Leveraging AI: UDL & Accessibility

Elli Constantin, M. Ed.
Distance Education Director
Cypress College

Opening Thoughts
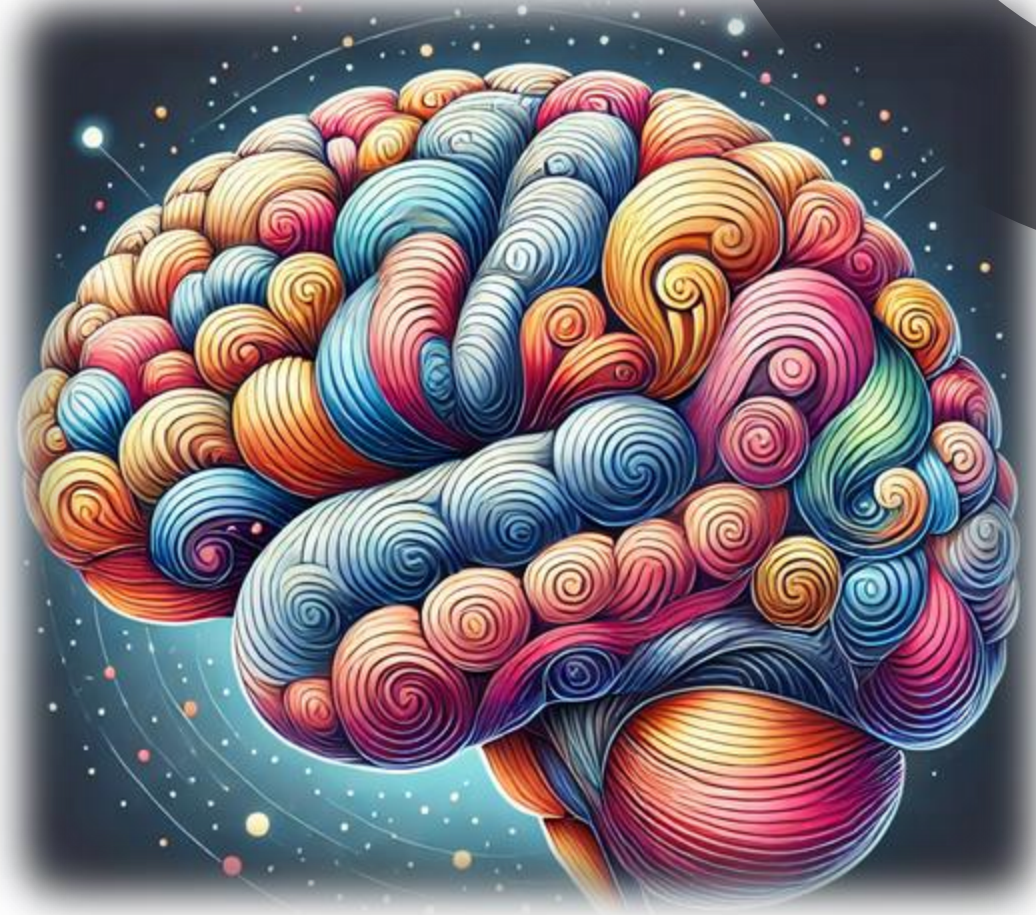
Always check AI

Survey

- [Survey](#)

What is UDL?

Universal Design for Learning (UDL) is an educational framework that aims to address the diverse needs of all learners by providing flexible methods of instruction, engagement, and assessment. It is based on the idea that each student learns differently, so teaching should be **adaptable** to different learning styles, abilities, and preferences**.**

Guiding Principles:

- Variability, not disability- social justice model

- Supports students with diverse learning and life needs

- Anticipate and design for variability

UDL Guidelines

UDL Guidelines		
Affective Networks	Recognition Networks	Strategic Networks
The "why" of learning	The "what" of learning	The "how" of learning
Multiple Means of Engagement	Multiple Means of Representation	Multiple Means of Action and Expression
Provide options for recruiting interest	Provide options for sustaining effort and persistence	Provide options for self regulation	Provide options for perception	Provide options for language and symbols	Provide options for compre-hension	Provide options for physical action	Provide options for expression and com-munication	Provide options for executive functions

- Engagement
  - The "Why" of learning
- Representation
  - The "What" of learning
- Action and Expression
  - The "How" of learning

Learn more on the CAST website and The Center for Teaching Excellence

Accessibility Benefits All

Student in a wheelchair: " Can you shovel the ramp?

Man shoveling snow: All these other kids are waiting to use the stairs. When I get through shoveling them off, then I will clear the ramp for you.

Student in a wheelchair: But if you shovel the ramp, we can all get in!

Overall message: Clearing a path for people with special needs clears the path for everyone!

How can AI Help?

AI FOR CREATING CONTENT THAT IS UDL FRIENDLY
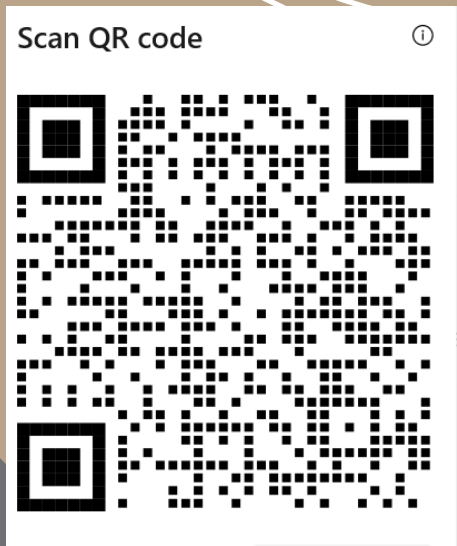
Use AI chatbots to modify assignments or content

- Ludia AI- UDL chatbot

- Universal Access Bot- UDL & Accessibility chatbot

  - Makes content UDL friendly

  - Can revise content for Canvas accessibility

- Khanmigo

  - Instructor-facing AI

  - Can make content student-friendly, help with formatting, and creating authentic assessments/assignments

- Hemingway AI

  - Can modify the instructor's writing level to adapt to various reading levels

- Accessible Syllabus Bot

  - Convert any syllabus into an accessible, student-friendly syllabus based on the Accessible Syllabus Project out of Tulane University.

Universal Access Bot

- PlayLab AI Universal Access Bot

Sample Assignment

I have provided the link for the film at the bottom of this page
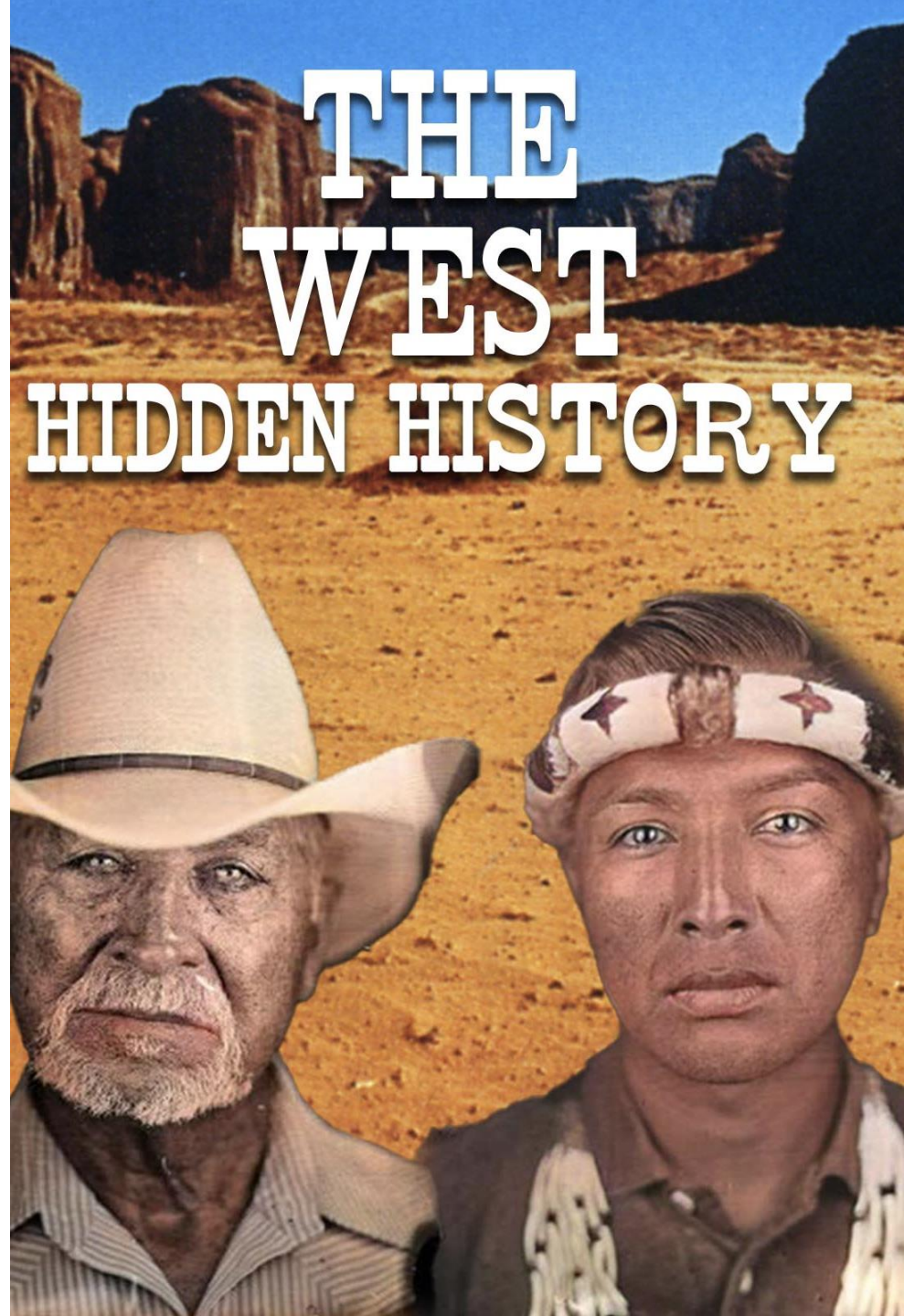
Due Date: February 11th @ 11:59PM

10 Points Total

Outline: Watch *The West: Hidden History* and write a review and analysis connecting it to historical themes. Your response should be thorough and demonstrate understanding.

The paper should be at least 750 words and follow standard formatting. Make sure to include a summary and analysis, addressing key points from the film. Consider questions like: What stood out to you? How does this relate to what we've discussed? Is there anything important to note?

Your review should be clear and well thought out. Submit it by the due date for full credit. The link to the film is provided below.

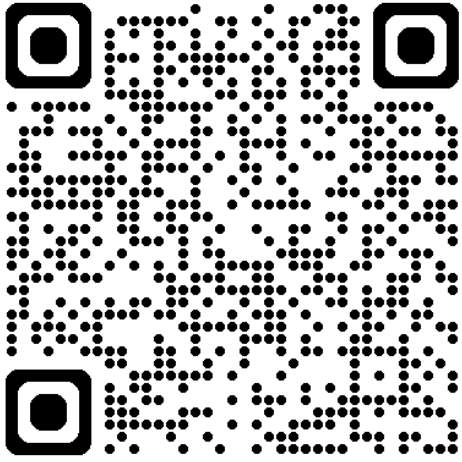[Watch *The West: Hidden History* for free on Tubi](#)

EXAMPLE PROMPT

Revise the following assignment to include multiple means of expression and engagement. Make the assignment authentic. Also include additional accessible resources students can use if they need support, such as human captioned videos. Make sure the assignment is clear and concise using student-friendly language. Include an overview, objective, directions, and rubric. Make sure to include information on instructor feedback (within 24 hours of assignment completion.

[Universal Access Bot Response](#)

[Ludia Response](#)
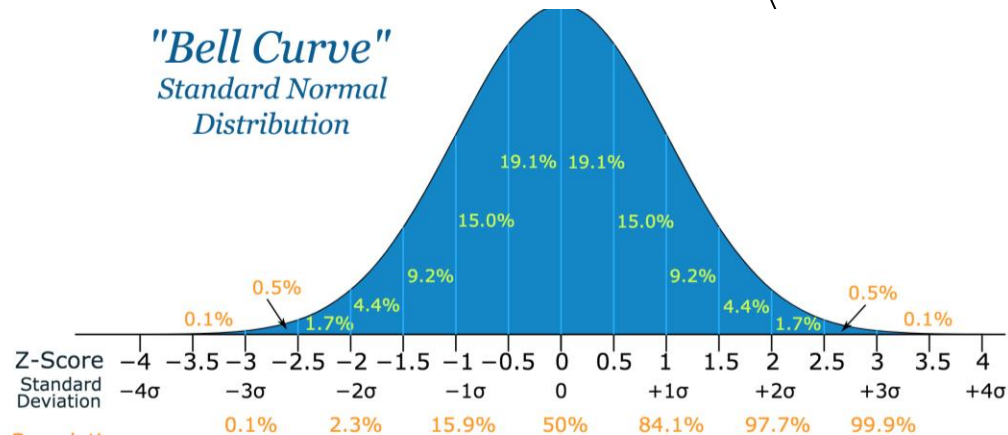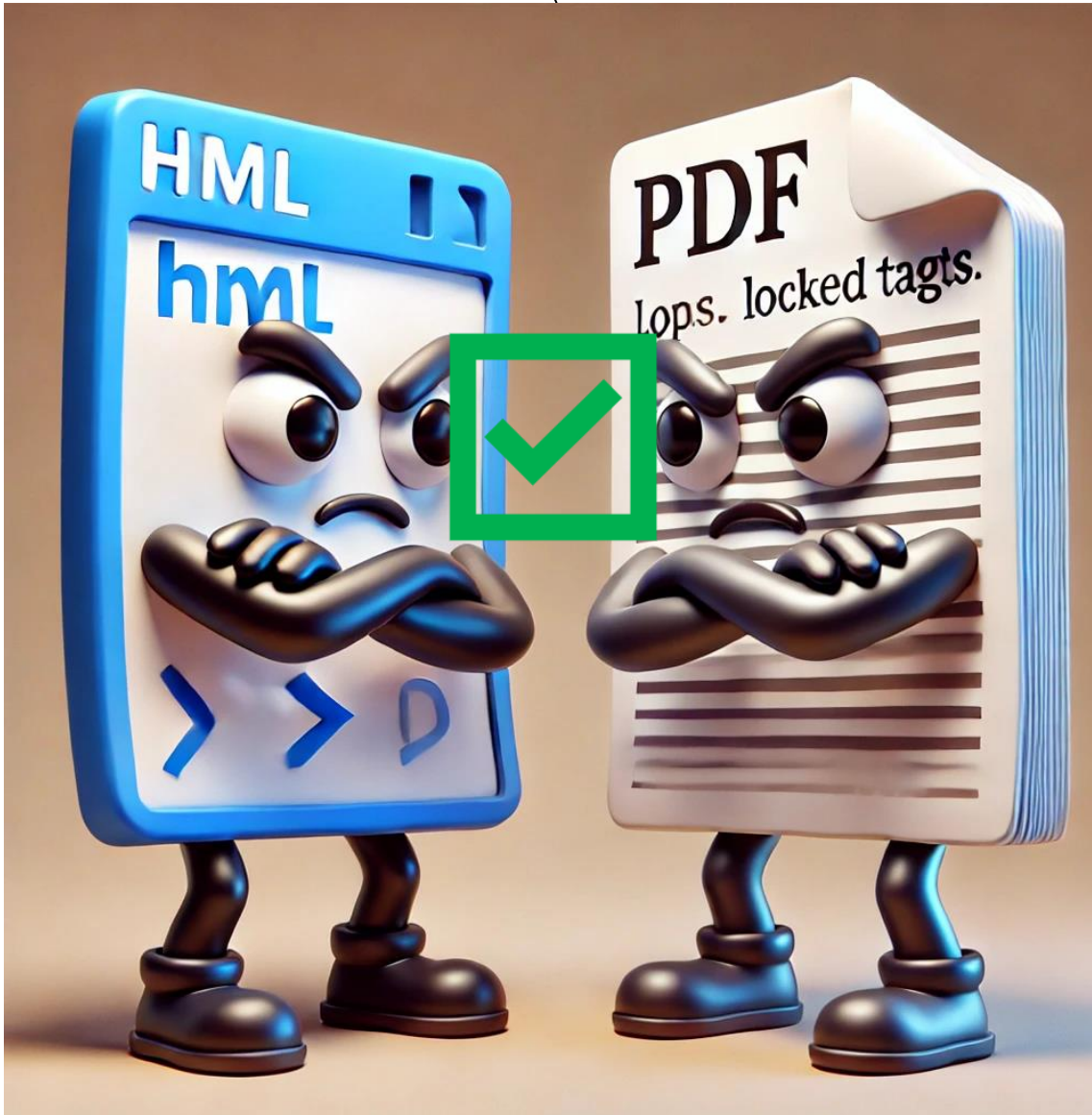
Accessible Syllabus Bot

- Revises syllabus for **accessible** and **UDL alignment**

- Student-friendly tone

- [Accessible Syllabus Project](#) Tulane University

- Includes an AI statement

- OEI aligned

It's on the syllabus.

Image Descriptions and Alt Text

- Image Descriptions
  - Chat GPT: Create an image description for the uploaded image with all relevant content included such as….
  - Give examples of what is relevant in the image
- Alt Text
  - Generate alt text for the uploaded image of the Standard Deviation Bell Curve. Keep it within 125 characters.

OpenAI. HTML and PDF Page Staring Angrily. DALL·E, 2025.

Convert PDFs to HTML for Canvas

- Upload PDF into a bot (I used Universal Access Bot)

  - Prompt: Convert to accessible HTML for Canvas

- Bonus:

  - Remediate for UDL

  - Simplify the language

  - Provide real-world examples, etc.

  - Organize using tabs or expanders

AI for UDL & Accessibility

- Use AI chatbots to present or source content in different modalities
- Gemini AI & OpenStax
  - Use Gemini to find OER Resources. Use @OpenStax when prompting Gemini
  - Always use "accessible resources" in your prompting
- Gemini & YouTube
  - Look for accessible, human-captioned videos. Use @Youtube when prompting Gemini.
- Google Notebooks
  - Create a Podcast based on uploaded documents
  - Convert complex materials into to easy-to-follow formats
- Use AI to make content accessible for Canvas
  - Universal Access Bot
  - Accessible Syllabus Bot
  - Claude AI
- Create image descriptions and alt text (ChatGpt)
- Caption videos using AI and YouTube

Captions Demo

- Go to YouTube

- Upload a video you created

- Once the video is uploaded, YouTube will begin to auto-caption.

- Click on video details, and then click on "Subtitles."

- You will see the auto-captions.

- Click "edit"

- Click "edit as Text"

- Take the auto-captions and copy them into an AI. Ask AI to add punctuation. Paste it back into the textbox within YouTube.

- Double check the text to make sure there are no errors, such as spelling of name errors, etc.

- Select "Publish"

- YouTube will then auto-synch the text to your video.

Ai & Captions

- [Guide to Captions and AI](#)

ACTIVITY

Universal Access Bot: Paste content/upload file and ask to increase engagement and representation

Gemini: Search for OER content by typing @OpenStax

Hemingway: Paste content into app and adjust reading level

Ludia AI: Ask Ludia to revise for UDL

Accessible Syllabus Bot: Paste a syllabus and ask to revise and make accessible for Canvas

When in doubt, ask AI
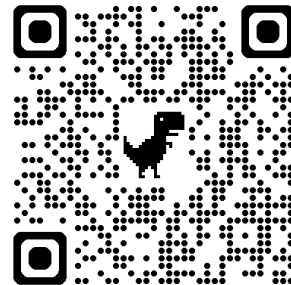
Get in contact

Elli Constantin, M. Ed
Director, Distance Education
Cypress College

econstantin@cypresscollege.edu

LinkedIn:

Download slides:

Adding Captions

- Extract **SRT file** from YouTube video

  - [SubsDown](#)

- Copy the **SRT file** and paste into Claude AI

- Use the following prompt: *Change the subtitle end time to match the start time of the next subtitle, ensuring the timings are synchronized.*

- Ask AI to *add punctuation*

- Click Save

- Copy and Paste back into the text file, click Save.

- Make sure the file has .SRT in the name

- Upload the Youtube video in Canvas, under captions, upload the SRT file.

- ALWAYS CHECK!!! AI MAKES MISTAKES!!