Every Learner, Every Voice:
Using AI to Differentiate with UDL in Mind

MONTGOMERY COLLEGE

Fall 2025 Inclusion by Design Summit - Attendance

Why Combine AI and Universal Design for Learning?

UDL Addresses Variability

Universal Design for Learning recognizes that every learner is unique, offering multiple means of engagement, representation, and expression to meet diverse needs.

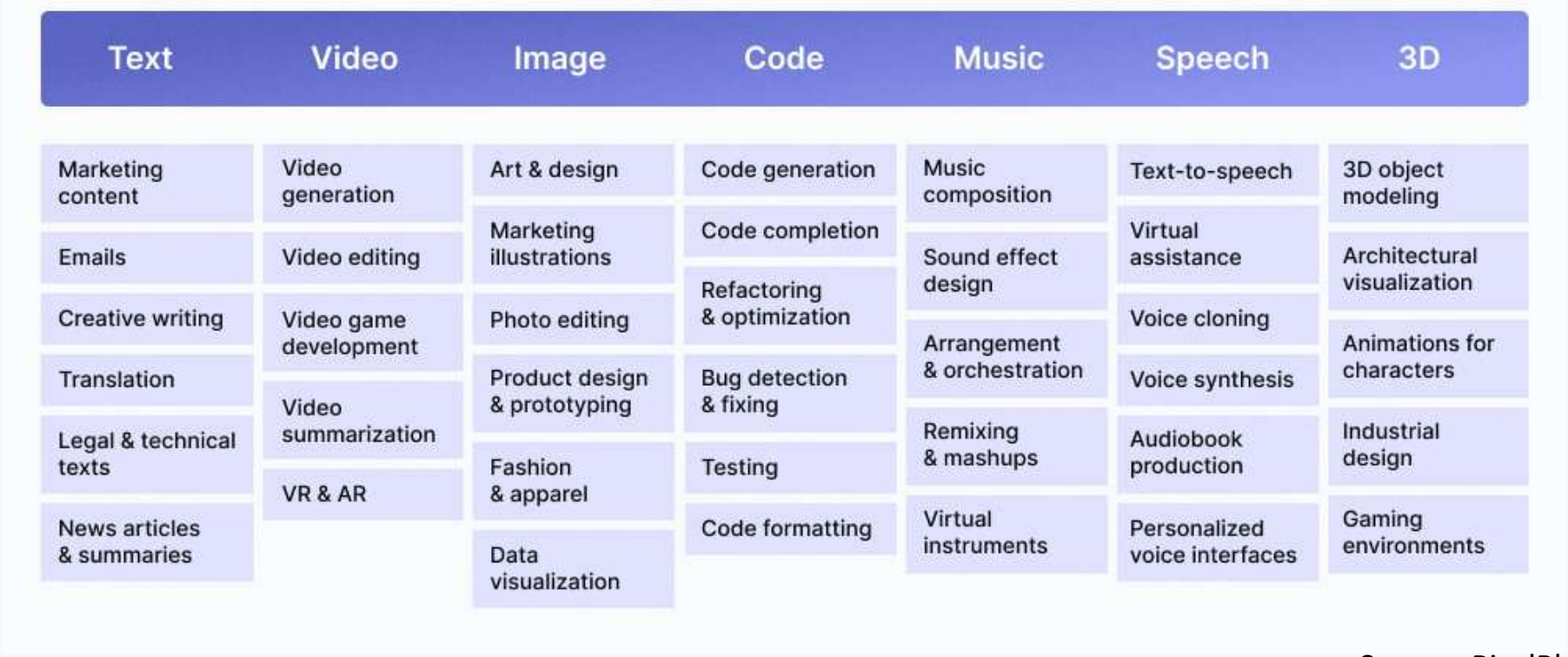
AI Enhances Personalization

Artificial intelligence dynamically adapts content in real-time, personalizing learning experiences and scaling UDL principles across entire courses efficiently.

Together, Build Equity

This powerful combination reduces barriers proactively and fosters educational equity from the start, not as an afterthought (CAST, 2025).

Generative AI Applications



Source: PixelPlex

The Power of AI Tools in Inclusive Course Design

ChatGPT: Your Content Assistant

Generates accessible text, clear explanations, and alternative content formats on demand. Perfect for creating multiple representations of complex ideas, translating content, or simplifying technical language for varied reading levels.

- Instant text simplification and rephrasing
- Multiple language translations
- Alternative assignment formats
- Scaffolded learning supports

Gamma: Visual Engagement Tool

Creates visually engaging, adaptable presentations and course materials quickly. Automatically designs responsive layouts that work across devices while maintaining accessibility standards and visual appeal.

- Responsive, adaptive layouts
- Quick visual content creation
- Built-in accessibility features
- Flexible presentation formats

Both tools support all three UDL principles: multiple means of representation, action and expression, and engagement.

From Static to Adaptive: Transforming Course Materials with AI

> Traditional course materials often follow a one-size-fits-all approach. AI-powered tools enable faculty to transform static content into dynamic, responsive resources that adapt to individual student needs in real-time.

Imagine a syllabus that can be instantly converted into multiple formats: a visual infographic for visual learners, an audio summary for auditory processors, or simplified text for English language learners. AI makes this level of personalization not just possible, but practical and sustainable for everyday teaching.

Workshop Outcome 1: Identify One AI Tool for Accessibility

01

Explore ChatGPT's Accessibility Features

Discover how ChatGPT can rephrase complex academic text into simpler language, translate content into multiple languages instantly, and generate alternative explanations for challenging concepts.

02

Experience Gamma's Adaptive Templates

See how Gamma's intelligent templates automatically adjust layouts for optimal readability and engagement across different devices and learning preferences.

03

Address Ethical Considerations

Discuss responsible AI use, data privacy considerations, academic integrity, and transparency when integrating AI tools into your teaching practice.

RESPECT Framework (Miller, 2023)

R: Research Skills

1. **Find information**
   Locate relevant sources and data
2. **Evaluate quality**
   Assess credibility and accuracy
3. **Use effectively**
   Apply information to solve problems

E: Ethical Use

Copyright awareness
Understanding intellectual property rights

Proper attribution
Citing sources correctly

Digital citizenship
Behaving responsibly in online communities

RESPECT Framework

S: Safety Online

Strong passwords

Creating and managing secure credentials

Recognizing threats

Identifying scams and malicious content

Secure browsing

Using safe connections and settings

P: Privacy

Control personal data

Managing what you share

Understand settings

Configuring privacy options

Respect others

Protecting others' information

RESPECT Framework

E: Effective Communication

Audience awareness

Tailoring messages to specific groups

Digital etiquette

Following appropriate online behavior

Multi-channel fluency

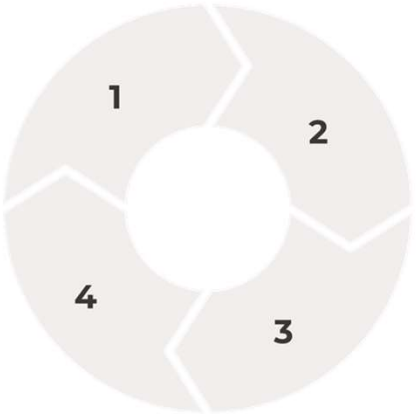
Using various platforms effectively

RESPECT Framework

C: Critical Thinking

1 Question sources
Examine who created the content

2 Analyze claims
Evaluate evidence and reasoning



3 Consider bias
Identify potential perspectives

4 Draw conclusions
Form well-reasoned judgments

T: Technology Basics

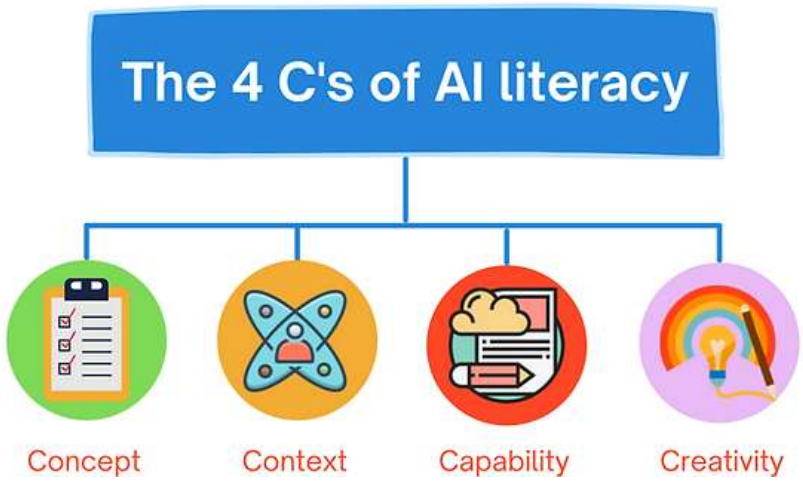
1 Hardware knowledge
Understanding physical devices

2 Software skills
Using applications effectively

3 Troubleshooting
Solving common technical problems

4 Adaptability
Learning new digital tools quickly

Digital literacy is an individual's ability to find, evaluate, and communicate information by utilizing typing or digital media platforms.



AI literacy is a set of competencies that enables individuals to critically evaluate AI technologies; communicate and collaborate effectively with AI; and use AI as a tool online, at home, and in the workplace.

Workshop Outcome 2: Develop or Adapt a Resource for Your Course

1	**Hands-On with ChatGPT** Create an accessible course summary that presents key concepts at multiple reading levels. Generate alternative assignment prompts that offer students choice in how they demonstrate learning.
2	**Design with Gamma** Build a flexible slide deck to explain TPACK that supports varied learner preferences through multiple representations. Include visual, textual, and interactive elements that students can navigate at their own pace.
3	**Peer Learning Exchange** Share and critique adaptive resources created by fellow faculty participants. Gain inspiration from diverse approaches across disciplines and course types.

Workshop Outcome 3: Plan Integration of Adaptive Materials

Embed in Your LMS

Practical strategies for integrating AI-generated content into Canvas, Blackboard, or other learning platforms seamlessly.

Align with UDL Goals

Map adaptive materials to course learning objectives and UDL checkpoints to ensure pedagogical coherence.

Iterate and Refine

Build a sustainable roadmap for continuous improvement based on student feedback and AI analytics.

Workshop Outcome 3: Plan Integration of Adaptive Materials

Embed in Your LMS

Practical strategies for integrating AI-generated content into Canvas, Blackboard, or other learning platforms seamlessly.

- Use LMS-native tools first
- Embed AI-generated media responsibly
- Leverage adaptive release features
- Centralize adaptive content
- Automate through integrations

Workshop Outcome 3: Plan Integration of Adaptive Materials

Align with UDL Goals

Map adaptive materials to course learning objectives and UDL checkpoints to ensure pedagogical coherence.

- Start with backward design
- Map to checkpoints
- Ensure pedagogical coherence
- Conduce accessibly checks
- Include reflective checkpoints

Workshop Outcome 3: Plan Integration of Adaptive Materials

Iterate and Refine

Build a sustainable roadmap for continuous improvement based on student feedback and AI analytics.

- Analyze engagement data
- Solicit student voice
- AI-assisted content updates
- Continuous quality loop (collect, reflect, revise, relaunch)
- Create a refinement schedule
- Document Changes

Real-World Impact: Faculty Success Stories

40%

Reduced Student Confusion

Professor Smith used AI-generated glossaries with visual examples and simplified definitions, dramatically decreasing student questions about key terminology.

30%

Increased Engagement

Dr. Lee implemented AI-personalized learning paths in Gamma presentations, allowing students to explore content at their own pace and depth.

100%

Improved Accessibility

Both faculty report significant improvements in accessibility for students with disabilities and multilingual learners across all course sections.

These outcomes demonstrate the transformative potential of combining AI tools with intentional UDL design principles.

Overcoming Challenges & Ethical Considerations

Address Faculty Skepticism

Clarify the distinction between AI "doing the work" versus AI supporting and enhancing human learning. AI tools scaffold instruction and remove barriers—they don't replace critical thinking or meaningful pedagogy.

Ensure Transparency

Be open with students about when and how AI is used in course materials. Clearly communicate data protection measures and privacy policies to build trust and ethical practice.

Balance Assistance with Agency

Use AI to support student independence, not create dependency. Foster critical thinking by teaching students to evaluate AI outputs and use tools strategically in their own learning.

The Ethics Imperative: Responsible and Transparent Use

Accuracy

Validate outputs and understand limitations

Human Oversight

Maintain human control and judgment

Privacy

Protect personal and institutional data

Bias Mitigation

Recognize and address algorithmic bias

Explainability

Understand how AI reaches decisions

Your Next Steps: Empower Your Teaching with AI + UDL

Choose Your Tool

Select one AI tool—ChatGPT or Gamma—to experiment with this week. Start small with a single lesson or assignment.

Draft Adaptive Content

Create or adapt one resource tailored to your course content using UDL principles and AI assistance.

Join the Community

Connect with fellow educators innovating inclusive learning. Share successes, troubleshoot challenges, and continue growing together.

> Together, we can create flexible, engaging, and accessible education for all learners!