Artifact Report 1

Remediated Slide Design

for Accessibility

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Audience & Purpose

The remediated slide presentation is taken from Oregon Department of Educations' Official Writing Scoring Guide and Calibration section. This artifact was designed for a wide range of users including school administrators, teachers, parents, and students. The purpose of the artifact is to provide accessible and well-structured educational information for everyone to understand. The slides previously had issues like poor contrast, redundant information, missing alt text, confusing or broken links, and inconsistent formatting. The goal was to improve comprehension, reduce cognitive load, and enhance accessibility across diverse user needs. The language used in this artifact is an important consideration when working with a diverse audience of individuals with different backgrounds and learning levels. Because this artifact is intended for a wide range of individuals from diverse backgrounds (e.g., administrators, teachers, parents, and students), the language is simplified to provide an informational overview of the scoring and calibrations processes. This artifact fits into the K-12 educational settings where clear communication is key for decision making and learning support.

Time Allocation

This artifact was created thoughtfully to ensure effective comprehension of the learning material. Time spent represents this attention to detail in every step of the remediation process.

Activity	Hours
Ideation	3
Research Remediation Options	7
Brainstorming and Planning	4
Accessibility Audit & Analysis	60

Improving Contrast and Text Adding Alt Text Fixing and Testing Links Summarizing and Editing Text	
Layout & Interactivity Improvements	14
Final Remediated Slide Deck (30-50 slides) Revisions	14
Total	103

AECT Standards Alignment

This artifact aligns with the following AECT standards:

1. Standard 1: Content Knowledge
    - 1.1 Creating: Remediation of slides to accommodate learning and performance outcomes through improving instructional materials.
    - 1.2 Using: Adherence to accessibility standards through using Large Language Models to assess accessibility and WCAG Evaluation add-ons to improve quality of learning outcomes.
    - 1.3 Assessing/Evaluating Instructional Strategies: Applied summarization techniques and visual information design to improve clarity, reduce redundancy, and support diverse cognitive needs (Mayer, 2001).
2. Standard 2: Content Pedagogy
    - 2.3 Computer-Based Technologies: Using Google Slides to create an interactive digitally accessible learning resource with embedded hyperlinks, clickable

transitions, and exportable PDF compatibility. These tools facilitate multimodal learning and flexible content access.

3. Standard 3: Learning Environments
    - 3.1 Creating: Developed a user-friendly presentation environment by improving slide spacing, alignment, and visual contrast; enhancing readability and visual comfort.
    - 3.4 Policies and Regulations: Complied with accessibility standards outlined in WCAG 2.1, including the use of alt text, high color contrast, and keyboard-navigable elements.
4. Standard 4: Professional Knowledge and Skills
    - 4.3 Reflection on Practice: Incorporated multiple rounds of peer feedback and iterative revisions to ensure the artifact meet accessibility standards and instructional expectations.
5. Standard 5: Research
    - 5.1 Theoretical Foundations: Grounded in Cognitive Load Theory (Sweller, 1988) and Universal Design for Learning (CAST, 2018), promoting effective engagement and reducing unnecessary cognitive strain through layout simplicity and content chunking.

Best Practices

The slide remediation project follows best practices recognized in instructional design and Educational Technology (EdTech), specifically aimed at improving learner accessibility and engagement in digital presentation formats.

- **Universal Design for Learning (UDL):** Slides were enhanced using multiple means of engagement and representation, enabling users with different learning needs to access and interact with material (CAST, 2018).
- **Cognitive Load Theory:** Unnecessary content was removed, layout simplified, and spacing increased to reduce extraneous cognitive load and help users focus on key messages. (Sweller, 1988).
- **Visual Hierarchy:** Strategic use of contrast, whitespace, font size, and positioning helped users visually prioritize information (Lidwell, Holden, & Butler, 2010).
- **Usability Heuristics:** Navigation and link structures were improved using consistent formatting and labels, ensuring intuitive user flow and reduced cognitive load (Nielsen, 1994).
- **Consistent Branding & Spacing:** Design consistency and improved word spacing aided readability and contributed to a more professional and unified look throughout the presentation (Reynolds, 2011).
- **Interactive Media Elements:** Inclusion of clickable links, slide transitions, and layout cues increased engagement while preserving clarity (Example).

Research & Theory

The design decisions in the remediated slide deck are rooted in foundational theories of instructional design and digital learning. The improvements reflect research-informed strategies enhancing clarity, usability, and accessibility.

1. **Multimedia Learning Theory:** Mayer's principles of coherence, redundancy reduction, and spatial contiguity were used to restructure slides for higher retention and understanding (Mayer, 2001).

   For example:

   - **Redundancy reduction** was completed in the *Workshop Goals* slides where goals were highlighted individually to showcase which goal was being targeted in the slide deck (Example).
   - **Spatial contiguity** was achieved by including images that correspond to the text on given slides (Example). **Coherence** was also achieved through the slides where key information was included, extraneous information was left out, see from the before slide example (Before Remediation Example).

2. **Engagement Theory:** Clickable elements and transitions support learner engagement through active interaction with content (Kearsley & Shneiderman, 1999).

   For example:

   - Each slide has **transitions** and **animations** added to slides with images to support learner engagement (Example). Slides with additional supporting information also contain **clickable links** for learners to interact with content further (Example).

3. **Gagne's Nine Events of Instruction:** Slides now follow a consistent instructional flow that aligns with Gagne's model, from gaining attention to enhancing retention and transfer (Gagne, 1985).

   For example:

   - *Workshop Goals*, *Title Slides*, and *Questions and Clarification* slides allow for the user to experience a consistent instructional flow with expected learning

objectives adhering to Gagne's **second event** of instruction of **expectancy** (Example) and the **fifth event semantic coding** (Example).

4. **Alt Text & WCAG Compliance:** Alternative text for images and meaningful link text follow WCAG 2.1 and W3C accessibility guidelines (Caldwell et al., 2008).

   For example:

   - Alternative text for informational purposes was included (Example), as well as, **meaningful link text like "*View Full Scoring Guide*"** instead of "*Click Here*" (Example). This was remediated from screenshots of the guide that were poor quality, screen reader incompatible and difficult for viewers to read (Before Remediation Example).

5. **Visual Accessibility:** Font and contrast adjustments were based on research in screen readability and color visibility to ensure usability across a range of visual abilities (Caldwell et al., 2008).

   For example:

   - Fonts like **Times New Roman and Arial** were used for maximum readability. The layout was changed to include a **solid white background with black text** to enhance color visibility (Example).

Accessibility

Accessibility was a central focus of the slide remediation process. The following features were implemented to ensure the presentation is inclusive, screen-reader friendly, and compliant with accessibility guidelines.

Visual & Layout Improvements

- **High-Contrast Color Schemes:** Background and text pairings meet WCAG AA color contrast thresholds for low-vision users. I used solid white for the background and black for the font colors in addition to bolding key-words.
- **Readable Fonts & Text Sizes:** Sans-serif fonts and minimum 24pt text ensure clarity and legibility across display formats. For titles I used a serif font of Times New Roman and for the body I used sans-serif font Arial.
- **Whitespace & Alignment:** Visual clutter was reduced by increasing padding and aligning elements to a consistent grid. Layout was customized to include consistent alignment and inclusion of branding elements.

Content & Media Accessibility

- **Alt Text for All Images:** Every infographic and visual includes descriptive alternative text for screen reader compatibility.
- **Keyboard-Navigable Transitions:** Animations and transitions are minimal and do not hinder keyboard or assistive input usage.
- **Hyperlinks with Contextual Labels:** clickable elements include descriptive text to improve clarity for screen readers and cognitive accessibility.
- **Tagged PDF Export:** The presentation was exported as a PDF with proper tagging to ensure logical reading order and heading structure.

Structural Improvements

- **Descriptive Slide Titles:** Every slide includes a clear, unique title tag to support screen reader navigation. For example, in slide 17, I include a clear title "*Oregon Writing Scoring Guide: How Student Writing is Evaluated (Scores 1-6)*" (Example) remediated from the original title "*Oregon's Official Writing Scoring Guide*" with a poor quality screenshot of the scoring guide (Before Remediation Example).
- **Logical Flow and Sequence:** Improved instructional sequencing benefits users with executive functioning challenges or learning differences. For example, using a consistent photo for questions and clarifications and goal title pages acts as a cue to learners improving the instructional sequencing.

References

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