on the chart by going to **Chart Tools > Layout > Legend > None**.

Designer Tip 5: Reverse the color scheme on your data slides to make them stand out from the text slides. If the majority of your slides have dark text with a light background, create data slides with light data on a dark background.

Finalizing the PowerPoint

There are a few steps you need to follow before calling your PowerPoint complete:

1. Ensure all the edits you made to the graphics, tables, and charts made it into the Word document.
2. Delete any animations from the accessible version of your slides if they will be distributed.
3. Set the document properties in both the PowerPoint and the handout.

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4. Save both the PowerPoint and the handout using filenames that clearly state the contents.

More Tips...

[5 ways to “messagize” your slides](#)⁹, Lior Student

[Data Visualization: Chart Dos and Don’ts](#)¹⁰, Duke University Libraries

[Tips for Making Effective PowerPoint Presentations](#)¹¹, National Conference of State Legislatures

[9 Ways to Simplify and Sexify Data](#)¹², Ginney Mineo

References

[Accessibility at TWC](#). <http://intra.twc.state.tx.us/intranet/its/html/accessibility.html>

Cover image courtesy of Marileidy Morel

<http://thesocialbutterfly.me/mercedes-fashion-week-ftl-moda/>

9 <https://www.td.org/insights/5-ways-to-messagize-your-slides>

10 <https://guides.library.duke.edu/datavis/topten>

11 <http://www.ncsl.org/legislators-staff/legislative-staff/legislative-staff-coordinating-committee/tips-for-making-effective-powerpoint-presentations.aspx>

12 <https://blog.hubspot.com/marketing/data-graph-design-powerpoint-tips-ht>