

# AI as a Creative Partner in Instructional Design

## Strategies for Effective Course Development

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# Online Engagement Challenges



## Isolation Risk

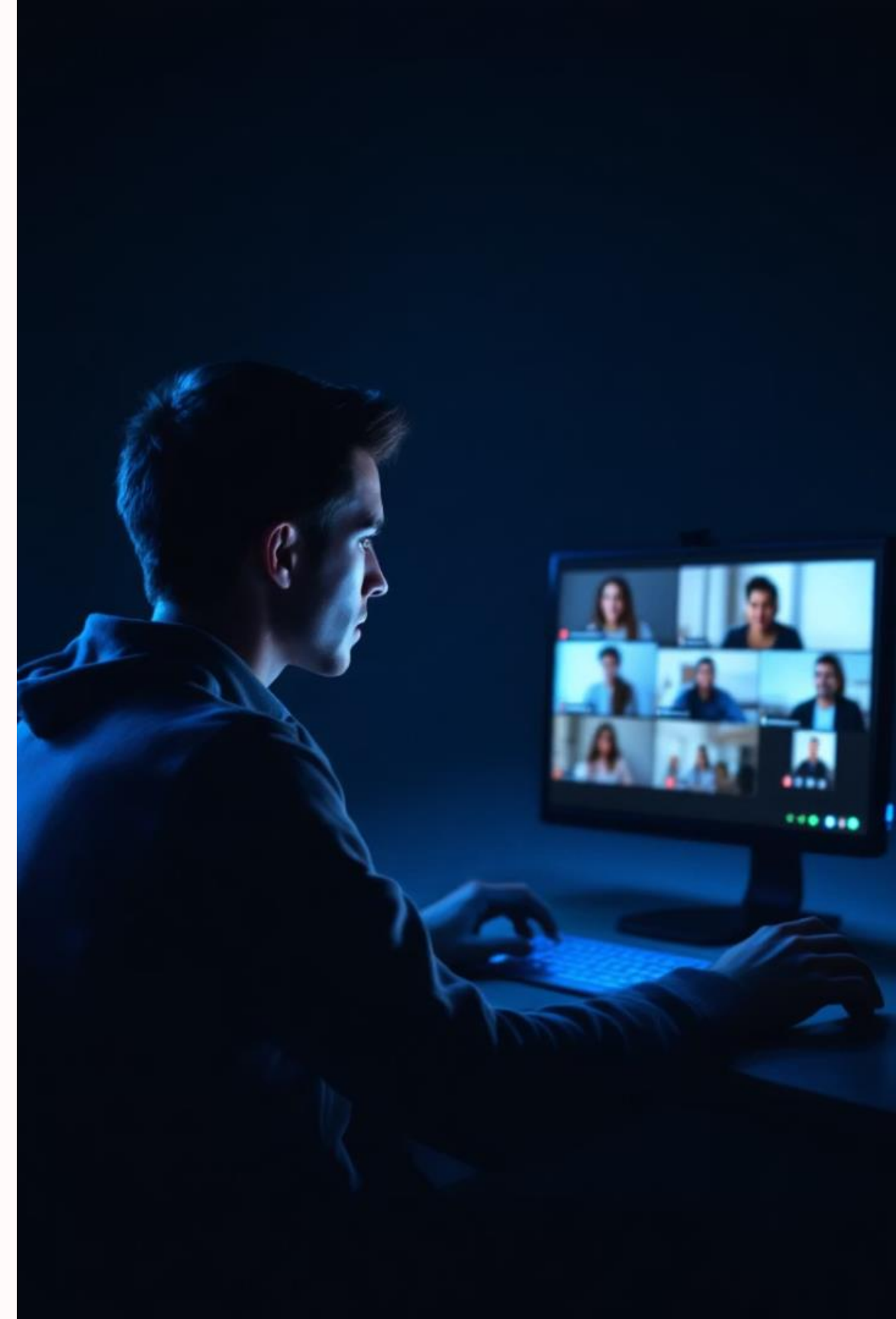
The online experience can feel isolating without intentional design (Rush, 2015)

## Connection Focus

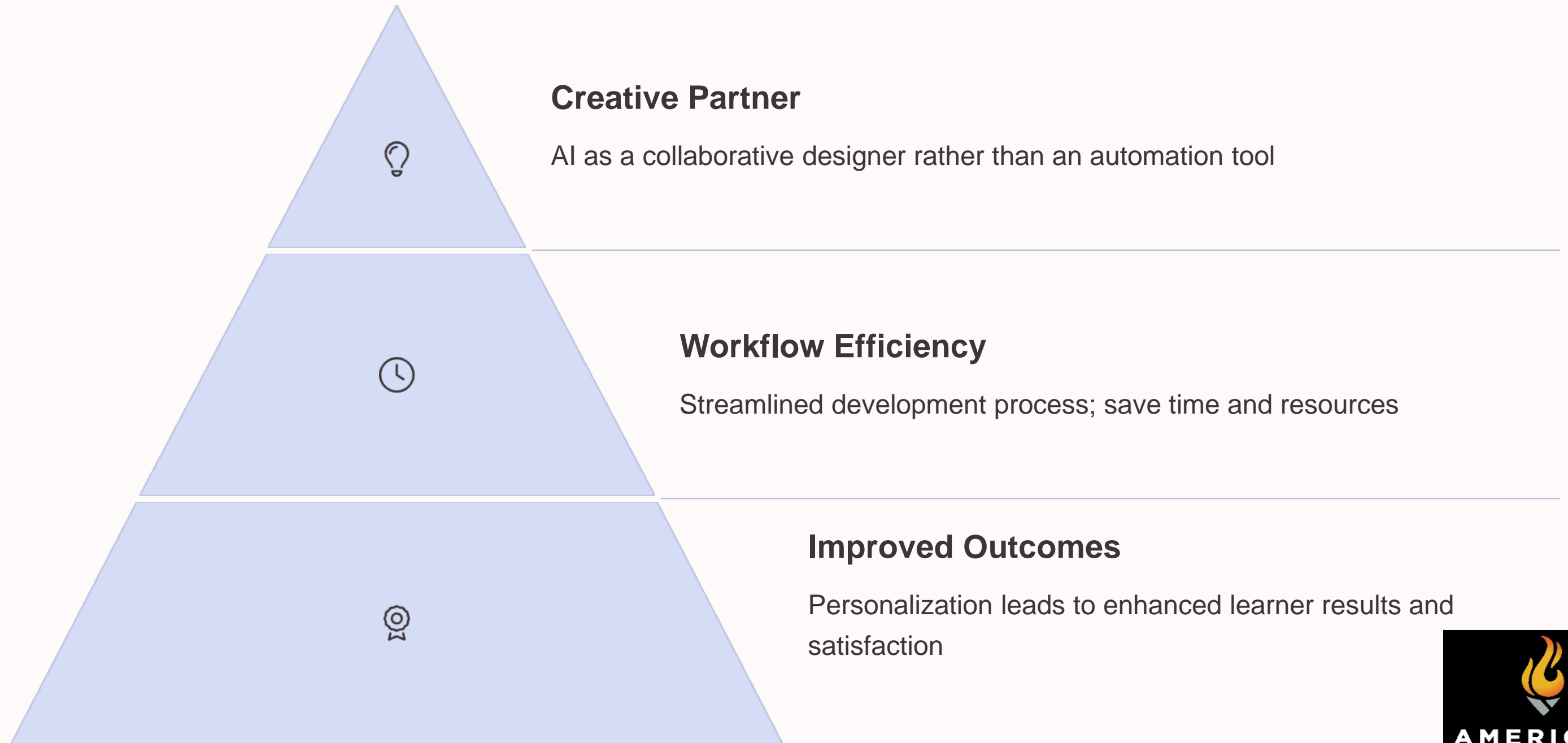
Fostering engagement is central for educators and designers (Scott & Pattath, 2018; Stone & Springer, 2019)

## Community Building

Intentional design is needed to create a sense of belonging (Bickle & Rucker, 2018)



# AI: More Than a Tool



## Practical Applications: Addressing ID Pain Points

### Case Studies

authentic scenarios  
involving a problem,  
ethical dilemma, and/or  
evidence-based  
decision-making

### Discussions

engaging discussion  
prompts foster  
meaningful peer  
interaction through  
personal/professional  
contexts

### Course Content Alignment

alignment between  
objectives, standards,  
learning activities, and  
assessments improves  
learning experience

### Assessment Development

generate test items  
across DOK levels and  
construct rubrics with  
clear performance  
indicators for  
assessment of learning

# Case Studies Bridge Theory & Practice



## Realistic Scenarios

Present complex situations requiring knowledge application



## Multiple Perspectives

Encourage consideration of diverse viewpoints and various potential solutions



## Deeper Engagement

Promote information retention and critical thinking



## Broader Competencies

Develop problem-solving, communication, and professional judgment.

## Central Valley Medical Center: Social Media Policy Case Study

As the newly appointed Director of Compliance and Ethics, you have been tasked with developing a comprehensive social media policy that addresses specific challenges while supporting CVMC's organizational goals.

### Background

Central Valley Medical Center (CVMC) is a 250-bed community hospital serving a diverse population of 180,000 residents. Recently, several incidents have prompted leadership to recognize the urgent need for a comprehensive social media policy.

### Recent Incidents

1. A nurse posted a TikTok video demonstrating proper hand-washing technique in an empty patient room. While educational, the video revealed patient information visible on a whiteboard in the background.
2. The hospital's marketing team created an Instagram campaign showcasing "Day in the Life" stories of various departments. Several staff members were photographed with visible patient charts, though no information was legible.
3. A doctor's personal Facebook post celebrating a successful surgery included too many specific details, leading to patient identification by community members.
4. Several employees joined a private Facebook group to discuss workplace challenges, inadvertently sharing protected information about hospital operations and patient care.

### Current Situation

CVMC's leadership has identified several key challenges:

### Digital Presence

- Active social media accounts: Facebook, Instagram, Twitter, LinkedIn
- Department-specific accounts for Pediatrics and Labor & Delivery
- Growing number of staff members using personal social media for professional networking



# Interactive Branching Scenarios

**PROMPT:** As an instructional designer, how would you rewrite this scenario as a branching scenario for a discussion board? Include decision points where nursing students must choose between multiple care options to encourage critical thinking. Add consequences for each level through 3 decisions. Don't make anything up. [Insert scenario]

1

## Initial Decision

First choice establishes scenario path

2

## Consequence Navigation

Second level builds on previous choices

3

## Resolution Paths

Final decisions lead to different outcomes



# Interactive Branching Scenario Example: Travel Nursing Course

## Scenario Introduction

You have just started a new assignment at Central Valley Hospital in Nevada. At your previous hospital in Illinois, nurses were required to have all high-risk medication calculations double-checked by another RN before administration. At Central Valley Hospital, this is not standard protocol, and the unit is severely understaffed.

## Decision Point 1: Your First Day

On your first shift, you need to administer heparin to a patient. You've calculated the dose, but based on your previous practice, you would typically have another nurse verify this calculation.

### Options:

1. Administer the medication without verification since that's Valley Hospital's standard protocol
2. Seek out another nurse for verification despite the understaffing
3. Talk to your charge nurse about your concerns

### Choice 1A: Administer Without Verification

**Consequence:** You administer the heparin without verification. Later in your shift, you realize you made a minor calculation error that fortunately did not harm the patient. This was a close call that has left you feeling uncomfortable about future high-risk medication administrations.

### Choice 1B: Seek Verification

**Consequence:** You find another nurse who is extremely busy but agrees to check your calculation. They confirm your dose is correct but mention, "This isn't our normal process here - you'll slow everyone down if you keep asking for checks." This creates tension, but you feel more confident about patient safety.

### Choice 1C: Speak to the Charge Nurse

**Consequence:** The charge nurse appreciates your concern for patient safety but explains that Valley Hospital has different protocols and has never had an issue. They suggest you review their medication policy and adapt to their workflows to avoid creating extra work in an understaffed environment.

We worked with Claude to generate a script aligned with the course and module objectives:

- Decision 1: Immediate patient safety vs. workplace norms
- Decision 2: Professional communication and advocacy approaches
- Decision 3: Long-term strategies for system improvement

After completing the branching scenario simulation, students respond to reflective prompts on the discussion board about their choices, consequences, and implications in the field.



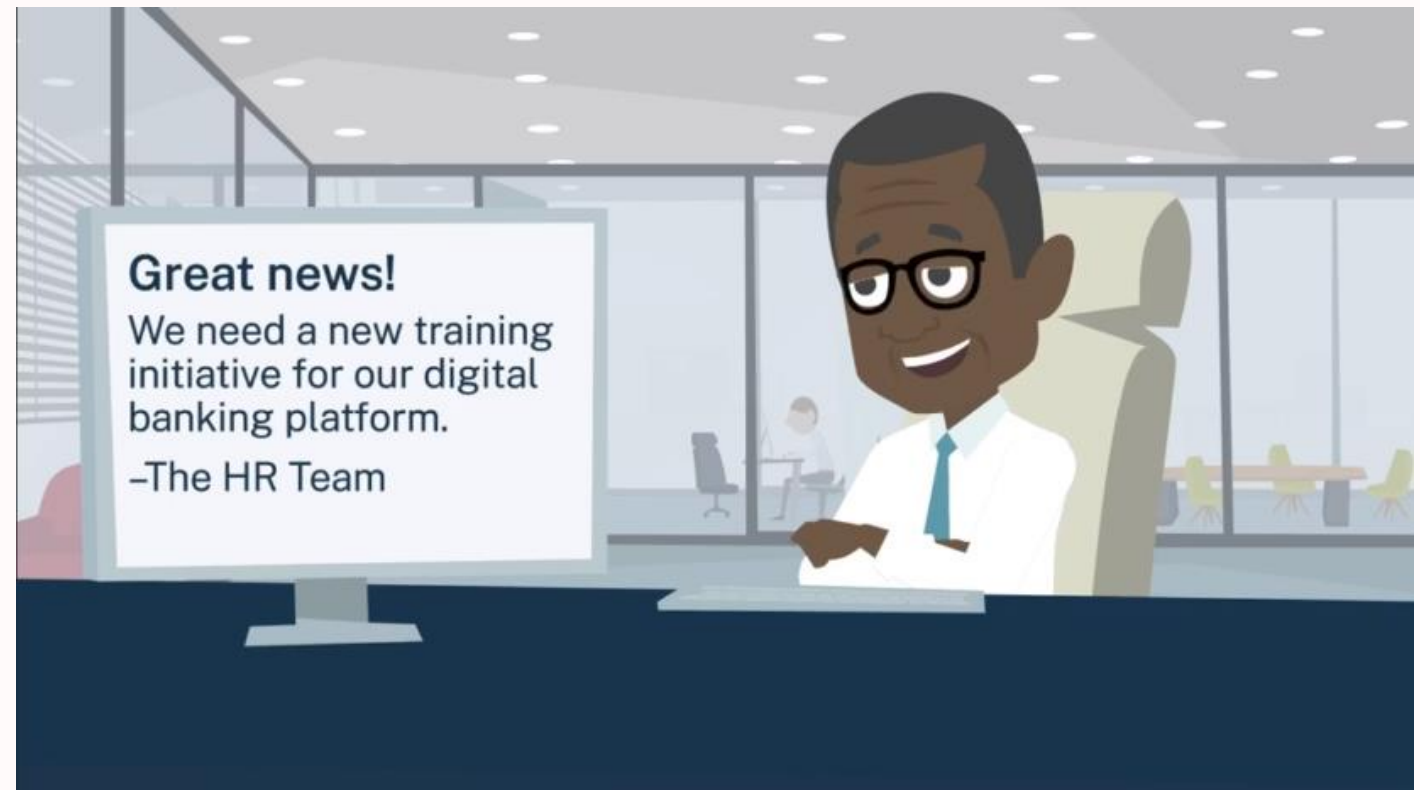
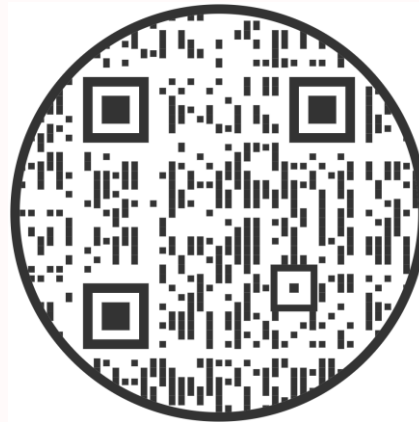
# Discussion Boards

Research suggests that discussion boards enable adult learners to engage in realistic and meaningful dialogue with their peers to fill the gap between in-person and online connections (Kaushik, 2023; McDougall, 2021).

- Value of discussion boards in online learning
- AI's role in creating dynamic and engaging prompts

## [Course Development Prompts](#)

- Debate prompts
- Scenario prompts
- Reflection prompts
- Problem-solving prompts
- Prediction prompts
- Peer feedback activities
- Video simulations as springboards for discussion





# Discussion Boards

[Video]

**Introduction:**

Jamal Thomson, a corporate trainer at FutureBanking Corp., sits at his desk, staring at his computer screen. The HR team has just informed him of a new training initiative for their digital banking platform. Jamal needs to write clear, measurable course outcomes to ensure the program's success. However, he is struggling to translate complex technical skills into engaging, practical objectives. With the deadline approaching, he realizes he must simplify the jargon while maintaining the course's integrity and relevance to employees' tasks.

He stares at his wordy course objectives and feels overwhelmed by the impending deadline. "Course Objective 1: Comprehend the systemic operations of backend processes and their operational implications."

Feeling flustered, he calls his friend Sofia Nguyen, a K-12 curriculum developer. He knows she can help.

After a quick review, Sofia points out that measuring comprehension is hard. She recommends starting with a verb that is easier to assess and notes that the language is too complex. With a few quick tweaks, Sofia and Jamal revise his first course objective to: "Identify the key steps in backend processes and their impact on daily operations."

Now, only three course objectives are left to revise. Use Sofia's recommendations to select the best revisions.

[Interaction #1]

**C02: Understand the nuances of the digital banking interface and apply the advanced configurations.**

Choice 1 - Understand and apply the nuances of the digital banking interface advanced configurations. Incorrect - [Remember that course objectives should center on a single, measurable verb.]
Choice 2 - Discuss how the digital banking platform works. Correct - [Nice work! This objective includes only one verb and uses simple language that's easy to understand.]
Choice 3 - Explore the nuances of the digital banking interface. Incorrect - ["Explore" is difficult to measure and should be avoided when writing objectives.]

## Student View



Course Objective #2  
"Understand the nuances of the digital banking interface and apply the advanced configurations."

Choose the best revision, then click Submit.

Understand and apply the nuances of the digital banking interface advanced configurations. **A**

Discuss how the digital banking platform works. **B**

Explore the nuances of the digital banking interface. **C**

## Learning Activity

### Writing Effective Course Objectives

The interaction, *Writing Effective Course Objectives*, focuses on writing clear and concise course objectives. Assist Jamal, a corporate trainer, in rewriting objectives for a new initiative on digital banking.

- Interaction: [Writing Effective Course Objectives](#)

Review the module readings and videos. Then, compose a new post in response to these prompts:

- Based on the interaction video, what aspect of writing objectives do you find most difficult? Why?
- Describe a time when clear, measurable objectives helped you succeed in a learning situation or when unclear objectives made it challenging to achieve your goals. (Please do not identify instructors or institutions by name.)

Comment on the posts of at least two classmates. This collaborative review is designed to generate a free flow of ideas and discussion. No APA citations are required. While you are not required to introduce outside information and research, if you do, cite it in APA format.

Please read the [Discussion Directions](#) before posting your response.

We worked with Claude to develop an interactive video script to launch students into their discussion board activity.

# AI and Course Planning and Alignment



## Course Description

Overall purpose and scope  
Learner profile



## Learning Outcomes

Measurable end goals  
Institutional level ► program level ► course level ► module level



## Module Objectives

Specific knowledge/skills



## Activities & Assessments

Content organization and coverage  
Skills development  
Demonstration of mastery

*The cohesion between what students are expected to learn and how they demonstrate that learning creates a seamless educational experience, reducing cognitive load and increasing transparency (Sweller et al., 2019).*



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# AI and Course Planning and Alignment

## Advanced Curriculum Review Components to Consider:

- ☐ Progression logic
- ☐ Content currency
- ☐ Industry and market alignment
- ☐ Professional standards and accreditation competency distribution

### Industry and Market Alignment

#### Current Industry Trends Not Addressed

1. AI in healthcare planning and delivery
2. Social media's dual role as both health risk and health promotion platform
3. Holistic health education approaches that integrate physical, mental, and social wellbeing
4. Remote/virtual health education and telehealth considerations
5. Post-pandemic health education needs and resilience building

#### Emerging Field Requirements

1. Grant writing and funding procurement skills
2. Mental health focus, including trauma-informed approaches
3. Work-life balance frameworks and applications
4. Data analytics and evidence-based decision making
5. Digital health literacy and technology-mediated health education

### Specific HESPA Content and Skills Gaps

#### Assessment and Data Analysis (Area I)

1. **Data analytics skills** - While 1.3 mentions data analysis, advanced technical skills for managing large datasets and using contemporary analytics tools are not explicitly covered
2. **Digital assessment tools** - Contemporary methods of collecting assessment data through digital platforms (1.2.7-1.2.8)
3. **Community-based participatory research approaches** within the assessment process (relates to 1.1.5)

#### Planning (Area II)

1. **Funding alignment in planning** - Connecting program planning with funding requirements and grant stipulations (2.4.1)
2. **Digital intervention development** - Creating technology-based health interventions (extends 2.3.4)
3. **Remote and hybrid program planning** - Designing interventions for both in-person and virtual delivery (expands 2.3.4-2.3.5)

# Assessment Development

## Sample Prompt

Create four Webb's DOK level 3 multiple-choice questions based on the content provided. The questions should be clear and concise, avoiding jargon. The tone should be professional but conversational. Provide four answer choices. The longest sentence should not always be the correct answer. Mark the correct answer with an \* [insert text.]

## Output

When analyzing reading assessment data, what approach is recommended for making high-stakes intervention decisions?

- Relying on a single assessment that has been proven reliable
- Prioritizing reading speed over comprehension or accuracy
- Using the teacher's subjective judgment about student performance
- Using multiple types of data with high reliability and strong evidence of validity \*

## Notes

The primary challenge with AI-generated test items is plausible distractors (Chun & Barley, 2024). We discard about 20% of items.

Apply Quality Assurance process:

- A development team member writes assessment items aligned with course objectives.
- Subject matter experts (SMEs) review and verify items for accuracy.
- A QA team member evaluates items using a checklist, confirming they:
  - ☐ Are written clearly
  - ☐ Reflect content taught
  - ☐ Are free of bias, stereotypes, or culturally insensitive content
  - ☐ Correctly align with the indicated DOK level



# Assessment Development

## Sample Prompt for a Rubric

Create a rubric that aligns with these assignment components [insert], maintaining a similar point structure to this previous rubric [insert]. Update the standards column. Score on 100 points for 5 indicators spread across 4 categories: mastery, proficient, emerging, and incomplete. Include the point range for each category.

Standard Alignment	Indicator	Exceeds (15.0-13.5)	Meets (13.4-12.0)	Approaching (11.9-10.5)	Improvement Needed (10.4-0.1)	No Submission (0)
TESOL 3.a, CAEP: Content Knowledge	Unit Framework	Comprehensive framework with clear content and language objectives, relevant standards, and meaningful essential questions. Language levels and time requirements clearly specified.	Complete framework with objectives, standards, and essential questions. Language levels specified.	Framework missing 1-2 components or lacks clarity in objectives/standards alignment.	Framework missing multiple components or poorly aligned objectives/standards.	Element missing
TESOL 3.b, CAEP: Content Knowledge	Content and Language Integration	Exceptional integration of content and language development. Activities systematically develop both content knowledge and academic language.	Clear integration of content and language development. Activities address both content and language needs.	Integration of content and language inconsistent or favors one over the other.	Minimal integration of content and language development.	Element missing
TESOL 3.c, CAEP: Instructional Practice	Lesson Sequence and Activities	Well-developed lesson sequence with clear progression. Activities incorporate all language domains with appropriate scaffolding.	Complete lesson sequence with activities addressing language domains and scaffolding.	Lesson sequence unclear or activities don't fully address language domains.	Poor lesson sequence or missing key language development activities.	Element missing
TESOL 3.b, CAEP:	Vocabulary and Language Support	Comprehensive vocabulary development plan with	Clear vocabulary plan with appropriate	Basic vocabulary support with limited scaffolding strategies.	Inadequate vocabulary support	Element missing

## Notes

- When changes/updates are made to one course component, they must be reflected in all areas. When revising course objectives or assignment directions, we upload all materials into an AI tool to reorganize and align the rubric.
- Rubrics provide valuable documentation for accreditation processes. Check and question the output carefully.
- Pilot new rubrics; export gradebooks from several course sections and run distribution analysis for scoring.



# Human Oversight and AI Output

*"While AI systems excel at processing massive quantities of data, carrying out sophisticated computations, and delivering real-time analysis, humans add creativity, critical thinking, emotional intelligence, and contextual awareness" (Chng, 2023, p. 38).*

1. Beware of "sycophancy"- always ask for a critical analysis of output to minimize simple validation of your input.

Sample prompts to analyze existing or new video scripts from SMEs or other content generated with AI:

- "Evaluate how well this script communicates complex concepts to the target audience."
- "Identify places where the script could provide more context or explanation for viewers unfamiliar with the subject."
- "Assess the pacing of information delivery - are there sections that move too quickly or slowly?"
- "Point out terminology or jargon that might need clarification for the intended audience."
- "Suggest visual elements or demonstrations that could enhance understanding of key concepts."
- "Analyze the narrative structure - does the script build knowledge effectively from beginning to end?"
- "Identify potential gaps in the logical flow that might confuse viewers."

2. Apply an iterative approach to prompt engineering and involve SMEs and other stakeholders to provide critical thinking essential to maintaining academic integrity, authenticity, and inclusion to counter AI's limitations.

\*If you use a pro account for Claude, for example, you can upload files to "project knowledge" and continue prompting for refinement within this project.



Instructional Design Focus Wheel

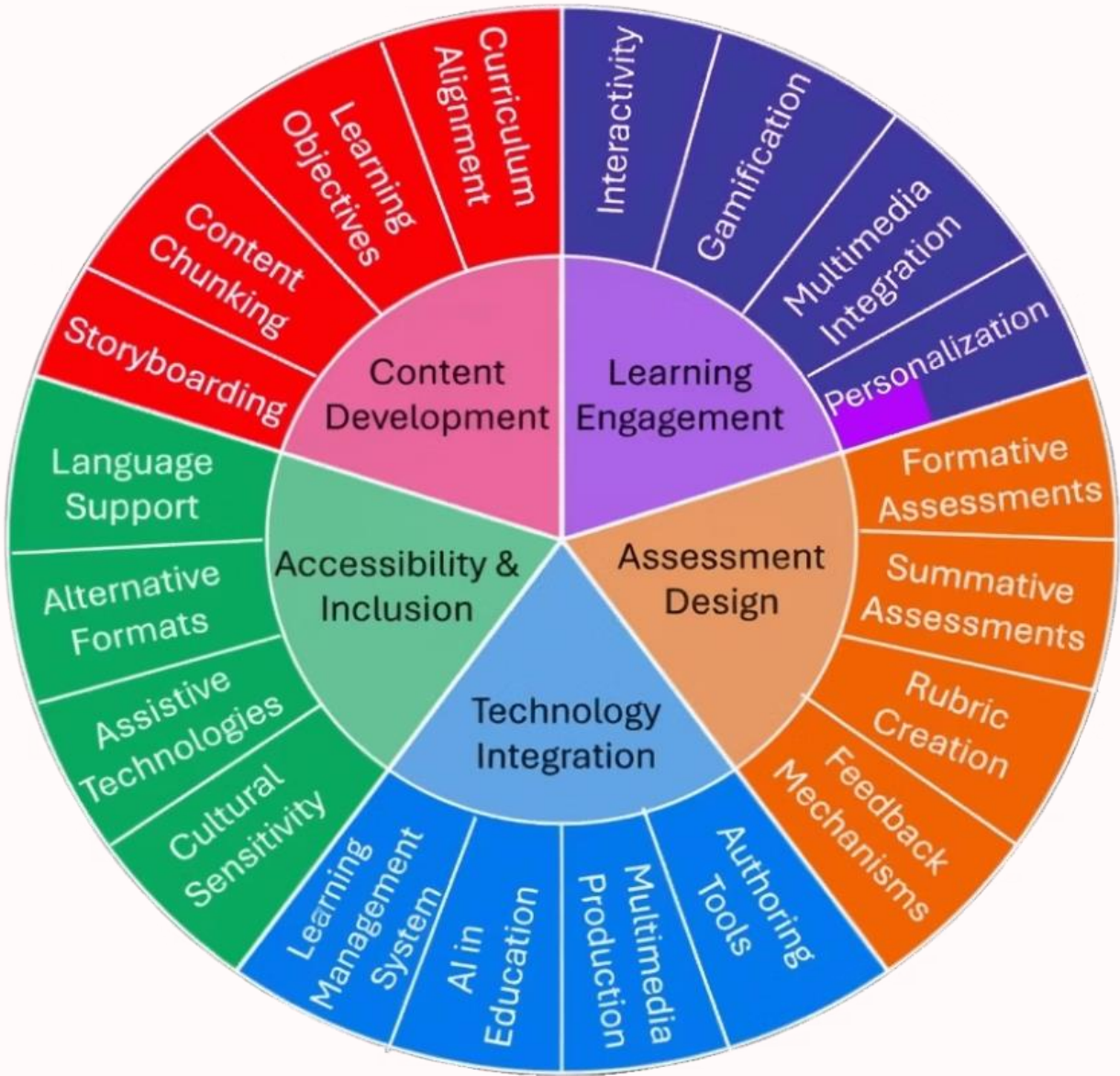


Image source: Ankita Jiyani Mangtani, LinkedIn

Future Directions for Instructional Designers

1

Key Challenges

Integrity, bias, human agency

2

Pedagogical Innovation

Critical thinking, reflection, career-relevant skills

3

Research Areas

Longitudinal impact of AI-integration  
on ID workflows,  
student outcomes



# Q&A

We invite your questions about implementing AI in instructional design. Your feedback shapes our ongoing research and best practices.

## Email

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