

Strategically Planning Assessments In an AI Era:

Using Assessment Objectives to Mitigate
or Encourage AI Use in Online Courses

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Hanging a gallery wall

What tools
would we need
for this task?



What tools would we need for this task?

Making a cutting board



What tools
would we
need for this
task?



What tools
would we
need for this
task?





Should I use
this tool?

We choose
the tool
based on the
task



Picture of the The Shadow Staging System Tool box

Available for sale at <https://shadowstagingssystem.com/product/toolbox-tool-staging-system-6-5-master-package/>

AI is a Tool

- Generative AI powered by LLMs, such as ChatGPT, Poe, Gemini, Claude
- Students are using AI as a multi-use tool
- Educators are figuring out how and when to use AI



.Victorinox Swiss Champ XXL 73 Function Large Pocket Knife, Rd Available at

https://www.amazon.com/Victorinox-Swiss-Army-Function-Champ/dp/B08ZNFNM9J/ref=asc_df_B08ZNFNM9J/?tag=hyprod-20&linkCode=df0&hvadid=693769126973&hvpos=&hvnetw=g&hvrnd=7507241318589329385&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmtd=&hvlcint=&hvlcophy=9007522&hvtargid=pla-1273159362479&psc=1&mcid=682a864cc9813c0ebaae843e5632b8bc

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AI is a Tool

Some say: Don't use it at all!



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AI is a Tool

Others say: Use it for anything/
everything!



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https://www.amazon.com/Victorinox-Swiss-Army-Function-Champ/dp/B08ZNFNM9J/ref=asc_df_B08ZNFNM9J/?tag=hyprod-20&linkCode=df0&hvadid=693769126973&hvpos=&hvnetw=g&hvrand=7507241318589329385&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmtdl=&hvlcint=&hvlcophy=9007522&hvtargid=pla-1273159362479&psc=1&mcid=682a864cc9813c0ebaae843e5632b8bc

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Before we say
“Yes” use this tool or
“No” don’t use this tool:

We must first ask:

What is the task we are
trying to accomplish?

The purpose of this presentation:

Participants will discuss how to use assessment objectives to:

01

1) Identify online assessment strategies that may require **mitigating the use of AI** when needed (and examples)

02

2) Identify online assessments that can be **completed with AI** when appropriate (and discuss how to grade)

03

Bonus: 3) Identify when to use **AI as a learning tool** for online assignments (and how)

Just like we
decided on the
task before
choosing the
tool...



We need to ask this question before choosing to use AI or not:

What is the learning objective we wish to measure with this assessment?



Questions to Ask Before Designing an Assessment:

Step 1: Identifying the Learning Objectives/Task (use Bloom's or other Taxonomy and active verbs) You Want to Assess

- Are the learning objectives focused on fact-finding, foundational knowledge, critical thinking, or creation?
- Does the objective align with skills that **AI can support** (e.g., information retrieval) or does it require skills that **AI might obscure** (e.g., problem-solving strategies, unique student insights)?

Blooms Taxonomy



BLOOM'S TAXONOMY DIGITAL PLANNING VERBS

REMEMBERING



Copying
Defining
Finding
Locating
Quoting
Listening
Googling
Repeating
Retrieving
Outlining
Highlighting
Memorizing
Networking

UNDERSTANDING



Annotating
Tweeting
Associating
Tagging
Summarizing
Relating
Categorizing
Paraphrasing
Predicting
Comparing
Contrasting
Commenting
Journaling

APPLYING



Acting out
Articulate
Reenact
Loading
Choosing
Determining
Displaying
Judging
Executing
Examining
Implementing
Sketching
Experimenting

ANALYZING



Calculating
Categorizing
Breaking Down
Correlating
Deconstructing
Linking
Mashing
Mind-Mapping
Organizing
Appraising
Advertising
Dividing
Deducing

EVALUATING



Arguing
Validating
Testing
Scoring
Assessing
Criticizing
Commenting
Debating
Defending
Detecting
Experimenting
Grading
Hypothesizing

CREATING



Blogging
Building
Animating
Adapting
Collaborating
Composing
Directing
Devising
Podcasting
Wiki Building
Writing
Filming
Programming

Example of Learning Objectives

1

Remember or Find (Look up and report information)

- Look up 10 balance exercises
- Locate 10 primary source materials

2

Understand

- Explain how force stimulates bone growth
- Describe why people may have different perspectives of the same historical event

3

Apply

- Create a tiktok video of posture exercises
- Identify the time period of an artifact

4

Analyze

- Identify biomechanical breakdown in gait pattern
- Cause and effect mapping of a historical event

5

Evaluate

- Determine if exercise is appropriate for a specific injury
- Determine the similarities and differences of two primary source materials for the same historical event

6

Create a finalized product

- Write an exercise prescription based on a patient's intake tests
- Create a living history display for a museum

Questions to Ask Before Designing an Assessment:

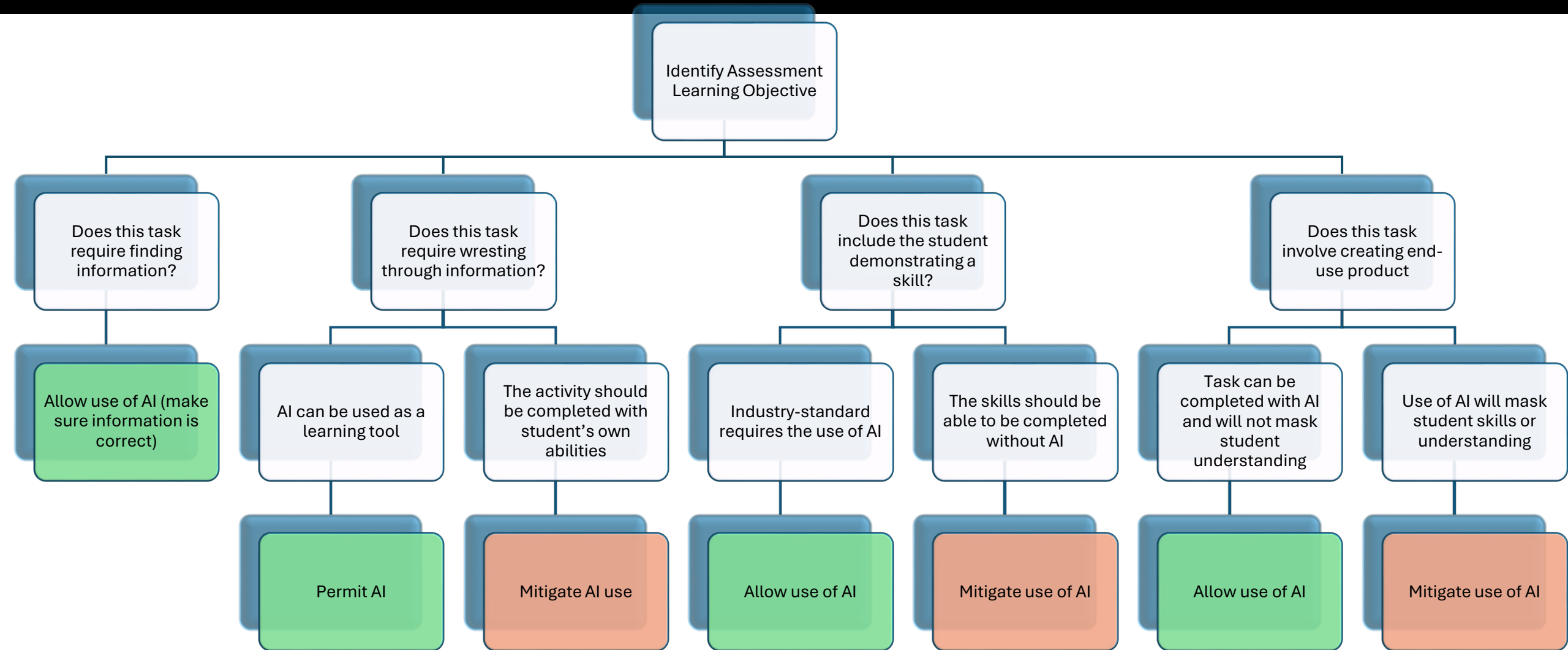
Step 1: Identifying the Learning Objectives/Task (use Bloom's or other Taxonomy and active verbs)

- Are the learning objectives focused on foundational knowledge, critical thinking, or creative application?
- Does the objective align with skills that AI can support (e.g., information retrieval) or does it require skills that AI might obscure (e.g., problem-solving strategies, unique student insights)?

Step 2: Asking Critical Questions

- *Do the students just need to find information?*
 - How can I ensure that students don't just accept AI-generated information but analyze and validate it?
- *Does this task require the student to wrestle through the information themselves?*
 - Is this information needed for foundational knowledge in the discipline?
 - *IF YES: Can I create an assignment where they wrestle through the information using AI?*
 - Will AI function as a learning aid or might it become a shortcut, bypassing important skill development or hinder ability to critically analyze information?
- *Does the task require a skill?*
 - Is the skill a psychomotor skills?
 - Does the industry standard expect them to know how to use AI? Is familiarity with AI tools an explicit skill or a beneficial add-on for this field?
 - Could introducing AI tools now offer students an advantage in future professional roles?
- *Is an end-use product the goal?*
 - Will allowing AI create an accurate representation of the student's skills or simply mask their understanding?

Determine use of AI based on learning objective of assessment



VENN Diagram: Use of AI for Course Assessments

Student must
wrestle with
content on their
own- Mitigate AI
use

Student must
demonstrate a
psychomotor skill
– Mitigate AI use

Student must
wrestle with
content and
AI can be
used as a
learning tool -
Use AI

Industry-standard
task includes
proficiently using
AI- Use AI

A (correct) product
is the end goal-
Use AI

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Step 3: Designing the Assessment

- In what ways can I ensure students engage with the material meaningfully, even when using AI?
- Should the assessment incorporate reflection on how they used AI, or require justification for the sources and tools they chose?

Mitigating Use of AI

Ideas: Assignments where the students are “doing” or “showing” their work

- Video submission (not PPT presentations)
- Drawing submissions
- Concept charts, mapping chart
- Role play videos
- Physical project pictures

Limit

- Written submissions or PPT presentations
- Charts or other assignments that are easily creatable with an LLM

Pros

- The student have to actively participate with the content

Cons (Time)

- Takes longer for students to complete --they actually have to work/wrestle/understand the content
- Takes longer for the instructor to “think through” and “explain” assignment (written, verbal, video instructions, and rubrics)
- Takes longer for the instructor to grade
- Higher level of assignment non submission rates

Question to Ask

- How do I provide clear instruction for this assignment?? How long will it take the student to complete? How long will it take me to grade?

Allowing Full Use of AI

Ideas: Assignments where end product is the goal

- Search and find information
- Industry-standard final projects (advertising campaign, exercise prescription)
- Market reports
- Creating infographics or flow charts

Limit

- Extensive instructions or “allowing” AI for one step of the project but not another

Pros

- The students have to ensure the end product is correct
- Can require higher standards of students (as far as accuracy)

Cons (Time)

- Takes longer to grade because instructor has to evaluate higher-level accuracy

Question to Ask

- What specific pieces of this task am I looking to assess for quality?
- How do I design my rubric in order to assess high-quality and correct submissions?
- What (if any) check points do you want to add to ensure students validate AI generated information?
- Do the students have the foundational knowledge for this project

Using AI as a Learning Tool

Ideas: AI is used as a tool to help students wrestle with content

- In online classes, we often use “learning activities” and call them assessments (because we need to engage students in the work and assign points)
- Students turning in a “back and forth” conversation with AI with a specific voice
- Student using AI to identify application of content to a situations that they are unaware of
- Medical or other case studies

Limit

- You have to provide clear instructions for the assessment

Pros

- Can make the assessments more engaging
- Can provide for differentiated assessment submissions

Cons (Time)

- Instructor must spend time thinking through the assignment/assessment purpose and create clear instructions and grading rubrics

Question to Ask

- How I am describing this assignment to the student? Am I providing enough instructions for students who do not use AI often?

Assignment Example

- Class: Psychology of Physical Activity:
- Assignment Purpose: For students to be able **to find** five pieces of health-related data on the geriatric population so they can later create a targeted physical activity campaign
- Decision: Allow Use of AI, requiring source validity
- Assignment submission: Students turn in a list, chart, PPT of the five statistics with references/links to where they got the data.
- Consideration: How to ensure students are confident that the AI output is correct?
 - Can require students to include links to their sources (as the instructor, check links)
 - Can require students to screenshot data/graphs from the resources
 - Can require students to screen capture opening resources and showing where the data came from

Assignment Example

- Class: Psychology of Physical Activity:
- Assignment Purpose: For students to be able **to explain** the benefits of physical activity to a geriatric patient or client, focusing on benefits specific to the patient's profile.
- Decision: Mitigate Use of AI
- Assignment submission: Students roleplay talking to a patient or client and turn in video

Assignment Example

- Class: Psychology of Physical Activity:
- Assignment Purpose: For students to be able **to apply** behavior change theories in a clinical setting.
- Decision: Use AI as a learning tool
- Assignment submission: Students draw comics that include dialogue between a patient/client and a healthcare professional to show how the healthcare professional would use a behavior change theory in that situation
- Assignment considerations:
 - Permit or encourage students to use AI to brainstorming scenarios
 - Use rubric to ensure scenario appropriately applies the behavior change theory

Assignment Example

- Class: Psychology of Physical Activity:
- Assignment Purpose: For students to be able **to analyze** a physical activity intervention plan.
- Decision: Mitigate Use of AI
- Assignment submission: Students will be assigned a published journal article of a physical activity intervention. Using a poster board, students will provide information on the targeted audience, health data presented in the article, behavior change theories used by the researchers, participates, how the intervention was conducted, how the intervention was evaluated.
- Assignment considerations:
 - Students may use AI to find the answers within the article, but they must write/compile their information on the poster board (could alternatively allow writing information out on a whiteboard, using several pieces of paper on a wall)

Assignment Example

- Class: Psychology of Physical Activity:
- Assignment Purpose: For students to be able **to create** a physical activity campaign for a senior living facility
- Decision: Encourage Use of AI
- Assignment submission: Students will identify health data specific to that population; design a physical activity intervention; create the intervention campaign (activities, flyers, social media, rewards); outline the intervention assessment strategy
- Assignment considerations:
 - End-use quality is the end goal
 - Create a rigorous rubric
 - Add in a video reflection assignment

Assignment Example

- Class: Psychology of Physical Activity:
- Assignment Purpose: For students to be able **to evaluate** a peer's physical activity intervention
- Decision: Mitigate Use of AI
- Assignment submission: Students will evaluate a peer's physical activity intervention plan using a checklist.
- Assignment considerations:
 - Screen capture video where students go through the intervention plan and look for, evaluate, and provide feedback on the plan using a provided checklist

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Step 4: Assess your Assessment

Assessing Your Assessments

- Use the Online Course Assessment Framework to evaluate your assessments (Smolansky et al., 2023)
- Ensure your rubric is assessing the skill you want to assess and not ancillary skills
- Have annual discussions on AI in your discipline and how it relates to the course and program learning objectives
- Review assessments after each semester
 - Non-submission rates
 - Students accurately understanding assessment instructions
 - Student challenges
 - Student perceptions

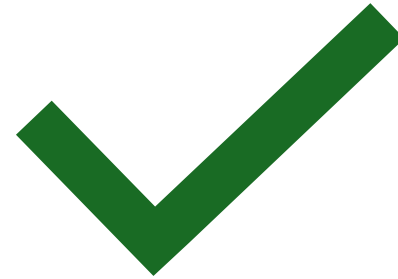
Online Course Assessment Framework (Smolansky et al., 2023)

Dimension	The extent to which the assessment:
Academic Integrity	Ensures security against cheating, impersonation, and other forms of inappropriate assistance
Student Experience	Enhances convenience and comfort for students, motivation, and concentration, minimizes stress and anxiety, and technical complication
Authenticity	Has similar tasks to those performed in the workplace or professional setting
Information Integrity	Reduces the likelihood of privacy breach (i.e., unauthorized access to student personal data, content student generated in their assessment)
Quality Feedback	Enables the provision of quality feedback (e.g., timely, multiple formats such as media, text, and encourages the use of feedback toward later assessment)
Equity of Access	Enables flexible conditions to complete the assignment (e.g., ease of access for students with disability/impairment, limited access to technology, geographically dispersed)

Perspective



The integration of AI for online class assessments is a **challenge**



But we can also see it as an **opportunity to be intentional** about the purposefulness of our assessments

Workshop Style Thinking

01

Pick a class that
you teach

02

Choose an
assessment

03

Write the purpose
of the assessment

04

Answer the critical
questions. Will
you mitigate or
encourage AI use?

05

Plan Assignment

06

Assess
Assessment



Questions?
Comments?

References

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- Smolansky, A., Cram, A., Radulescu, C., Zeivots, S., Huber, E., & Kizilcec, R. F. (2023, July). Educator and student perspectives on the impact of generative AI on assessments in higher education. In *Proceedings of the tenth ACM conference on Learning@ Scale* (pp. 378-382). <https://doi.org/10.1145/3573051.359619>
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