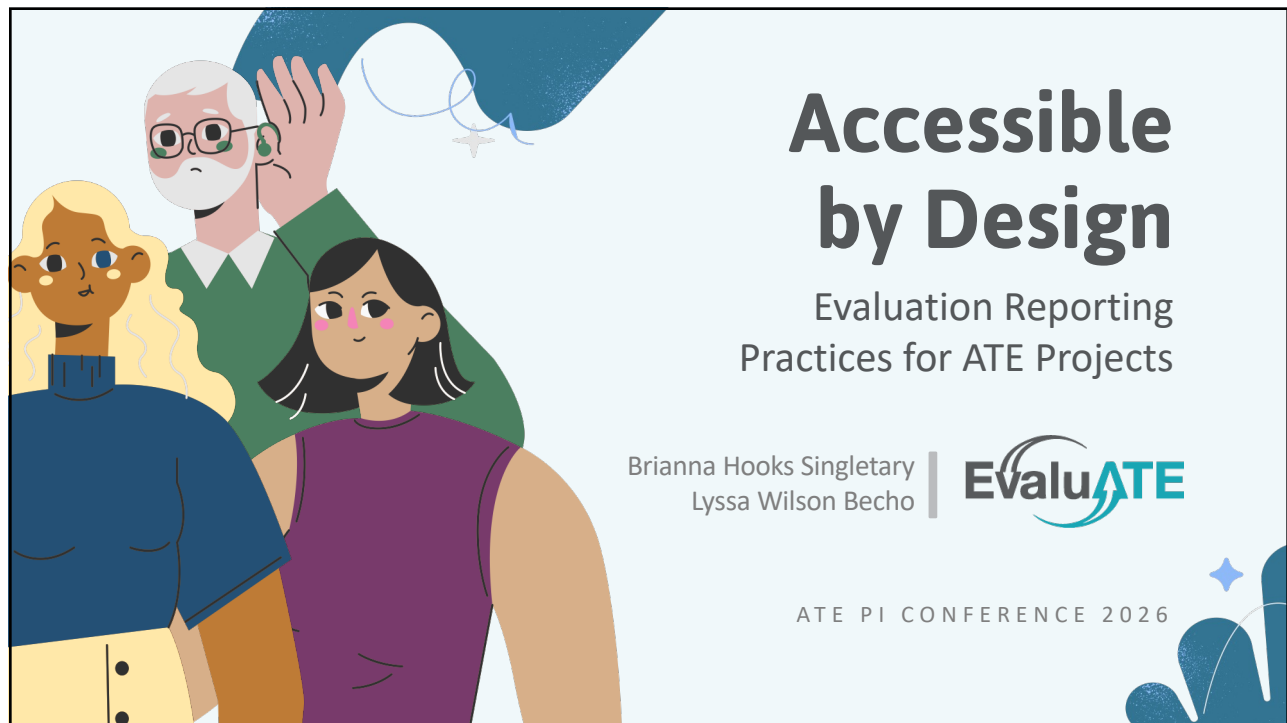




1



2



OUR Vision

EvaluATE envisions an ATE community in which evaluation is valued, systematic, and used to improve the education of technicians in high-tech fields.

OUR Mission

EvaluATE's mission is to engage the ATE community with information, expertise, and tools to advance high-quality evaluation.

EvaluATE

3

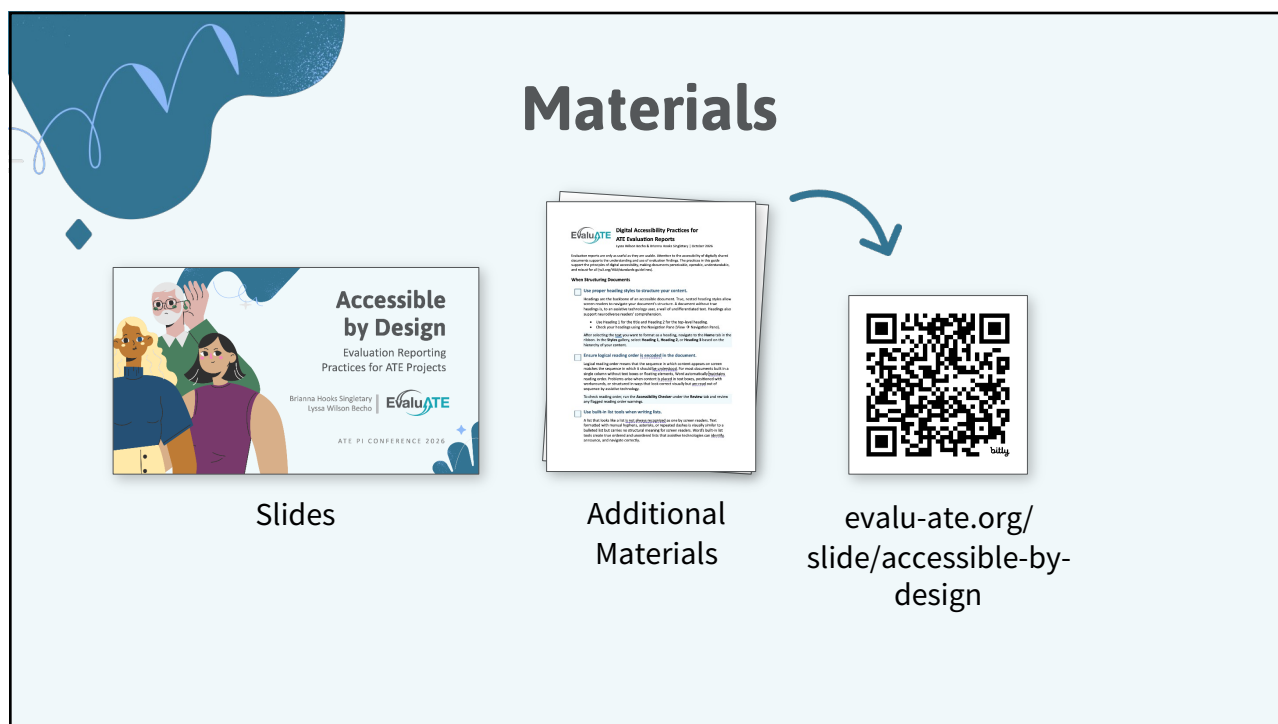


This material is based upon work supported by the National Science Foundation under Grant No. 2332143. The content reflects the views of the authors and not necessarily those of NSF.

4



5



6

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Introductions



Brianna
Hooks Singletary



Lyssa
Wilson Becho



7

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Thank You



Luis
Perez



Maureen
Green



Kelly
Robertson



8

evalu-ate.org/slide/accessible-by-design

Agenda

9:00 – 9:15	Welcome & Agenda
9:15 – 9:30	Quick Pair-Share Activity
9:30 – 10:00	Defining Accessibility, ADA Title II, & WCAG Principles
10:00 – 10:25	Structuring Documents
10:25 – 10:35	Break
10:35 – 10:45	Creating Accessible Tables
10:45 – 11:10	Making Logic Models & Data Visualizations Accessible
11:10 – 11:15	Checking and Exporting Your Documents
11:15 – 11:25	Reflection & Commitments
11:25 – 11:30	Closing

9

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We're Still Learning

A few honest notes:

Language.

We'll use identity-first language ("disabled person"), but preferences vary. Ask, don't assume.

Representation.

We're sharing what we've learned, not speaking *for* the disability community.

10

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We're Still Learning

A few honest notes:

Scope.
This session leans on visual and screen-reader examples. But cognitive and learning accessibility deserve equal attention.



Framing.
We're aiming for genuine usability, not just legal compliance.



11



Progress over perfection.



12

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Our Accessibility Commitments

- ✦ Consultation with Luis Perez
- ✦ Visual design choices
- ✦ Live captioning
- ✦ Universal design principles
- ✦ Flexible participation



13

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ACTIVITY

The Daily Obstacle

In pairs, share one minor daily task that felt frustrating or difficult recently.

How did design cause this friction?



10:00

14



15



16

ADA Title II What You Need to Know

What they say

ADA Title II

Web content

WCAG 2.1
Level AA

What it means

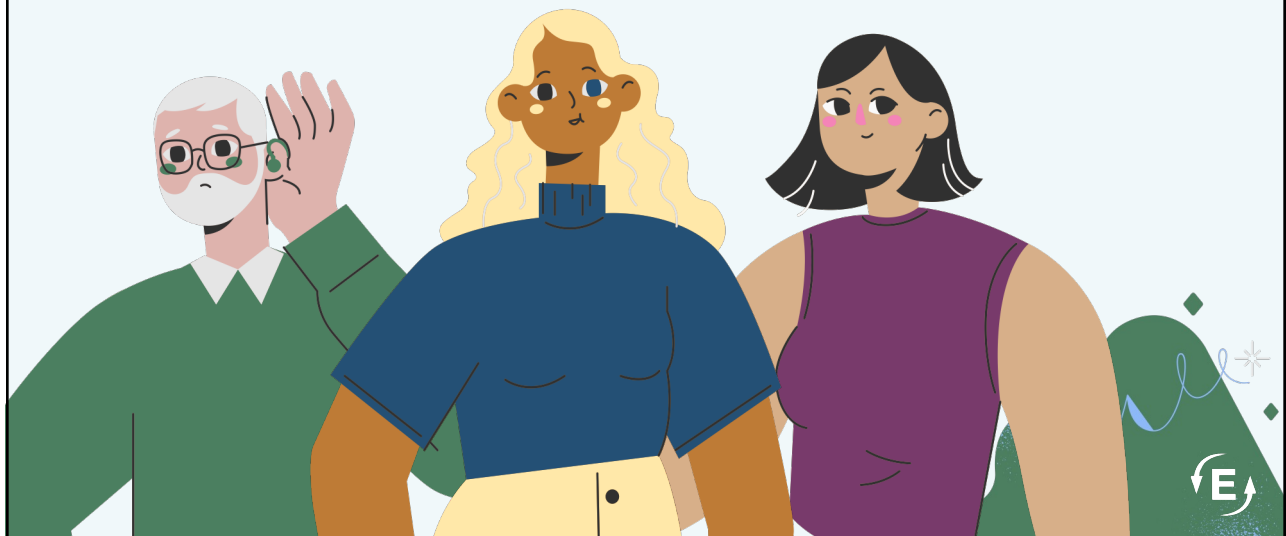
The part of the disability rights law covering state and local government, including public colleges.

Websites, apps, and posted documents, including PDFs and reports.

A widely used checklist for accessible digital content. Level AA is in the middle of the three levels.

17

Accessibility helps everybody



18

Principles of Digital Accessibility

Perceivable	Operable	Understandable	Robust
People must be able to see, hear, or otherwise sense your content through at least one sense.	People must be able to navigate and interact using whatever method works for them (keyboard, voice, or touch).	Content and instructions should be clear enough that people can follow and use them without confusion.	

CAG, [w3.org/WAI/standards-guidelines](https://www.w3.org/WAI/standards-guidelines)

19

Principles of Digital Accessibility

Perceivable	Operable	Understandable	Robust
People must be able to see, hear, or otherwise sense your content through at least one sense.	People must be able to navigate and interact using whatever method works for them (keyboard, voice, or touch).	Content and instructions should be clear enough that people can follow and use them without confusion.	Content should keep working reliably across current and future devices, browsers, and assistive technology.

CAG, [w3.org/WAI/standards-guidelines](https://www.w3.org/WAI/standards-guidelines)

20

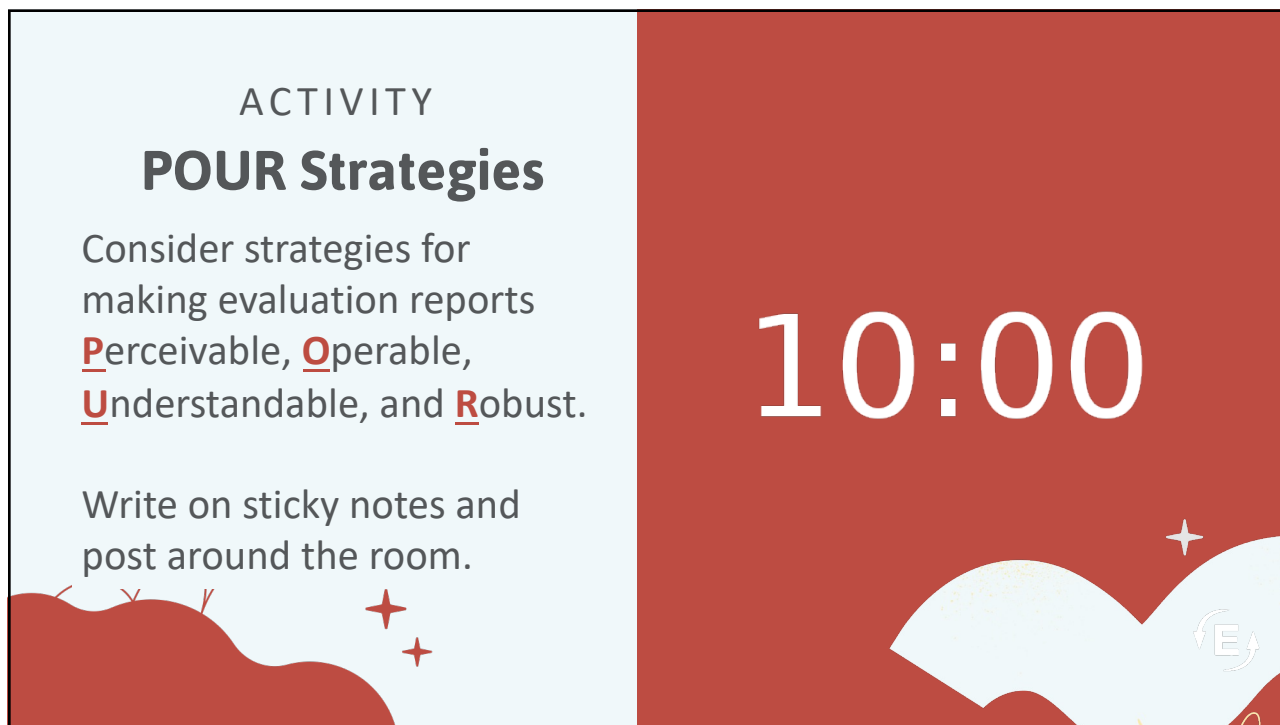
ACTIVITY

POUR Strategies

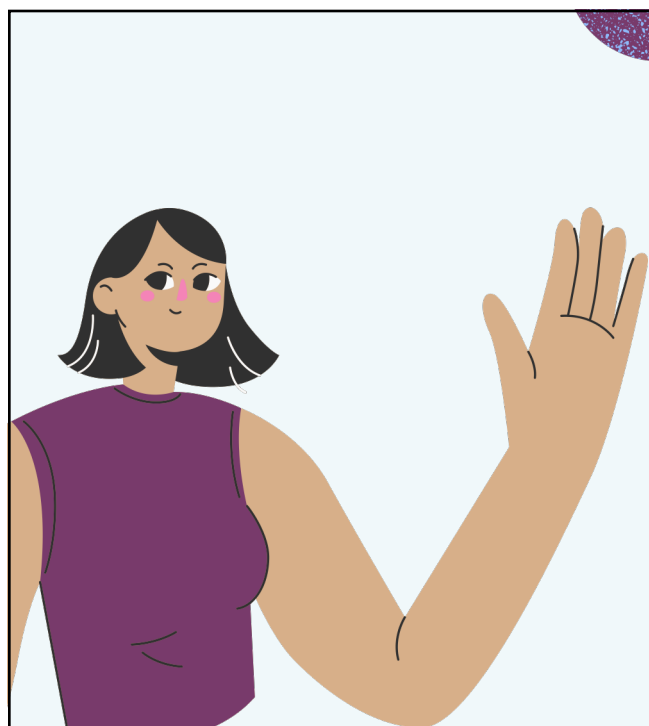
Consider strategies for making evaluation reports Perceivable, Operable, Understandable, and Robust.

Write on sticky notes and post around the room.

10:00

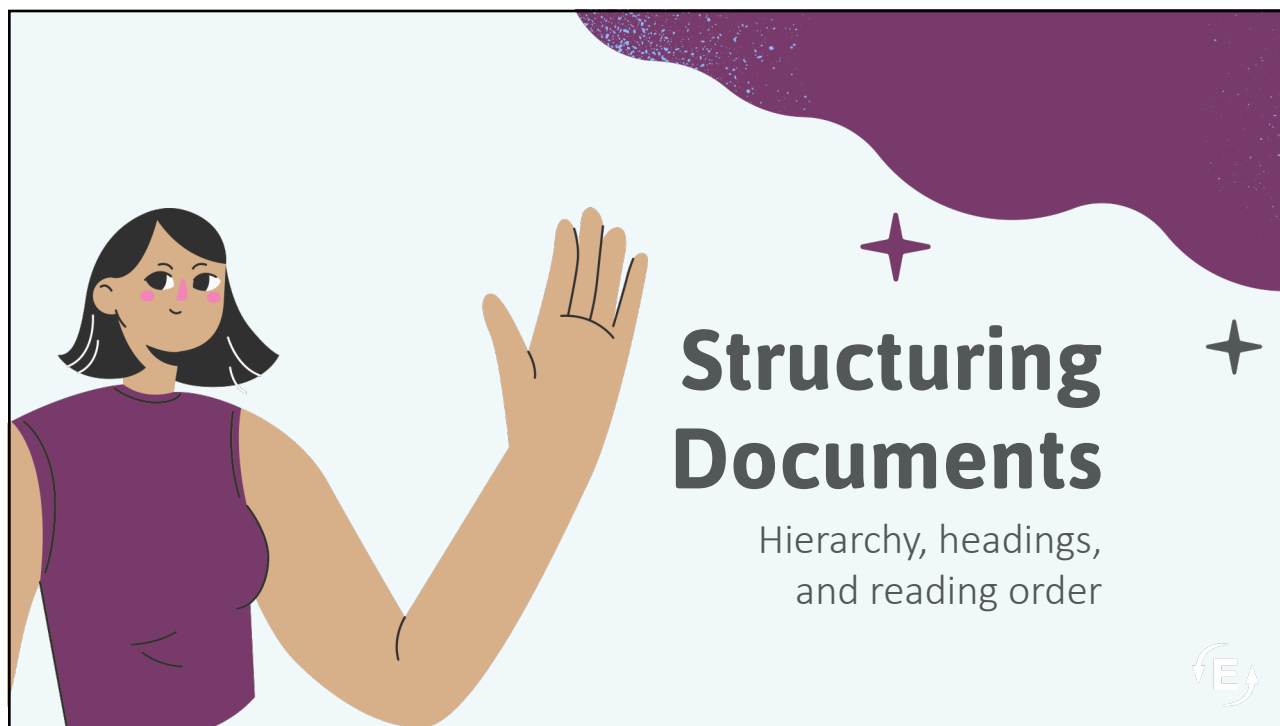


21



Structuring Documents

Hierarchy, headings, and reading order



22

Hierarchy & Headings

H1 Heading

H2 Heading

H3 Heading

H3 Heading

H2 Heading

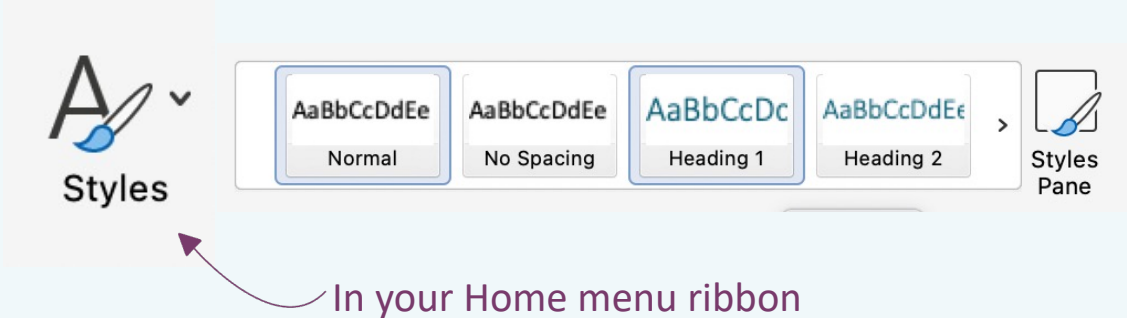
23

Hear from Marc Sutton



24

Heading Styles Aka Paragraph Styles



Styles

Normal No Spacing Heading 1 Heading 2

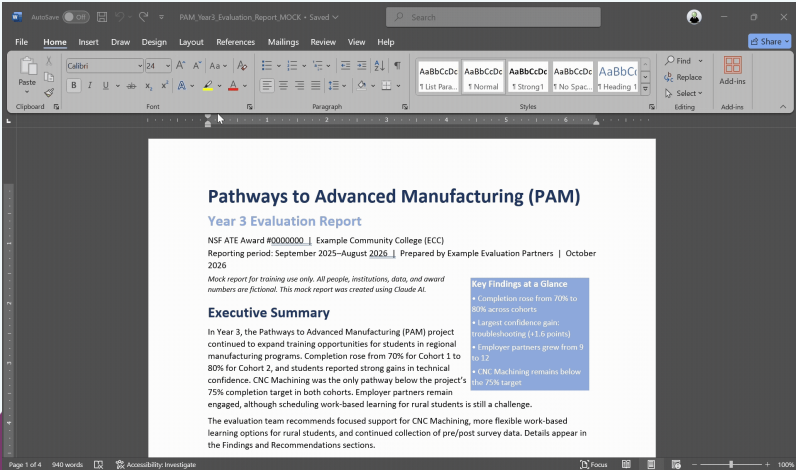
Styles Pane

In your Home menu ribbon

25

Heading Styles Aka Paragraph Styles

Home → Styles



Pathways to Advanced Manufacturing (PAM)
Year 3 Evaluation Report

NSF ATE Award #0000000 | Example Community College (ECC)
Reporting period: September 2025–August 2026 | Prepared by Example Evaluation Partners | October 2026

Mock report for training use only. All people, institutions, data, and award numbers are fictional. This mock report was created using Claude AI.

Executive Summary

In Year 3, the Pathways to Advanced Manufacturing (PAM) project continued to expand training opportunities for students in regional manufacturing programs. Completion rose from 70% for Cohort 1 to 80% for Cohort 2, and students reported strong gains in technical confidence. CNC Machining was the only pathway below the project's 75% completion target in both cohorts. Employer partners remain engaged, although scheduling work-based learning for rural students is still a challenge.

The evaluation team recommends focused support for CNC Machining, more flexible work-based learning options for rural students, and continued collection of pre/post survey data. Details appear in the Findings and Recommendations sections.

Key Findings at a Glance

- Completion rose from 70% to 80% across cohorts
- Largest confidence gain: troubleshooting (+3.6 points)
- Employer partners grew from 9 to 22
- CNC Machining remains below the 75% target

26

Heading Styles Aka Paragraph Styles

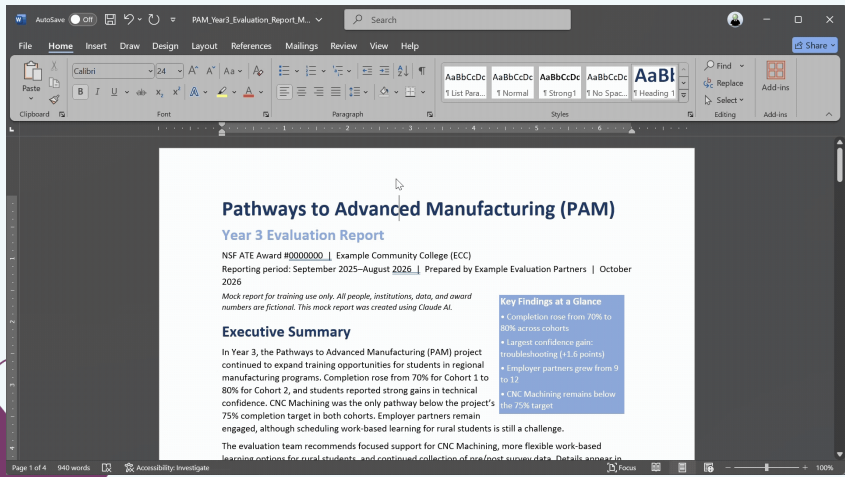
View

→

Navigation Pane

→

Headings



27

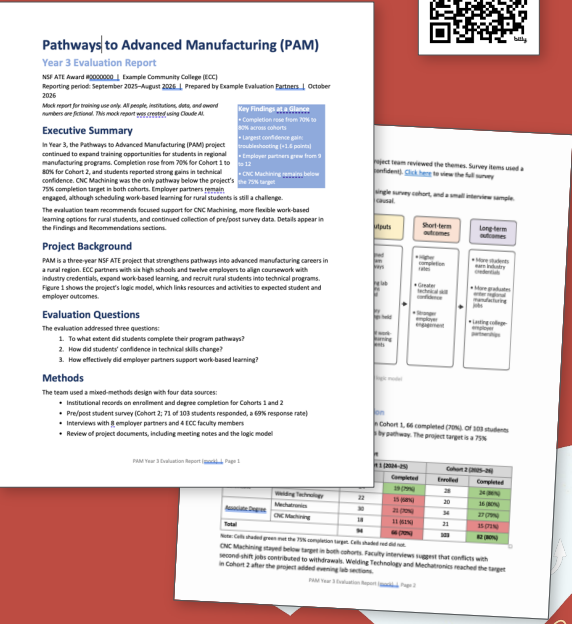
ACTIVITY

Applying Headings

Using the example evaluation report or your own, apply headings to the first 4 pages.

Check that everything appears correctly in the Navigation Pane.

evalu-ate.org/slide/accessible-by-design



28

ACTIVITY

Applying Headings

Using the example evaluation report or your own, apply headings to the first 4 pages.

Check that everything appears correctly in the Navigation Pane.

evalu-ate.org/slide/accessible-by-design



10:00

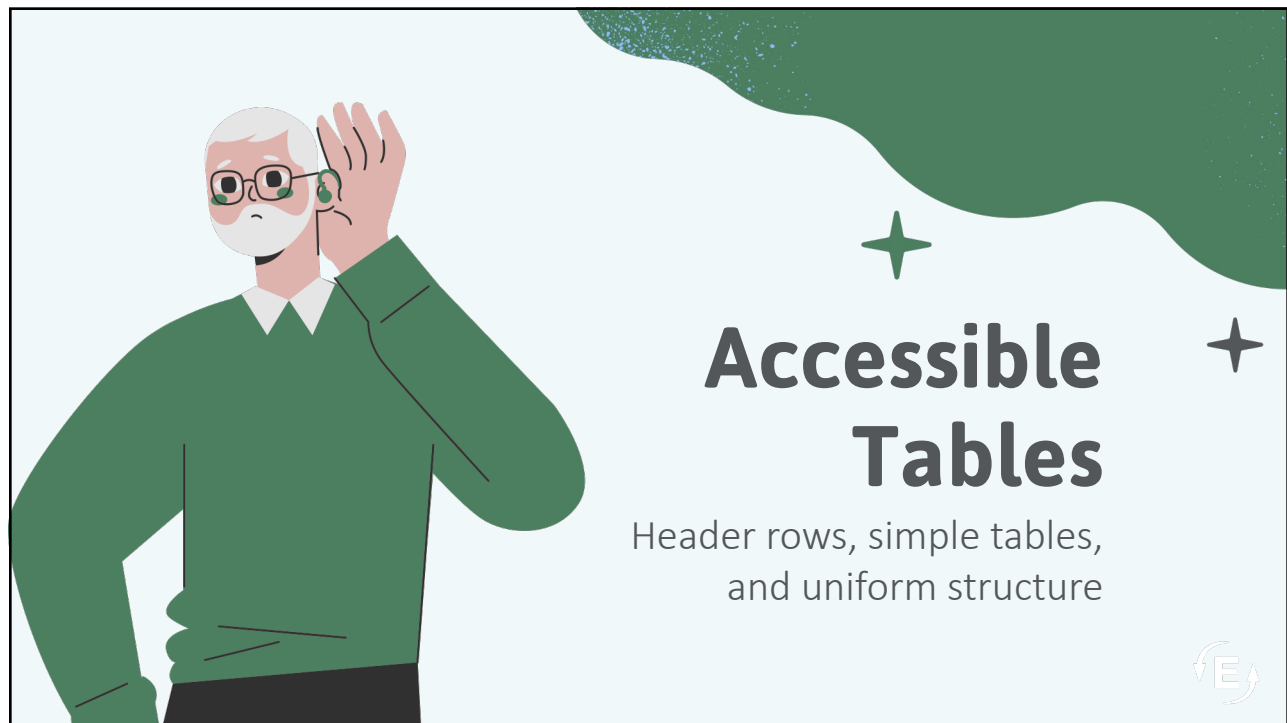
29

TIME TO TAKE A

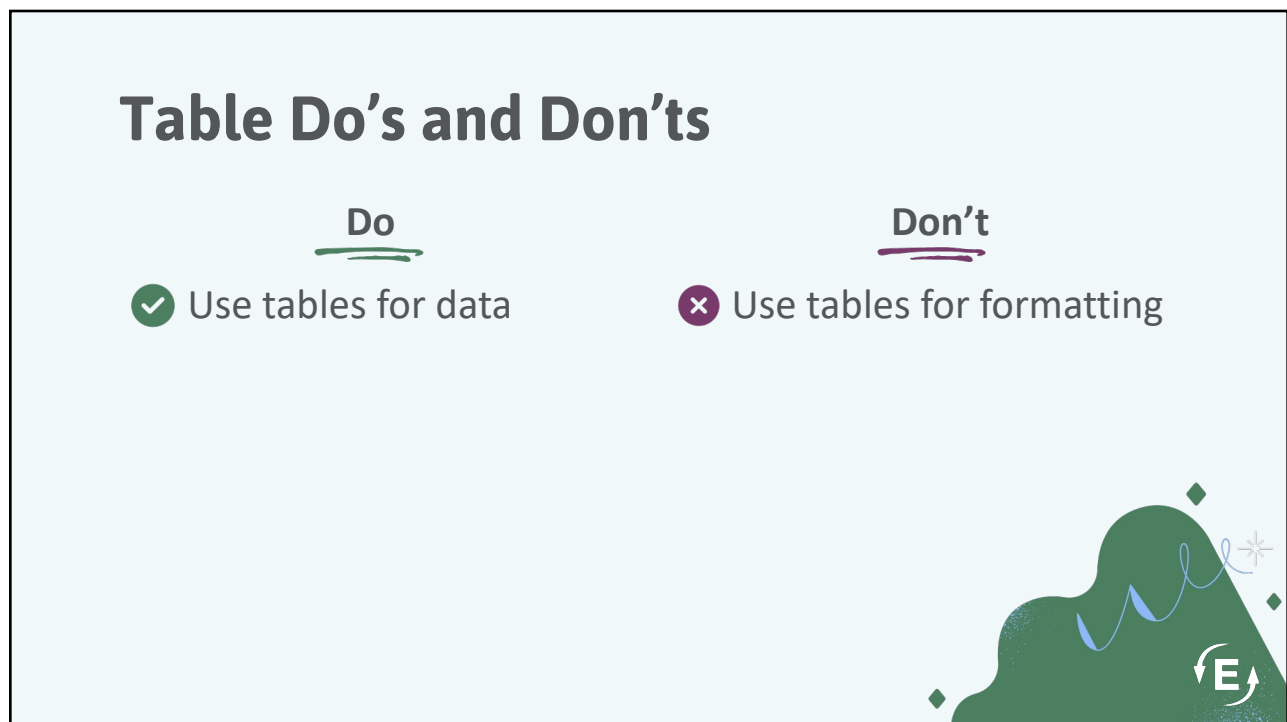
Break

10:00

30



31



32

Use Tables for Data, Not Design

33

Use Tables for Data, Not Design

Content is a grid of related data

34

Use Tables for Data, Not Design

Don't use tables for...

Side-by-side layout



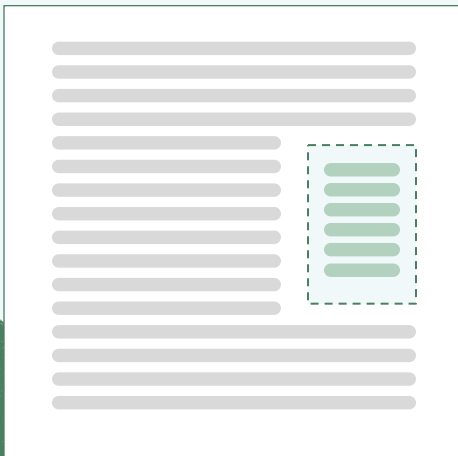
The diagram shows a layout with a table of horizontal lines on the left and a bar chart on the right. Both are enclosed in a dashed rectangular box, illustrating how they are treated as a single design element rather than separate data components.

35

Use Tables for Data, Not Design

Don't use tables for...

Side-by-side layout
Sidebar callouts



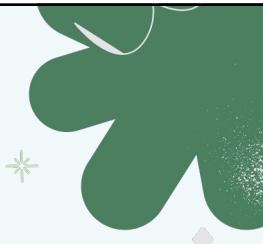
The diagram shows a layout with a table of horizontal lines on the left and a list of horizontal lines on the right. The list is enclosed in a dashed rectangular box, illustrating how it is treated as a design element rather than separate data components.

36

Use Tables for Data, Not Design

Don't use tables for...

- Side-by-side layout
- Sidebar callouts
- Title page or headers**

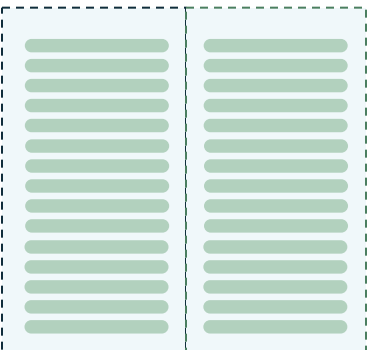
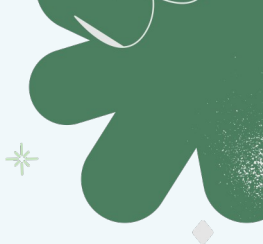
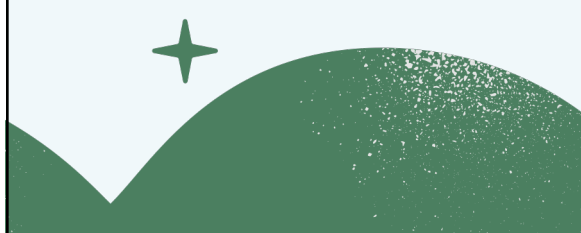


37

Use Tables for Data, Not Design

Don't use tables for...

- Side-by-side layout
- Sidebar callouts
- Title page or headers
- Two-column text**


38

Table Do's and Don'ts

Do

- ✓ Use tables for data
- ✓ Use single cells

Don't

- ✗ Use tables for formatting
- ✗ Merge or split cells

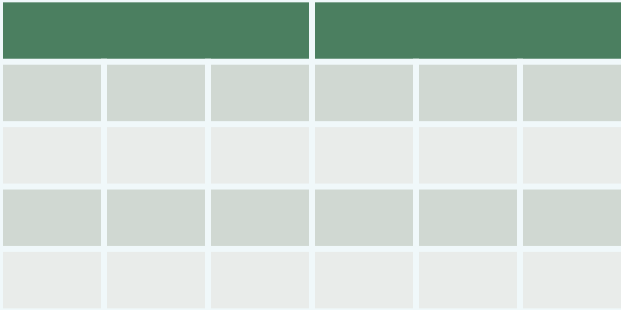
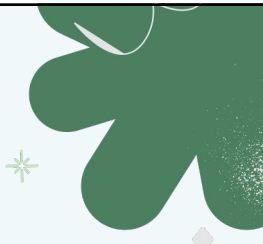
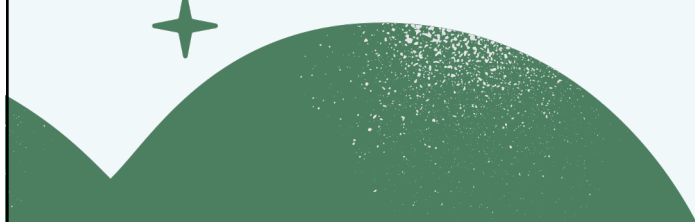
39

Never Merge or Split Cells

40

Never Merge or Split Cells

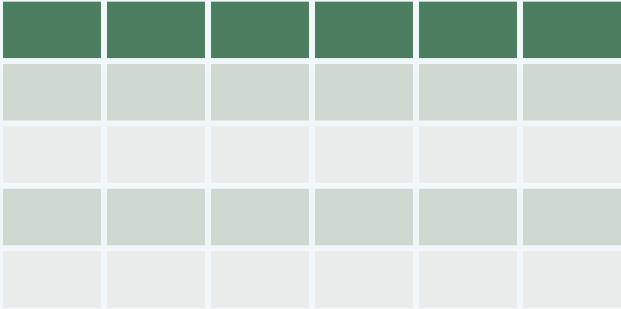
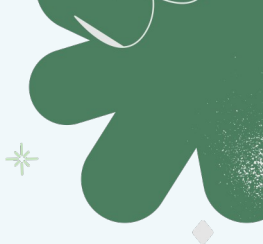
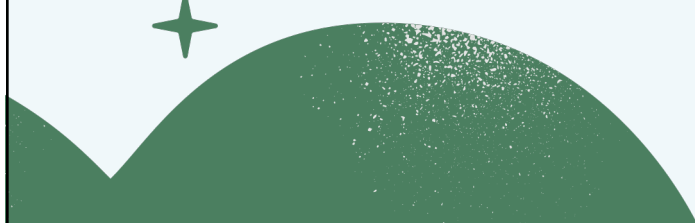
Use the same number of columns in every row


41

Never Merge or Split Cells

Use the same number of columns in every row


42

Table Do's and Don'ts

Do

- ✓ Use tables for data
- ✓ Use single cells
- ✓ Ensure all tables have a labeled header row

Don't

- ✗ Use tables for formatting
- ✗ Merge or split cells
- ✗ Stack multiple header rows



43

Table Do's and Don'ts

Do

- ✓ Use tables for data
- ✓ Use single cells
- ✓ Ensure all tables have a labeled header row
- ✓ Split complex tables into multiple simple tables

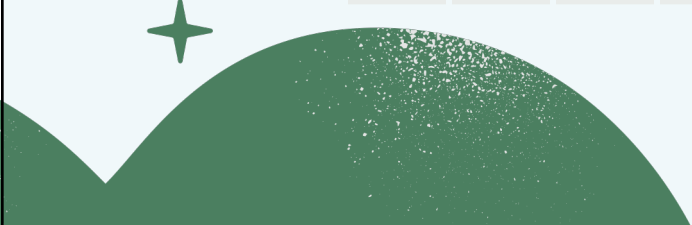
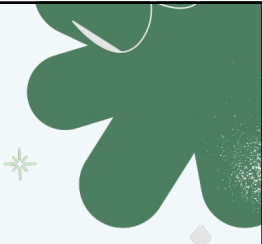
Don't

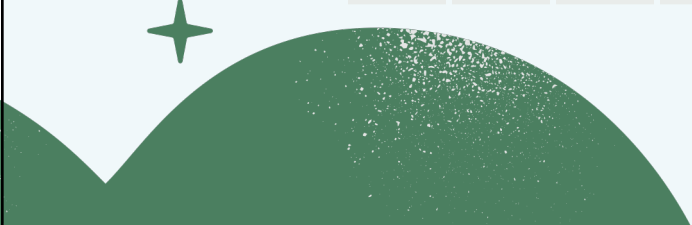
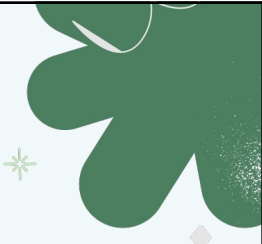
- ✗ Use tables for formatting
- ✗ Merge or split cells
- ✗ Stack multiple header rows
- ✗ Nest a table within a table



44

Keep One Header Row

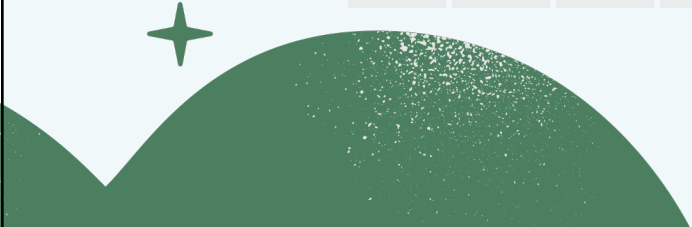
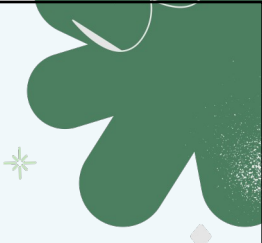



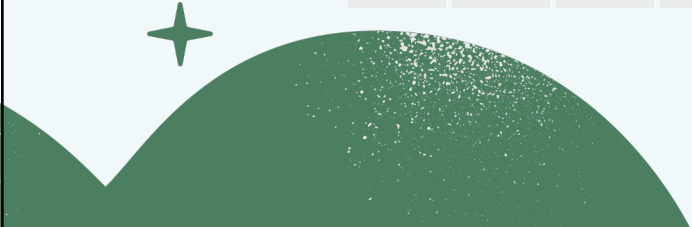
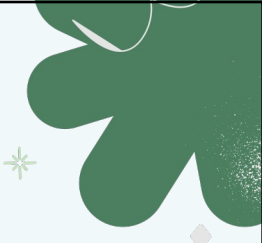

45

Keep One Header Row

Split into multiple tables

Before			After		
A	B	C	A	B	C


46

Keep One Header Row

Before

A	B	C

After

A	B	C

47

Assign Header Row

Click into table → Table Design → Header Row

Completion improved across cohorts. Of 94 students in Cohort 1, 66 completed (70%). Of 103 students in Cohort 2, 82 completed (80%). Table 1 shows results by pathway. The project target is a 75% completion rate for each pathway.

Table 1. Enrollment and Completion by Pathway and Cohort

Credential	Pathway	Cohort 1 (2024-25)		Cohort 2 (2025-26)	
		Enrolled	Completed	Enrolled	Completed
Certificate	Industrial Maintenance	24	19 (79%)	28	24 (86%)
	Welding Technology	22	15 (68%)	20	16 (80%)
Associate Degree	Mechatronics	30	21 (70%)	34	27 (79%)
	CNC Machining	18	11 (61%)	21	15 (71%)
Total		94	66 (70%)	103	82 (80%)

Note: Cells shaded green met the 75% completion target. Cells shaded red did not.

CNC Machining stayed below target in both cohorts. Faculty interviews suggest that conflicts with second-shift jobs contributed to withdrawals. Welding Technology and Mechatronics reached the target in Cohort 2 after the project added evening lab sections.

PAM Year 3 Evaluation Report (ppack3_1) Page 2

48

ACTIVITY

Simplifying Tables

1. Complex table with merged cells
Example: Year 2 evaluation findings for an ATE advanced manufacturing project, by partner group and data source.

Partner Group	Data Source	Participation		Key Finding	Recommendation
		Invited	Took Part		
Students	End-of-course survey	112	94	Students reported more confidence operating industry-standard equipment, such as PLC trainers and CNC machines.	Add open lab hours so students get more hands-on practice.
	Focus groups (4 groups)	40	32	Evening and part-time students wanted more chances to work in teams on real industry problems.	Build team-based troubleshooting scenarios into each course module.
Faculty	Professional development survey	17	12	Faculty said the summer professional development institute made it easier to adapt the new curriculum modules.	Continue the summer institute and share finished modules on ATE Central.
	Interviews	10	8	Faculty asked for help using evaluation data to decide what to change in their courses.	Offer a data use workshop each semester led by the evaluation team.
Industry partners	Advisory board interviews	10	8	Employers valued graduates' technical skills and their ability to communicate on the shop floor.	Keep the annual business and industry advisory board curriculum review.
	Employer survey	20	15	Employers named teamwork and troubleshooting as areas where new hires still need to grow.	Expand capstone projects that use employer-defined problems.

Why this can be difficult to navigate: The table looks organized on screen, but several features make it hard to use with a keyboard or screen reader:

- The Partner Group cells are **merged** down across rows, so a screen reader may only announce "Students" or "Faculty" on the first row of each group. Readers can lose track of which group a finding belongs to.
- The two-row header (Participation split into Invited and Took Part) means a screen reader may read the wrong header for some [cells](#), skip one.

49



Logic Models & Data Visualizations

Alt text, reading order, and use of color

50

Visualizations in Evaluation Reports



Logic Models



Charts and Graphs



Photographs



Flow Charts

51

A Reminder...

Perceivable

People must be able to see, hear, or otherwise sense your content through at least one sense.

Operable

People must be able to navigate and interact using whatever method works for them (keyboard, voice, or touch).

Understandable

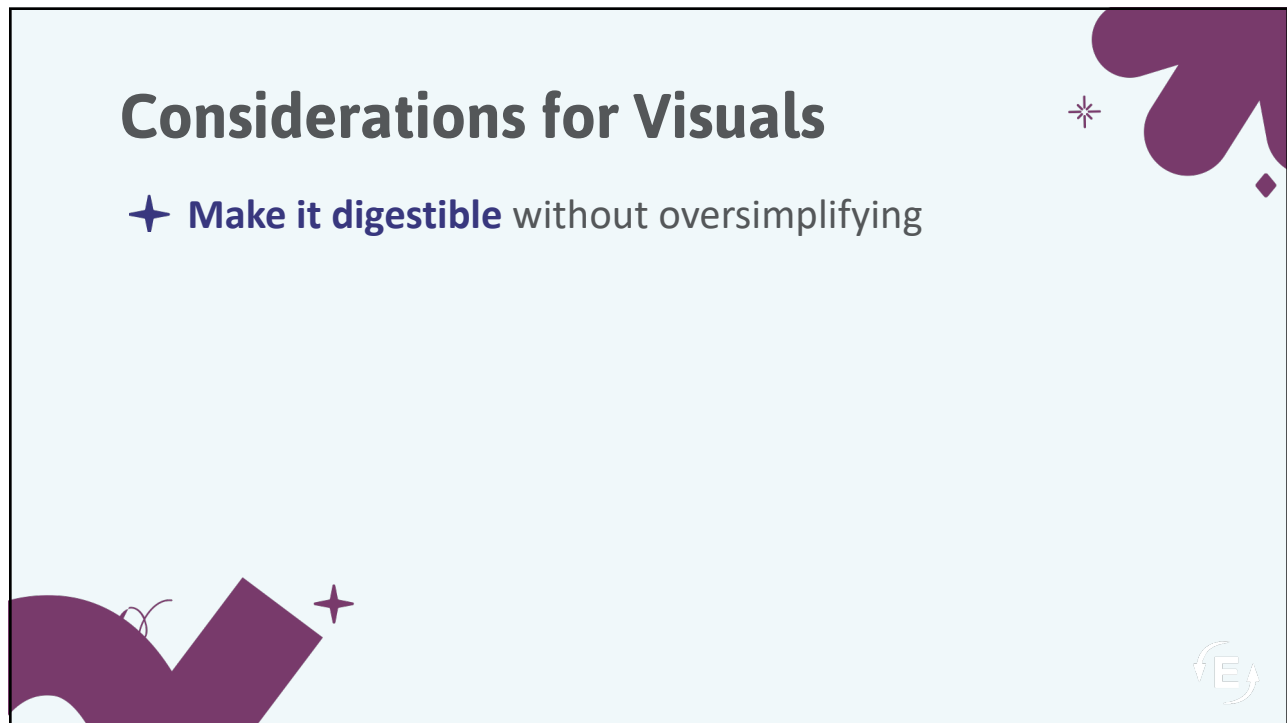
Content and instructions should be clear enough that people can follow and use them without confusion.

Robust

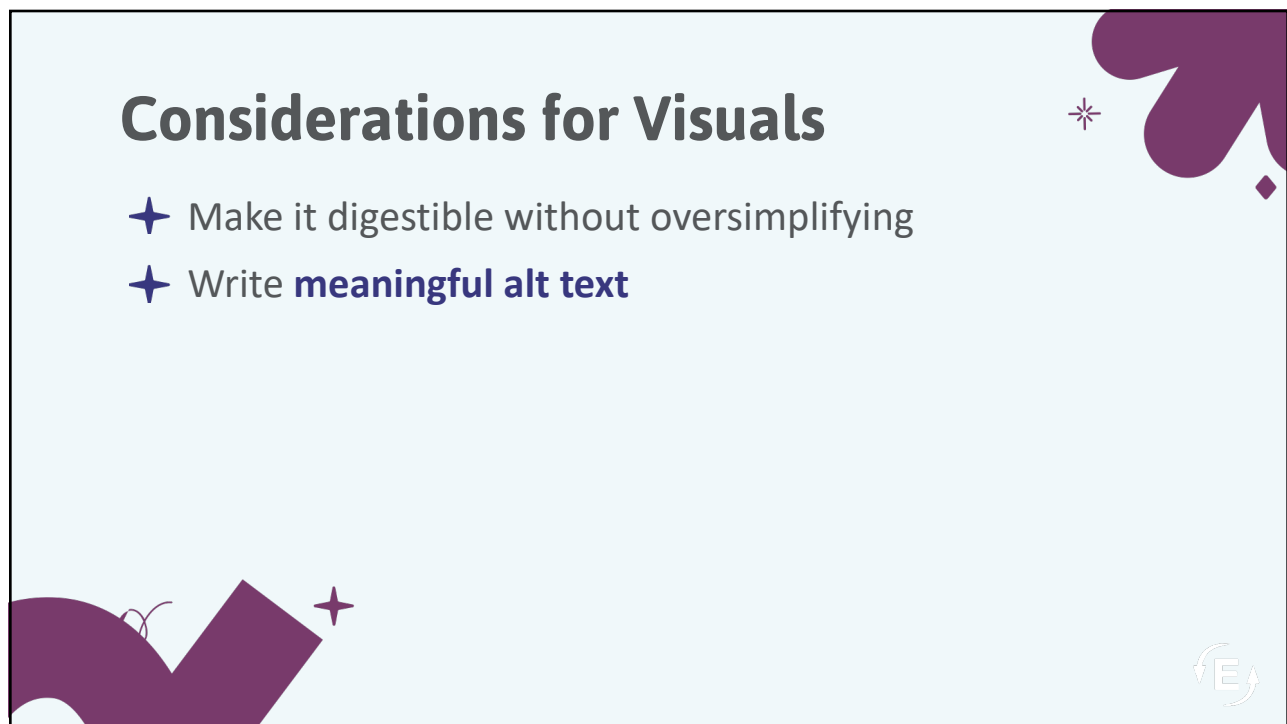
Content should keep working reliably across current and future devices, browsers, and assistive technology.

CAG, [w3.org/WAI/standards-guidelines](https://www.w3.org/WAI/standards-guidelines)

52



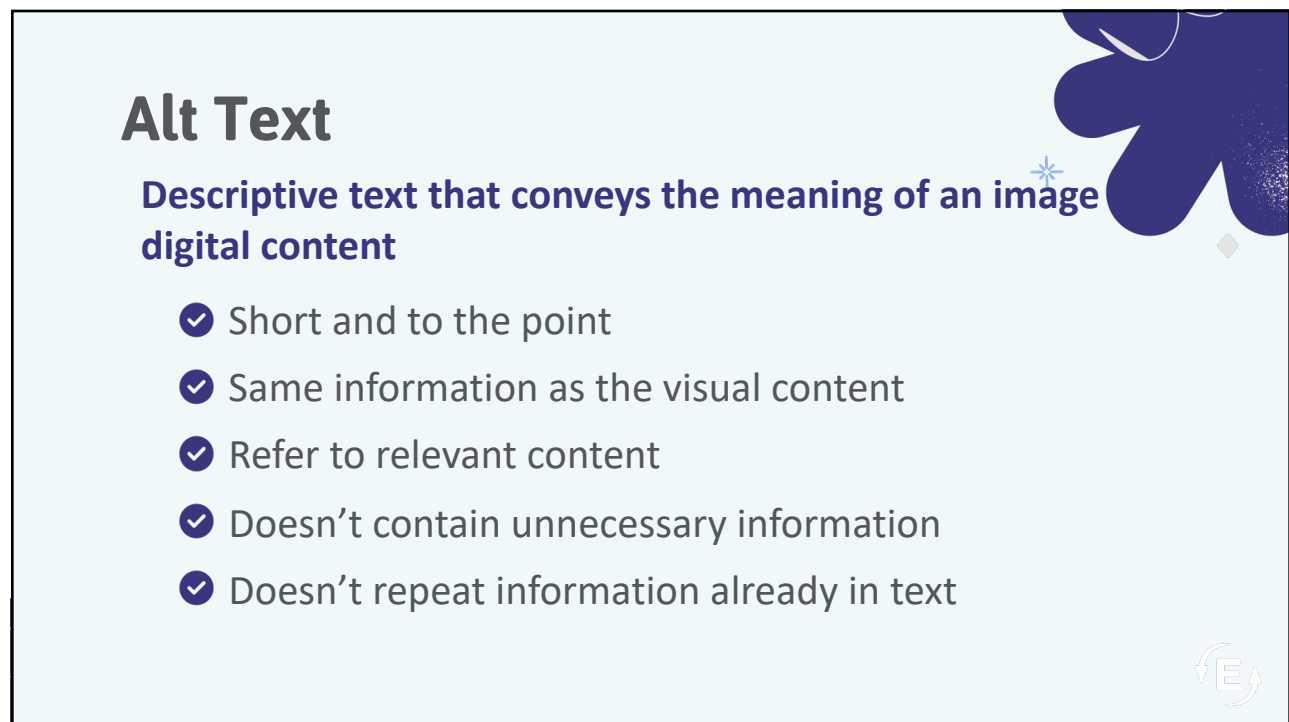
53



56



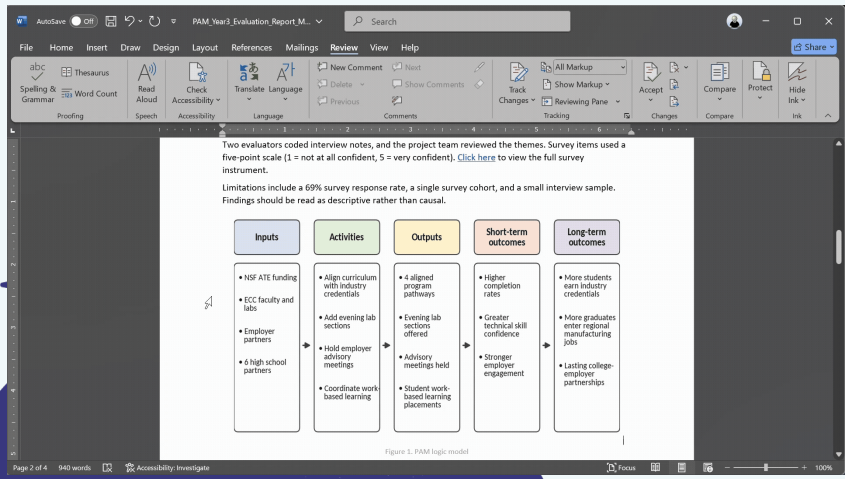
57



58

Adding Alt Text

Right Click → View Alt Text



Two evaluators coded interview notes, and the project team reviewed the themes. Survey items used a five-point scale (1 = not at all confident, 5 = very confident). [Click here](#) to view the full survey instrument.

Limitations include a 69% survey response rate, a single survey cohort, and a small interview sample. Findings should be read as descriptive rather than causal.

Inputs	Activities	Outputs	Short-term outcomes	Long-term outcomes
- NSF ATE funding - ECC faculty and labs - Employer partners 6 high school partners	- Align curriculum with industry credentials - Add evening lab sections - Hold employer advisory meetings - Coordinate work-based learning	4 aligned program pathways - Evening lab sections offered - Advisory meetings held - Student work-based learning placements	- Higher completion rates - Greater technical skill confidence - Stronger employer engagement	- More students earn industry credentials - More graduates enter regional manufacturing jobs - Leading college-employer partnerships

Figure 3. PAM logic model

59

Alt Text for Photos

- ✗ Image of a room with tables, chairs, and equipment.
- ✓ An engineering lab with workstations, computer monitors, control panels, and mechanical testing equipment arranged on tables and along the walls.



60

Alt Text for Logos

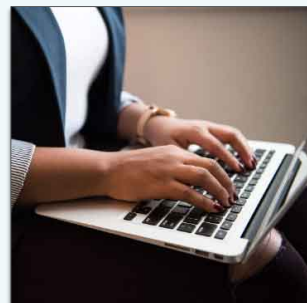
- ✗ Logo
- ✓ EvaluATE logo with text:
evalu-ate.org



61

Alt Text for Decorative Images

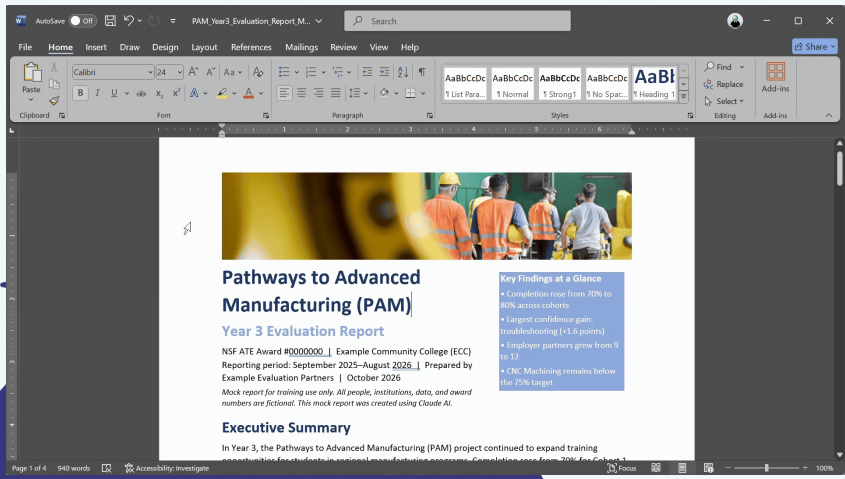
- ✗ Leave decorative images without alt text or mark them as non-decorative, causing screen readers to read the file name.
- ✓ Mark decorative images as decorative so screen readers skip them.



62

Marking Images as Decorative

Right Click → View Alt Text → Mark as Decorative



The screenshot shows a Microsoft Word document titled 'PAM_Year3_Evaluation_Report.M...'. The document content includes a header image of workers in orange safety vests, followed by the title 'Pathways to Advanced Manufacturing (PAM) Year 3 Evaluation Report'. Below the title is a paragraph of text: 'NSF ATE Award #0000000 | Example Community College (ECC) Reporting period: September 2025–August 2026 | Prepared by Example Evaluation Partners | October 2026. Mock report for training use only. All people, institutions, data, and award numbers are fictional. This mock report was created using Claude AI.' To the right of this text is a blue box titled 'Key Findings at a Glance' containing a bulleted list: '• Completion rate rose from 70% to 80% across cohorts', '• Largest confidence gain (troubleshooting (+1.5 points))', '• Employer partners grew from 9 to 12', and '• CNC Machining remains below the 75% target'. The status bar at the bottom indicates 'Page 1 of 4', '940 words', and 'Accessibility: Investigate'.

63

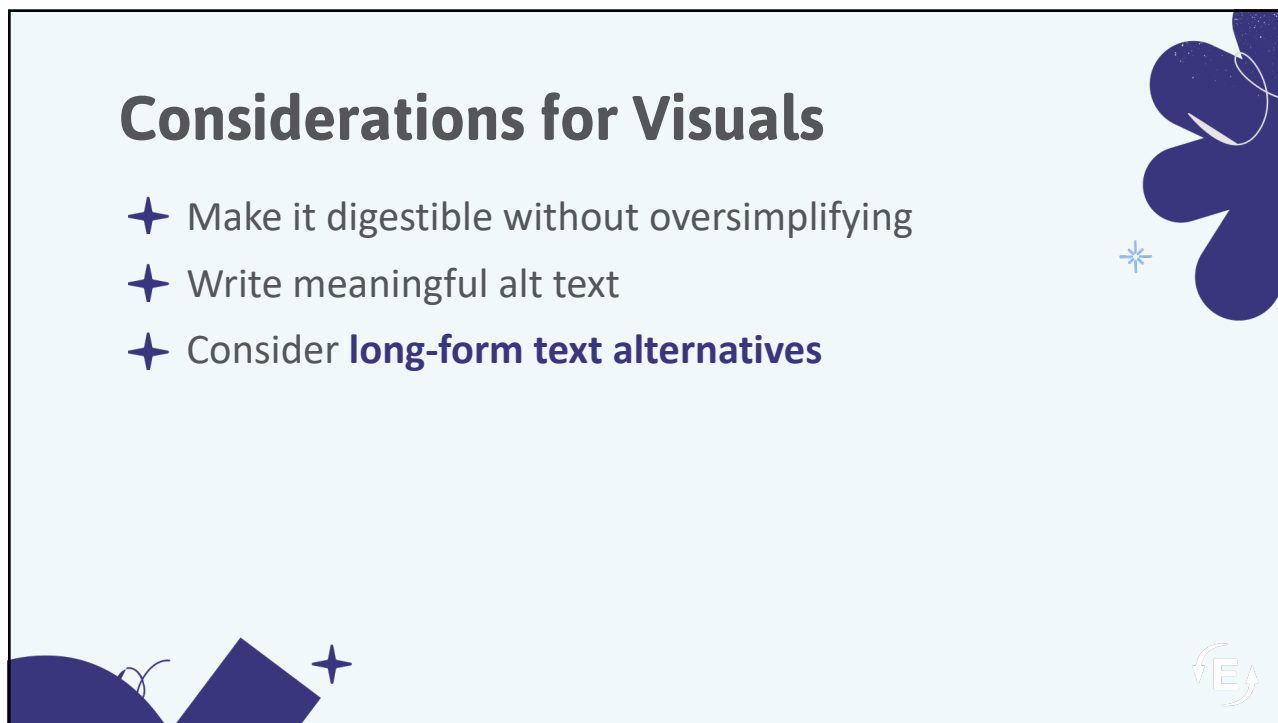
Tips for using AI for Alt Text

-  +  Give AI context, not just the image.
-  Adjust your prompt for the type of visual.
-  Distinguish description from interpretation.
-  Review and refine the alt text before adding it to your document.

64

Considerations for Visuals

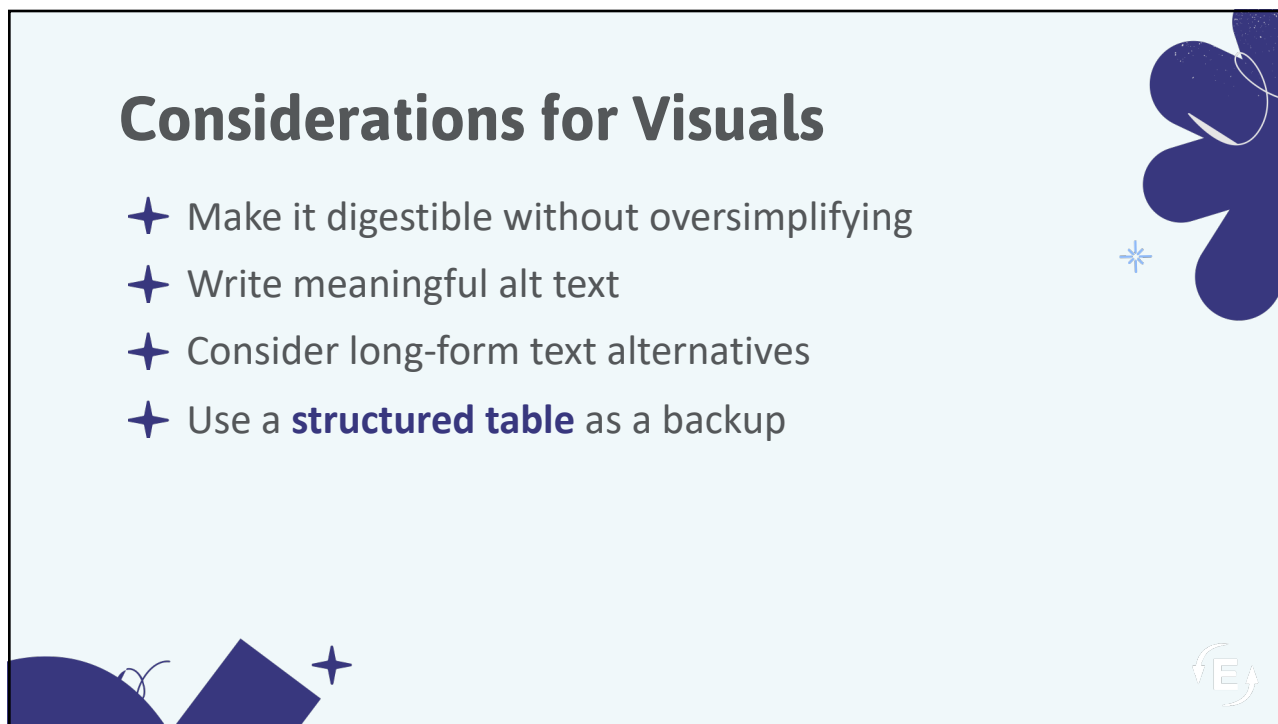
- ✦ Make it digestible without oversimplifying
- ✦ Write meaningful alt text
- ✦ Consider **long-form text alternatives**



65

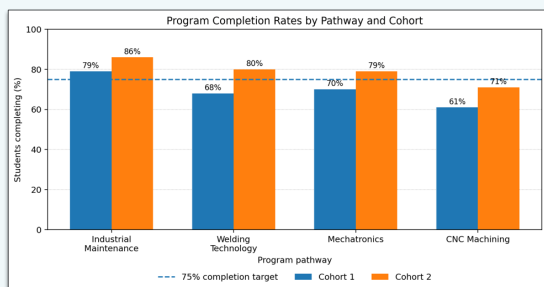
Considerations for Visuals

- ✦ Make it digestible without oversimplifying
- ✦ Write meaningful alt text
- ✦ Consider long-form text alternatives
- ✦ Use a **structured table** as a backup



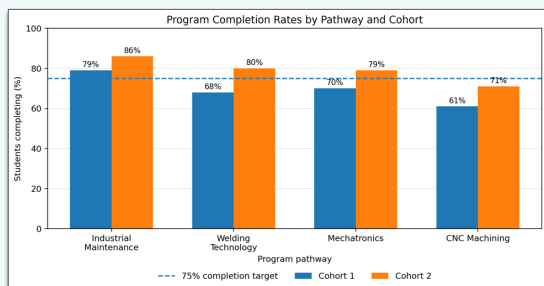
66

Using Tables as Text Alternatives to Graphs



67

Using Tables as Text Alternatives to Graphs



Pathway	Cohort 1 completion rate	Cohort 2 completion rate	75% target met? Cohort 1	75% target met? Cohort 2
Industrial Maintenance	79%	86%	Yes	Yes
Welding Technology	68%	80%	No	Yes
Mechatronics	70%	79%	No	Yes
CNC Machining	61%	71%	No	No

68

Considerations for Visuals

- ✦ Make it digestible without oversimplifying
- ✦ Write meaningful alt text
- ✦ Consider long-form text alternatives
- ✦ Use a structured table as a backup
- ✦ **Don't rely on color alone** to carry meaning

69

Using Color

- 🎨 Make text stand out from its background
- 🎨 Don't rely on color alone
- 🎨 Skip red and green together
- 🎨 Pay attention to small details, like superscript, labels, and footnotes.
- 🎨 Darken brand colors when needed
- 🎨 Test before you share

70

ACTIVITY

Remediate a Visual

Choose one visual to remediate. Consider how to make it more **P**erceivable, **O**perable, **U**nderstandable, and **R**obust.

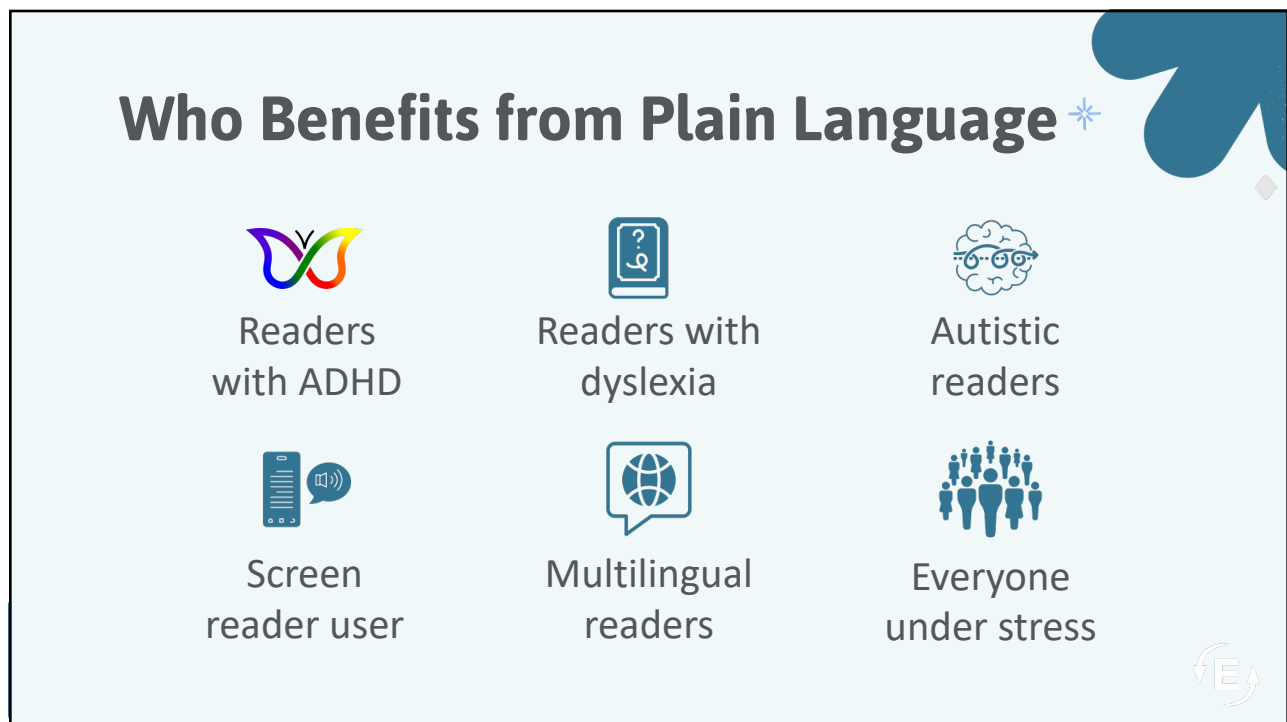
Check the alt text, reading order, or color contrast.

73

74

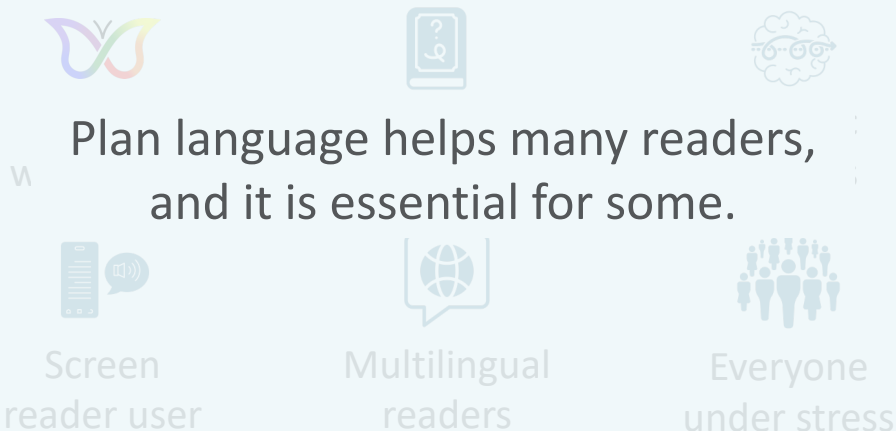


75



76

Who Benefits from Plain Language *



77

How It Improves Evaluation Reports

Before

Triangulation of survey and interview data indicated statistically significant gains in self-efficacy among PD participants, which moves the needle on retention.

78

How It Improves Evaluation Reports

Before

Triangulation of survey and interview data indicated statistically significant gains in self-efficacy among PD participants, which moves the needle on retention.

After

Participants who attended most workshops felt more confident. Survey and interview results agree. The difference is unlikely to be due to chance.



79

How It Improves Evaluation Reports

Before

Triangulation of survey and interview data indicated statistically significant gains in self-efficacy among PD participants, which moves the needle on retention.

After

Participants who attended most workshops felt more confident. **Survey and interview results agree**. The difference is unlikely to be due to chance.



80

How It Improves Evaluation Reports

Before

Triangulation of survey and interview data indicated statistically significant gains in self-efficacy among PD participants, which moves the needle on retention.

After

Participants who attended most workshops felt more confident. Survey and interview results agree.

The difference is unlikely to be due to chance.



81

How It Improves Evaluation Reports

Before

Triangulation of survey and interview data indicated statistically significant gains in self-efficacy among PD participants, which moves the needle on retention.

After

Participants who attended most workshops felt more confident. Survey and interview results agree.

The difference is unlikely to be due to chance.



82

How It Improves Evaluation Reports

Before

Triangulation of survey and interview data indicated statistically significant gains in self-efficacy among PD participants, which **moves the needle** on retention.

After

Participants who attended most workshops felt more confident. Survey and interview results agree. The difference is unlikely to be due to chance.



83

How It Improves Evaluation Reports

Before

Triangulation of survey and interview data indicated statistically significant gains in self-efficacy among PD participants, which moves the needle on retention.

21-word sentence



After

Participants who attended most workshops felt more confident. Survey and interview results agree. The difference is unlikely to be due to chance.



84

Tips for Evaluation Reports



Plain Language Tips for ATE Evaluators
Writing Clear and Understandable Evaluation Reports
Lissa Wilson Becth & Deanna Woods-Engelhart / October 2025

Clear, accessible writing ensures that evaluation findings reach, and can be used by, the people they are meant to serve. These tips are for ATE evaluators or anyone communicating data-rich information when developing evaluation products, such as reports, summaries, data displays, and presentations. Plain language respects readers' time and expertise and broadens the range of readers who can understand and act on evaluation findings.

Before You Write
Planning your audience, purpose, and main message helps keep your report focused and relevant.

- ☐ **Name one specific audience.**
Make it specific. For example, "administrators at my community college." Not "interested holders."
- ☐ **Write one purpose statement.**
What should readers do, think, or feel afterward?
- ☐ **Write your main message in 1 to 3 sentences.**
This keeps your thinking focused and reduces unnecessary writing.

Organize to Serve the Audience
Organizing information around readers' needs makes key findings and recommendations easier to find and use.

- ☐ **Place the main message at or near the top.**
Make it stand out. Bold it, enlarge it, or shade it.
- ☐ **Lead with findings and recommendations.**
Put methods and background later or in an appendix. The project team and their NSF program officer already know this information.
- ☐ **Order remaining content by importance to the reader.**
You don't need to organize by the order of your evaluation work.
- ☐ **Keep titles to 8 words or fewer.**
Subtitles come in handy for long ATE project titles.
- ☐ **Add a heading for every 1 to 3 paragraphs.**
Keep headings to 8 words or fewer.
- ☐ **Write headings that state the message.**
For example, "Most Participants Finished the Program," not "Findings."

evalu-ate.org/slide/accessible-by-design

85

ACTIVITY

Improve It

Utilizing a convergent mixed-method design, the evaluation team conducted an analysis of pre/post survey instruments to ascertain PD intervention effects on faculty self-efficacy. Statistically significant gains were observed ($p < .05$) and were attributable in part to peer mentoring. Findings should be interpreted with caution given the lack of a comparison group.

**Think
Pair
Share**

86

ACTIVITY

Improve It

Sample Rewrite

Faculty who attended most workshops felt more confident. Surveys taken before and after the workshops show this. The difference is unlikely to be due to chance. Peer mentoring may have played a role. We had no comparison group, so we can't say the workshops caused the change.

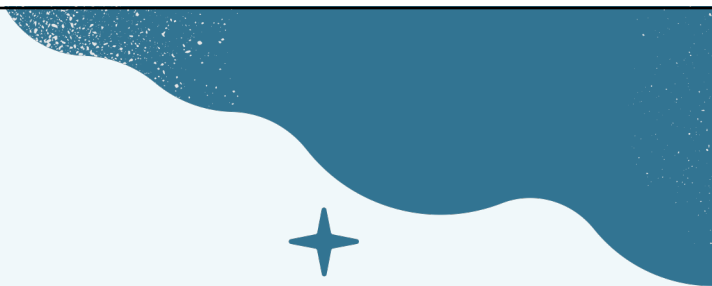
Think
Pair
Share



87



Checking & Exporting Documents



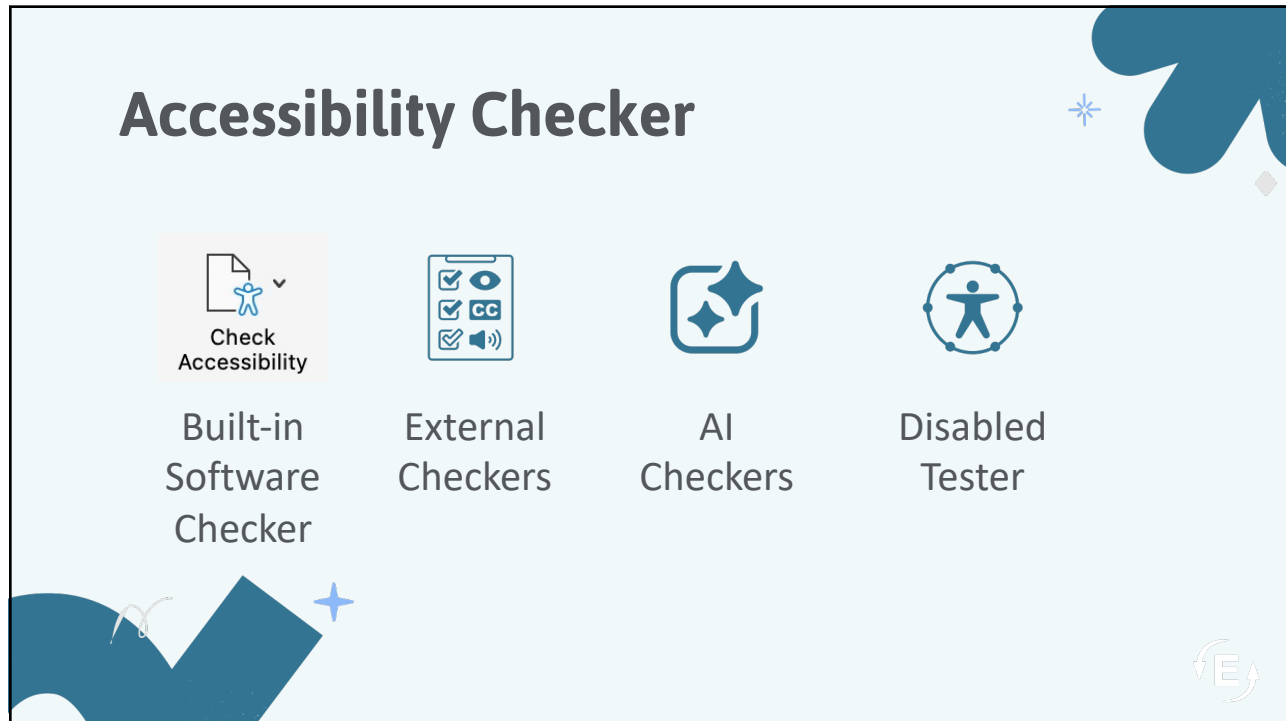
88

Review ➔ Check Accessibility

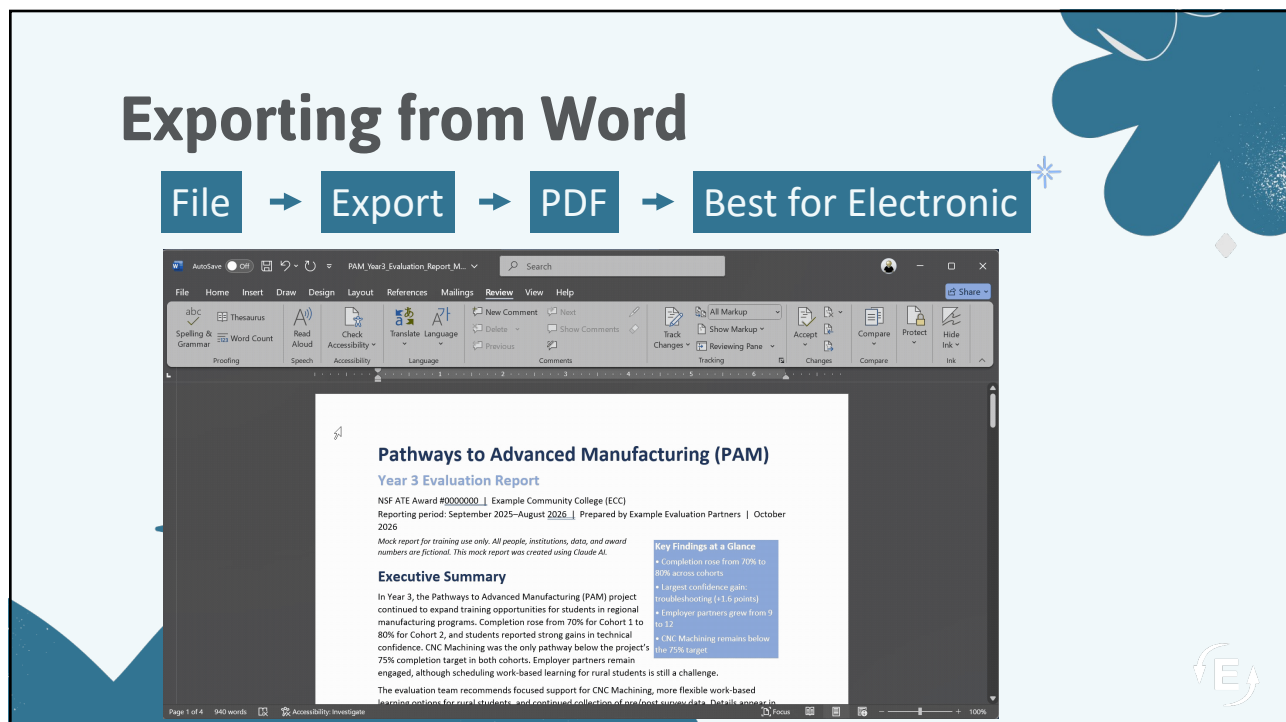


Settings → Accessibility → Status Inline





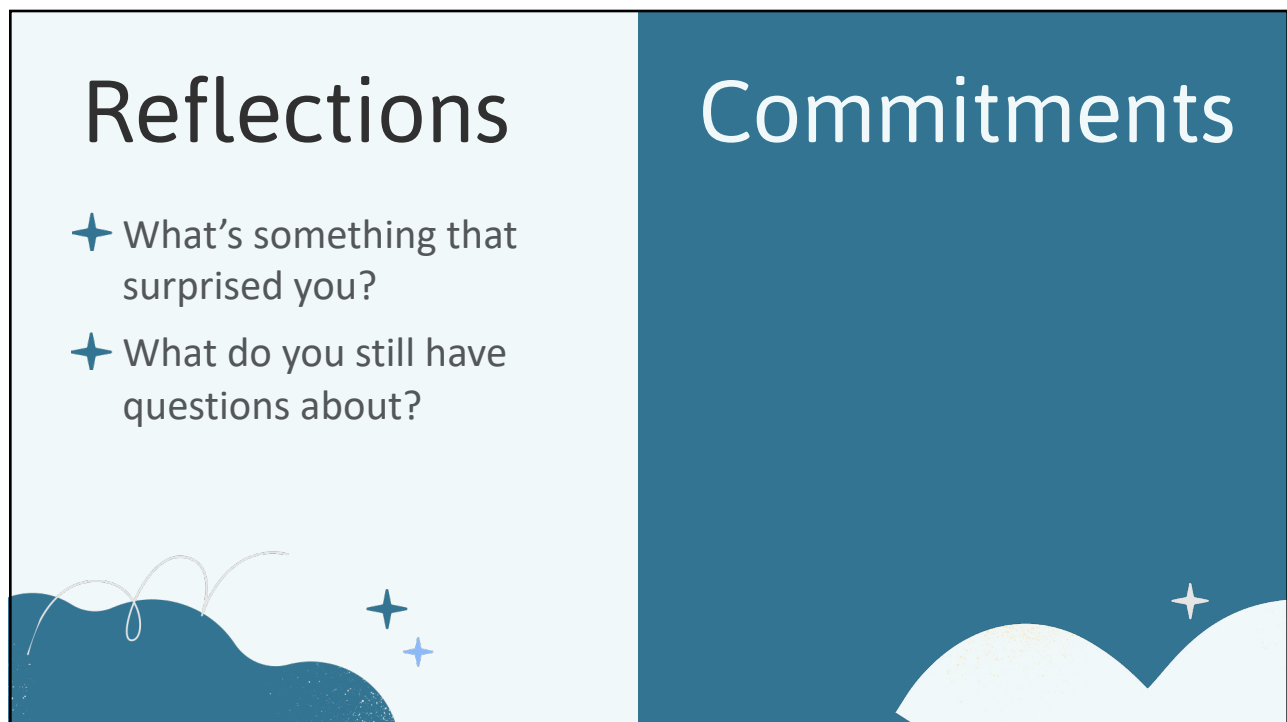
91



92



93



94

Reflections

Commitments

Write down one specific strategy from the workshop you commit to integrating into your standard practice.

Share it with a neighbor.

95

Thank you!

Brianna.HooksSingletary@wmich.edu
Lyssa.Becho@wmich.edu

See what else
EvaluATE's up to at the
conference this year!



96