

# The Alchemy of Assessment and Evaluation



# THE ALCHEMY OF ASSESSMENT AND EVALUATION

From Lead to Gold

JESSICA KAHLOW

Mavs Open Press  
Arlington



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# DEDICATION

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*This book is dedicated to everyone who's ever read  
directions and still had no idea what to do.*



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# ABOUT THIS PROJECT

Jessica Kahlow

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## Overview

This book details the difference between assessment and evaluation, assessment types, assessment design, and types of evaluations.

## Creation Process

This book has been put together using reputable sources in the field of online learning and the author's experiences as an instructor and instructional designer.

## About the Author

Jess Kahlow, PhD is an Instructional Designer in the Center for Distance Education at the University of Texas at Arlington (UTA). She is also an Adjunct Associate Professor in the College of Education at UTA, where she teaches graduate courses in Instructional Learning Design and Technology. She also researches how technology impacts communication

processes and experiences in professional and educational settings.

# ACKNOWLEDGMENTS

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## Author's Note

After being assigned to teach a course on Assessment and Evaluation, I began looking for course materials while listening to the newly released album by Taylor Swift. The lyric, “The Professor said to write what you know” inspired this book because I couldn’t find any resources that said what I wanted students to take away from this new course. So, I took Taylor’s advice and wrote what I knew.

## Additional Thanks to...

I’d also like to acknowledge my friend Amanda for keeping my mental health in mind when I told her about this project. I didn’t listen, but maybe I should have. But again, “Honestly, who are we to fight the alchemy?”

# PART I ASSESSMENTS



1.

# ASSESSMENT VS. EVALUATION

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## Assessments

Assessments in education encompass the process of gathering information about student learning to measure what students know, understand, and can do. These assessments can be formative, providing ongoing feedback to improve learning, or summative, evaluating student learning at the end of a unit or course. As an educator, I've moved away from relying solely on quizzes for assessment. While quizzes offer quick snapshots of student understanding, I've found that projects and other creative assessments allow students to apply their knowledge in more meaningful and diverse ways, fostering deeper learning experiences.

## Evaluations

In contrast to assessments, evaluations involve making

judgments or interpretations based on data collected. They extend beyond measuring individual student performance to assess the effectiveness of entire courses, programs, policies, or interventions. At the end of each semester, I encourage students to complete course evaluations. These anonymous surveys provide valuable feedback that is read by various stakeholders to evaluate teaching effectiveness and course impact. Students need to understand that their honest yet professional feedback contributes to ongoing improvements in educational quality.

## Differences Between Assessments and Evaluations

Program evaluations are crucial for ensuring that educational programs achieve their intended goals. For example, they help assess the impact of new curricula. Teacher evaluations focus on evaluating the effectiveness of teaching methods, while institutional assessments measure overall school performance. Assessments primarily focus on student learning and understanding, providing the foundational data needed for evaluations. Evaluations, in turn, use this data to make informed judgments about program effectiveness and outcomes, encompassing a broader scope beyond individual student performance.

Assessments and evaluations are indispensable tools in

education, each serving unique yet complementary purposes. By understanding their distinctions and leveraging their strengths, educators can create a more effective and engaging learning environment that supports student growth and achievement. Through thoughtful assessment practices and robust evaluation frameworks, we can continuously enhance educational quality and meet the evolving needs of learners.

## 2.

# SELECTING ALIGNED ASSESSMENTS

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Assessment is a crucial element in enhancing the overall quality of teaching and learning in higher education. What and how students learn depends to a major extent on how they think they will be assessed (Biggs & Tang, 2007). All assessments lead to some amount of student learning, but a fundamental challenge lies in stimulating the right kind of learning. Therefore, it is important that assessment practices are designed to send the right signals to students in shaping the effectiveness of student learning – about what they should learn and how they should learn.

From a student's perspective, the relationship between learning and assessment often comes down to one thing: a grade (McMorran, Ragupathi and Simei, 2015). This problem arises simply because an assessment is usually about several things at once and Boud (2000) refers to this as 'double duty'. It is about grading and about learning; it is about evaluating student achievements and teaching them better; it is about

standards and invokes comparisons between individuals; it communicates explicit and hidden messages.

Assessment has multiple purposes that include providing feedback on learning, facilitating improvement, measuring achievement, motivating learning, and maintaining standards. Always worry about the quality of assessments rather than their quantity. Well-designed assessment tasks will influence how students approach the problems and thereby improve the quality of their learning. Thus, the level of student engagement and the amount of time students invest in any given learning experience is directly related to how much the student believes they will benefit from this experience.

It's a good reminder here for how to determine the assessment type before you start creating all the assessment details.

1. In the middle section of the wheel, find the action verb your objective uses.
2. Once you find the location of your verb, look at the outer portion of that section and review the assessments listed.
3. Choose an assessment.
4. Check yourself: What if you don't see an assessment you want to use? Do you see the assessment you do want to use under a different section of the circle? If so, it looks like there may be a problem with the alignment of your objective and assessment. Perhaps you need to rewrite



## Types of Online Assessments

<b>Assessment Type</b>	<b>Examples</b>	<b>Possible Tools</b>
<b>Written Assignments</b>	Essays, Case studies, Reflections, Journals, Article Reviews, Literature Reviews, Proposals, Research Papers, Reports, Summaries, ePortfolios	Canvas Assignments, Canvas Rubrics, Microsoft Word, PowerPoint, Blogs/wikis, etc.
<b>Online Discussions</b>	Presentations, Peer Reviews, Case Studies, Analysis, Reflections, etc.	Canvas Discussions
<b>Graded Quizzes</b>	Online Quizzes (MCQs, MRQs, FIBs, T/F, matching, ordering), in-video quizzes, short answer questions	Canvas Quizzes, H5P, Quizlet, Genially, etc.
<b>Ungraded Quizzes</b>	Online Quizzes (MCQs, MRQs, FIBs, T/F, matching, ordering), in-video quizzes	H5P, Quizlet, Genially, etc.

According to the constructive alignment theory by Biggs and Tang (2007), assessment tasks (AT) and teaching-learning activities (TLA) are designed to ensure that students achieve the intended learning outcomes (ILO) and develop cognitive skills at a range of levels. The learning outcomes for a topic/unit are the criteria against which instructors make judgments about student learning. The introduction of a series of in-class teaching-learning activities and online tests/assignments that allow students to practice applying information, and the repetitive use of these skills that are spaced in regular intervals makes a difference in students' learning.

Assessment tasks need to be aligned to the learning outcomes we intend to address for a particular topic, and an appropriate AT should indicate how well a student has achieved the ILO(s) it is meant to address and/or how well the task itself has been performed. A range of assessment types ensures that students develop all of the intended learning outcomes and also provides opportunities for students to demonstrate their learning.

Well-designed assessments set clear expectations, establish a reasonable workload, and provide opportunities for students to self-learn, rehearse, practice, and receive feedback. However, when designed poorly they can be a major hindrance to thinking and learning in our students. Assessments should be able to provide students with feedback on their progress and be able to help them identify their readiness to proceed to the next

level of the module. Therefore, assessment tasks need to be aligned with intended learning outcomes (ILOs) and should be designed in such a way that they:

1. Elicit **higher-order cognitive skills**
2. Develop a **consequential basis** for test score interpretation and use
3. Are **fair**, and **free of bias**
4. Can be **generalized** and **transferable**, at least across topics within a domain
5. Ensure the **quality of content** is consistent with the best current understanding of the field
6. Recognize the comprehensiveness, or scope, of **content coverage**
7. Are **high-fidelity assessments of critical abilities**
8. Are **contextualized** and **meaningful** to students' educational experiences.
9. Are **practical**, **efficient**, and **cost-effective**

The above set of criteria is not exhaustive but provides a guideline that is consistent with both current theoretical understandings of validity and the nature and potential uses of new forms of assessment (Linn et al, 1991; Darling-Hammond et al., 2013).

Bloom's Taxonomy of educational objectives (Table 1) can also serve as a useful reminder when designing assessment tasks. Holtzman (2008) provides a quick summary of the six levels in

Bloom's taxonomy, and how these six skill levels build on each other.

When following the Quality Matters (QM) Rubric, you'll find the recommendation to make sure assessments are varied, sequenced, and suited to the level of the course. Here's what each of those mean:

1. **variety:** According to QM, "... provide multiple ways for learners to demonstrate progress and mastery, and to accommodate diverse learners". Some students may do better at written assignments because multiple choice tests give them test anxiety. Vice versa, some students may struggle with written assignments (maybe English is their second language) and so they prefer multiple choice tests.
2. **sequence:** According to QM, "... assessments are sequenced so as to promote the learning process and to build on previously mastered knowledge and skills gained in this course and prerequisite courses. Assessments are paced to give learners adequate time to achieve mastery and complete the work in a thoughtful manner." For example, students may start off with simple quiz questions to identify key concepts from the week's readings. Then, once they have mastered identifying and recalling information about the concepts, they are ready to apply the concepts on a discussion or real-life example problem. Another

example is sequencing of a final project. Students may start by turning in an outline, then an introduction and bibliography or a first draft, and then the final version of the project.

3. **suited to the level of the course:** While you do want to make sure assessments reflect varying levels of cognitive engagement in every course, the level of the course can dictate how much it is skewed. For example, in a lower-level course it may be ok for most of the assessments to measure students remembering basic facts; but, assessments in an upper-level course should include more assessments that are at the application level or above.

## How to Complete the Course Map

The course map provides a detailed outline of your entire course. Its purpose is two-fold. First, it helps make sure you and your instructional designer (ID) are on the same page as you begin putting your course into Canvas. Second, it helps show alignment for both students and the QM review process. So, it's an important first step, and you can't move on to developing your course until your ID approves your course map.

It is a lengthy and time-consuming process, and most course

maps need to be reviewed by the ID 3-4 times before they are complete. Most course maps end up being at least three pages long. It is important that you stick to your course map as you develop your course, but you can make changes to it; we'll ask for a finalized course map at the end of the process.

This guide will help you develop your course map.

## Course Outcomes

Make sure course objectives are measurable (use verbs from the lists below).

Below is a list of **measurable** verbs from Bloom's taxonomy that are most often used for course and module objectives.

<b>Knowledge</b>	<b>Understand</b>	<b>Apply</b>	<b>Analyze</b>	<b>Evaluate</b>	<b>Create</b>
classify	compare	apply	analyze	appraise	collaborate
define	contrast	calculate	classify	argue	construct
describe	describe	change	compare	assess	create
enumerate	differentiate	combine	contrast	critique	design
identify	discuss	collect	correlate	debate	develop
label	distinguish	complete	diagram	decide	facilitate
list	explain	compute	differentiate	estimate	integrate
locate	group	demonstrate	dissect	evaluate	make
match	interpret	explain	distinguish	grade	manage
name	order	illustrate	estimate	judge	plan
recall	organize	interpret	explain	justify	prepare
recite	outline	practice	illustrate	measure	present
record	paraphrase	relate	order	predict	propose
repeat	summarize	solve	organize	rate	simulate
select	translate	use	separate	recommend	write

Table adapted from UTA Center for Distance Education. (2023). CDE Measurable Verbs. [https://uta.instructure.com/courses/143147/pages/measurable-verbs?module\\_item\\_id=7039880](https://uta.instructure.com/courses/143147/pages/measurable-verbs?module_item_id=7039880). CC BY-NC-SA 4.0.

## Action Verbs to Avoid because they are NOT measurable

There are some action verbs that should be avoided. Those are:

- understand
- reflect
- demonstrate understanding
- become aware of
- increase awareness of
- explore
- know
- learn
- appreciate
- demonstrate an appreciation of

These verbs are not the task students will be doing to demonstrate mastery on the graded assignment. For example, to measure understanding, students might be identifying on a multiple choice test or explaining on a written assignment, and therefore identify or explain is a better action verb.

## Module Outcomes

Focus on what you want students to have learned by the time they finish the module. A good place to start thinking about these might be your textbook chapters; they often have objectives already listed at the beginning of chapters.

Your module objectives should also use Bloom's verbs and they should use a verb at the same level or lower than the course objective. For example, if the course objective starts with "analyze" a module objective could include any verb from the analyze, apply, understand, or knowledge categories.

Make sure they are measurable (use a verb from the lists provided above).

Make sure there is only one module objective per row. This means that each module will have more than one row.

Make sure they're not tasks. If they are tasks, then they are likely an activity or an assessment (see below).

## Materials (readings, videos, etc.)

Materials include anything that you give students to learn the materials. This includes textbook chapters, journal articles, other reading materials, recorded lectures, other videos, podcasts, etc.

Be sure to list out each reading separately and say what it is. For example, “Read textbook chapter 3.”

## Selecting inclusive instructional materials

It is also important to include a variety of instructional materials so that your course isn’t entirely text-based. According to Quality Matters, there should be “options for how they [learners] consume content, e.g., reading an article or text, viewing a video, listening to a podcast.” Some students digest content better when watching versus reading and vice versa.

Variety doesn’t just mean variety in text versus audio/video, but also in perspectives. It’s good to provide content from multiple authors and multiple perspectives (if multiple perspectives exist). This culturally responsive pedagogy is a part of having variety among your course materials. This is also things like making sure your course isn’t completely text-based, citing your sources, having current materials, and having a variety of assessments, preferably one per module, even if it’s a low-stakes assessment.

Whether you are curating or developing content, it is important to always consider the inclusivity of the materials. Read each item below to learn more about how to make sure your instructional materials are inclusive.

## 1. Select content that engages a diversity of ideas and perspectives

One of the best ways to make sure your content is diverse and inclusive is to choose interesting, engaging, and relevant content. When choosing readings, texts, and other materials, think about whether any perspectives are missing or underrepresented. You want students to be able to think about course materials from a variety of different perspectives. So, it's important to recognize how your choice of materials reflects your perspectives, interests, and possible biases. Always analyze the content of your examples, analogies, and humor; too narrow a perspective may ostracize students who have differences.

If you do assign something that could be problematic or that uses stereotypes, be sure to point out those shortcomings and consider supplementing those readings with other materials that show other perspectives. This also encourages students to critique content, which also helps promote critical thinking. You can also use this as an opportunity to teach students about the conflicts present within the field by incorporating those diverse perspectives.

## 2. Select content by authors with diverse backgrounds

When selecting course content, include materials written, created, or researched by authors of diverse backgrounds

relevant to the topics in the course. For example, if all of the articles in your course were conducted by male European or American scientists, you may send a message (even if inadvertent) to students that there is no scholarship produced by women and people of color, or perhaps worse, that you do not value it. If applicable, discuss contributions made to the field by historically underrepresented groups and explain why these efforts are significant. This can validate students by helping them see themselves represented by the authors of the course (Appert et al., 2017).

Whenever possible, instructors should broaden readings by including some from non-dominant perspectives. However, you should also avoid including just a token marginalized perspective here or there just to comply with a diversity best practice instead of meaningfully including and considering different perspectives. Inclusive course readings should place multiple perspectives at the center and should be carefully and thoughtfully contextualized and integrated (Appert et al., 2017).

### 3. Offer a variety of representative instructional materials

Offering a variety of course materials is an inclusive best practice and a general teaching best practice. Standard 4.5 of the QM rubric states “a variety of instructional materials is used in the course”, and the Universal Design for Learning

model also stresses the importance of presenting information in a variety of formats because not everyone learns or processes information in the same way; this it increases the cognitive accessibility of the materials, provides students flexibility in how they learn, and increases student engagement (Brooks & Grady, 2022).

This means that you should use a variety of teaching methods. Your course shouldn't be entirely text-based because not every student learns best by reading. Instead, supplement your readings with recorded lecture videos, overview videos, other pre-existing videos (that you didn't create), podcasts, images, and other activities. When selecting visuals, try to choose visuals that include diverse participants.

#### 4. Use relevant and diverse examples

When choosing materials and examples (and test questions, assignments, and case studies) to use in your course, be sure to use examples that speak across genders and cultures and that are relatable to people from various socio-cultural contexts in a way that doesn't marginalize students. Provide representative exemplars through the selection of texts, guest speakers, and leaders that allow students to imagine their future successful selves.

If you cannot, ground examples in specificity and discuss limitations. Don't assume that all students will recognize the

cultural, literary, or historical references you use. Make sure not to reward students for their similarity to you at the expense of others. Instead, draw on resources, materials, humor, and anecdotes that are relevant to the subject, and sensitive to the social and cultural diversity of your students (Appert et al., 2017). Make connections from the content to learners' lived experiences when possible (e.g., provide examples of genetic diseases familiar to learners when discussing the topic of chromosomal abnormalities).

## 5. Ensure all materials work together to promote diverse ways of knowing

Make sure the instructional materials, assessments, learning activities, and tools you develop/select all support the learning outcomes. This intentional curricular alignment should integrate and encourage diverse ways of knowing.

As you begin to create content, always keep alignment and the course's learning objectives in mind. Alignment is the idea that all critical course components work together to ensure that learners achieve the desired learning outcomes. This best practice also aligns with QM standards 4.1 and 4.2, which state that “instructional materials contribute to the achievement of the stated learning objectives” and “the relationship between the use of instructional materials and learning activities in the course is explained”, respectively.

You can ensure alignment with backward design by following these three basic steps:

1. Write measurable, action-oriented learning objectives that address the appropriate level of Bloom's Taxonomy.
2. Choose assessment methods that indicate students' mastery of the objectives and materials.
3. Choose instructional materials that help students work towards those objectives.

## 6. Make all content accessible to all students

Another question to always keep in mind as you are developing and curating content, is “**Are these materials/activities accessible for all learners?**” Are images and other visuals described in text? Are headings properly formatted as headings or are they just bigger, bolder fonts?

As you may recall, accessibility is also present in the QM rubric; standards 8.3 and 8.4 state that the “course provides accessible text and images in files, documents, LMS pages, and web pages to meet the needs of diverse learners” and “the course provides alternative means of access to multimedia content in formats that meet the needs of diverse learners”, respectively.

**Using diverse, inclusive, and equitable content can help improve the learning**

## experience for all learners.

Keep in mind that not all of these will always be appropriate for every class, but you should still be able to find yourself able to incorporate at least a few of them.

### 1. Allow students to demonstrate learning in multiple ways

One way to do this would be to include varying assignment types (e.g., quizzes, discussions, assignments, H5P activities, etc.) to balance the type of tasks students do in the course (e.g., individual vs group or written vs oral).

Another way to do this would be to allow students to choose how they will demonstrate that they learned the aligned course or module objective. For example, instead of assigning a traditional written out synthesis paper, you could still ask students to synthesize materials, but instead of requiring a paper, you could allow them to choose the type of product they produce (e.g., paper, presentation, video, website). This type of agency lets students demonstrate their individual strengths.

You could also encourage students to explore topics from their unique identity perspectives. This could include inviting students to critique the current literature in your field for biases, or it could also include inviting students to respond to course readings from their own personal experiences.

## 2. Make assessment criteria clear from the beginning

You may also recognize this best practice from the QM rubric. Standards 3.2 and 3.3 state that “the course grading policy is stated clearly at the beginning of the course” and “specific and descriptive criteria are provided for the evaluation of learners’ work, and their connection to the course grading policy is clearly explained”, respectively. Therefore, these best practices are true from a general teaching perspective and from an inclusive teaching perspective.

To make sure that all students can succeed on a given assignment, communicate specific assessment criteria when the assignment is given. You’ll provide this information in the rubric, but you could also include a description of successful versions of the assignment, and other Transparent Assignment Design strategies. **Transparent assignment design** is the process of designing assignments so that the process of learning is more explicit for students. In other words, transparent assignments shed light on the assignment’s purpose, task, and criteria (Bose et al., 2020). UTA’s assignment template provides a template for getting started with this by including headings for the prompt, guidelines, and support.

## 3. Include a variety of different assessments

This is also present in the QM rubric; standards 3.4 and 3.5

states that “the assessments used are sequenced, varied, and suited to the level of the course” and “the course provides learners with multiple opportunities to track their learning progress with timely feedback”, respectively. When we say to include various types of assessments, we mean that in any given course, you should use more than one or two types of assessments. For example, you could include weekly quizzes and discussions, and then have one or two longer essays throughout the course.

However, you should also include diversity in the types of assessments, which have different functions. **Diagnostic assessments** typically come at the beginning of a course; they provide informal opportunities for you to learn what students know going into your course so that you may adjust instruction accordingly. **Formative assessments** promote practice and create opportunities for you to give feedback to students to guide their learning. Like diagnostic assessments, formative assessments provide you with information that can inform instruction. **Summative assessments** provide opportunities for formal evaluation, typically for the purposes of a grade (Marquis, 2021).

You should also incorporate a balance of low-stakes and high-stakes assessments because all students can benefit from these. **Low-stakes assessments** are typically more informal and formative, and they may be graded (with a very low point value) or ungraded. These are important because they give

students the opportunity to practice (without the risk of negatively impacting their final grade) and receive feedback, which enhances their learning (Marquis, 2021). Examples of these could include comprehension/reading quizzes, H5P activities, and reflective assignments. Conversely, **high-stakes assessments** are more formal and summative and have grades that represent a significant portion of their grades. Examples of these may include final projects or papers, midterms or final exams, etc.

#### 4. Make sure you're assessing the learning you're aiming for

This best practice also overlaps with the QM rubric; standard 3.1 states that “the assessments measure the achievement of the stated learning objectives”. There are two major things to keep in mind here.

First, when creating an assessment, always make sure that it relates to your materials and to your objectives.

Second, be sure that the assessment is focusing on the skills or knowledge from the course and not from something else. For example, if you're asking students to present something, be sure the assessment is focused on things you discussed in the course and not on the student's ability to actually present (unless of course, that's something covered in the course). In any case, be clear about the specific learning you are aiming to

see displayed will help you to better identify aspects of your assessments that you may be able to adjust. For instance, grading criteria for presentations might privilege the conceptual learning you want to see displayed over public speaking skills (Barkley & Major, 2016).

## 5. Provide descriptive, forward-looking feedback

Feedback is an essential component of the learning process. From a diversity and inclusivity perspective, giving students good, quality feedback is important so that students know how they're doing in your course and what they need to do to improve. Usable, meaningful feedback doesn't need to be labor intensive. Indeed, research shows that providing too much feedback (for instance, on written work) can be overwhelming and inhibit learning.

Even a few key observations that describe what is and is not working in an assessment can help students better self-assess. Concrete strategies for improvement also can help to ensure all students have the information they need to be successful (Watling & Ginsburg, 2018).

In your feedback, be sure to let students know what they're doing well and what they could be doing better. Moreover, be sure you also give students the opportunity to use the feedback you provide (Brookhart, 2008). For example, will the feedback

apply to future assignments as well, or will they be able to use it to revise the current assignment?

## Activities (not graded or low stakes)

Activities, for the purpose of a course map, is anything the student does in the course that isn't directly graded. For example, you might have an ungraded video quiz or an H5P activity that you want students to complete.

Activities can include activities that you mark as either complete or incomplete.

Activities always include reading and watching the materials in the “materials” column and should be noted.

## Assessments (graded)

Assessments are anything that your students complete for a grade (quizzes, exams, papers, projects, discussions, etc.). So, you need to decide what kind of assessment will best test whether your students learned what the objective said they would learn. Once you have measurable verbs, it's also important that you choose an assessment that aligns with the verb.

For example:

Verb	Assessment
Define Identify Recognize Categorize Classify	Quiz
Describe Explain Summarize Interpret	Quiz/Assignment (short answer or essay questions)
Discuss Defend Interpret Critique Compare Relate Contrast	Discussion

Verb	Assessment
Write Evaluate Analyze Conclude Judge Cite Solve	Written assignment/ essay
Design Develop Plan Create Use Illustrate	Course project
Collaborate Complete	Group assignment

## Is it a learning activity or an assessment?

Learning activities and assessments can be thought of the same; they are anything that incorporate interaction and engage the learner with the course content. For example:

- Class discussions
- Simulation exercises
- Practice quizzes
- Tests
- Case studies
- Role-playing
- Student presentations
- Labs

For example, you may have a discussion where in order to participate in the discussion, students will first have to read two articles. The reading of the two articles would be the learning activity. The discussion post the student creates is then the assessment.

Another example is when a learning objective requires a student to apply a concept to a real-life case. The learning activity could be the student applying that concept to a case study and the assessment is how well the student did when they applied that concept to the case study.

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### 3.

# ASSIGNMENTS

Jessica Kahlow

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Written assignments are a staple of educational assessment, providing a means for students to demonstrate their understanding, critical thinking, and communication skills. This chapter delves into various types of written assignments and offers guidance on how to design them effectively to enhance student learning and engagement.

## The Importance of Written Assignments

Written assignments serve multiple educational purposes:

- **Demonstrating Understanding:** They allow students to articulate their comprehension of the material.
- **Developing Critical Thinking:** Written tasks encourage students to analyze, synthesize, and evaluate information.
- **Enhancing Communication Skills:** Writing

assignments improve students' ability to express ideas clearly and coherently.

## Types of Written Assignments

### 1. Essays

Essays are a common type of written assignment that require students to explore a topic in depth, develop an argument, and support it with evidence.

- **Types of Essays**
  - **Expository Essays:** Explain or describe a concept or idea.
  - **Persuasive Essays:** Argue a specific point of view.
  - **Analytical Essays:** Analyze a text, event, or idea.
  - **Narrative Essays:** Tell a story or recount an event.
- **Components of a Good Essay**
  - **Clear Thesis Statement:** The central argument or point of the essay.
  - **Structured Organization:** Introduction, body paragraphs, and conclusion.
  - **Evidence and Examples:** Support the thesis with relevant information and analysis.

- **Coherent Flow:** Logical progression of ideas and smooth transitions.

## 2. Research Papers

Research papers require students to investigate a topic, gather information from various sources, and present their findings in a structured format.

- **Components of a Good Research Paper**
  - **Clear Research Question or Hypothesis:** Defines the focus of the paper.
  - **Literature Review:** Summarizes existing research on the topic.
  - **Methodology:** Describes the research methods used to gather data.
  - **Analysis and Results:** Presents the findings of the research.
  - **Discussion and Conclusion:** Interprets the results and suggests implications or future research directions.

## 3. Reflective Journals

Reflective journals encourage students to reflect on their learning experiences, integrating personal insights with course content.

- **Components of a Good Reflective Journal**
  - **Personal Reflection:** Discusses personal experiences and insights.
  - **Connection to Course Material:** Links reflections to concepts and theories from the course.
  - **Critical Analysis:** Examines experiences critically, considering different perspectives.
  - **Future Implications:** Reflects on how the experience will influence future learning or actions.

## 4. Case Studies

Case studies involve detailed analysis of a real-world situation, requiring students to apply theoretical knowledge to practical scenarios.

- **Components of a Good Case Study**
  - **Clear Description of the Case:** Provides background information and context.
  - **Identification of Key Issues:** Highlights the main problems or challenges.
  - **Application of Theories and Concepts:** Uses course material to analyze the case.
  - **Recommendations:** Suggests practical solutions or actions based on the analysis.

## 5. Annotated Bibliographies

Annotated bibliographies require students to summarize and evaluate sources related to a specific topic.

- **Components of a Good Annotated Bibliography**
  - **Accurate Citations:** Provides complete and correct bibliographic information.
  - **Summaries:** Briefly describes the content of each source.
  - **Evaluations:** Critically assesses the relevance, quality, and credibility of each source.
  - **Reflection:** Discusses how each source contributes to the understanding of the topic.

## Steps to Crafting Effective Written Assignments

### Step 1: Define the Purpose and Objectives

Clearly articulate what you want students to achieve through the assignment. Consider the following:

- **Learning Objectives:** What skills or knowledge should students demonstrate?
- **Purpose:** Is the assignment intended to assess

understanding, promote critical thinking, or encourage reflection?

## Step 2: Choose the Appropriate Type of Assignment

Select a type of written assignment that aligns with your objectives and is suitable for the course content and student level.

## Step 3: Develop Clear Instructions

Provide detailed instructions that outline:

- **Assignment Goals:** What students are expected to achieve.
- **Format and Structure:** Guidelines on length, formatting, and organization.
- **Assessment Criteria:** Rubrics or criteria that will be used to evaluate the assignment.

## Step 4: Provide Resources and Support

Offer resources and support to help students succeed:

- **Guidelines and Examples:** Provide examples of good

assignments and tips for effective writing.

- **Research Resources:** Recommend databases, journals, and other resources.
- **Writing Support:** Offer access to writing centers or online tools.

## Step 5: Encourage Drafts and Revisions

Encourage students to submit drafts and provide feedback to help them improve their work before the final submission.

## Step 6: Assess and Provide Feedback

Evaluate the assignments based on the established criteria and provide constructive feedback to guide further learning.

## Best Practices for Written Assignments

You were up all night thinking about the perfect assignment. You started your morning off by typing up your thoughts and posting it to students as an assignment. And then... the emails come... “How long does it have to be?”, “Can I use a PowerPoint or do I have to do a video?”, “Why do I have to

use this citation style?”, and “What do you mean by...”. Yikes! This was supposed to be the perfect assignment!

- **Clarity and Precision:** Ensure instructions and expectations are clear and precise.
- **Alignment with Objectives:** Make sure the assignment aligns with the learning objectives of the course.
- **Engagement and Relevance:** Design assignments that are engaging and relevant to students’ interests and experiences.
- **Feedback and Support:** Provide timely and constructive feedback, and offer support throughout the process.

## Writing Assignment Directions

Maybe it’s still the perfect assignment, but your prompt didn’t give students enough information. Try to predict the questions students will ask and make sure your prompt addresses those by including these five components:

### 1. Introduction

This situates the assignment within the context of the course, reminding students of what they have been working on in anticipation of the assignment and how that work has prepared them to succeed at it.

## 2. Justification, Purpose, and Summary

In a few sentences explain the overall assignment mission and type of assignment.

Explain why the particular type of assignment you've chosen (e.g., lab report, policy memo, problem set, or personal reflection) is the best way for you and your students to measure how well they've met the learning objectives associated with this segment of the course.

## 3. Detailed Tasks/Key Components

Outline what students are supposed to do at a granular level. Is there a step-by-step process they need to follow? What are the key components they need to make sure to include?

## 4. Logistics/Submission Format

Explain how and when students will submit. Include items like:

- Due date
- Requirements for length, formatting/styling, document type, and citation style
- Location and type of submission

## 5. Evaluation Criteria

Outline the criteria you will use to evaluate students work. This could be in a detailed list or rubric.

It is helpful to explain what criteria look like at certain performance levels. For example, what does “A” work look like, “B” work look like? Or what comprises “Meets expectations” vs. “Does not meet expectations”?

## Writing Student Presentation Directions

Group or individual presentations can be an essential part of student participation because it “fosters interaction among students”, especially when they’re also asked to share comments and questions about others’ presentations (Ko & Rossen, 2017, p. 329). Moreover, online presentations are a great way for students to share their work with their classmates. Online presentations afford students more tools to convey their ideas.

Having students give presentations is easy enough in a face-to-face class – everyone is present and there aren’t many technology considerations that have to be made. But in an online format, a once-simple assignment gets more complex.

- How can students record presentations that include sharing a screen, video of themselves, and audio?

- How can students submit their videos so that just the professor can watch them?
- How can they submit videos so that their peers can view and comment?

We're going to walk through all the options so you can choose what is right for your course, and then we'll also provide resources for you to pass along to your students for whichever method you choose.

## Presentation Options

There are two main choices you have to make.

1. Assignment type: Will it be an individual or a group presentation?
2. Audience: Will students submit it just to the professor or will their classmates also be able to see it?

If the audience is only the instructor, you may want your students to do a presentation or video recording that does not need to be viewed by the entire class. For this, you'll use a Canvas online submission assignment, and students will embed their video into their submission.

If the audience is the classmates and the instructor, create a discussion in Canvas. Students can embed their videos into discussion posts. You can set up groups in those discussions so

that only those in the groups can see the presentations, or you can leave them open to the whole class.

## Tools and Technologies for Supporting Written Assignments

### Learning Management Systems (LMS)

Platforms like Moodle, Canvas, and Blackboard facilitate the submission, grading, and feedback processes for written assignments.

### Writing Tools

Tools like Grammarly, Turnitin, and the Purdue OWL offer writing assistance and plagiarism checking.

### Collaboration Tools

Google Docs, Microsoft Teams, and other collaboration tools enable peer review and collaborative writing projects.

Crafting effective written assignments requires thoughtful planning, clear communication, and ongoing support. By understanding the various types of written assignments and following best practices for their design and implementation, educators can create meaningful assessments that enhance

student learning and engagement. Written assignments not only evaluate students' understanding and skills but also foster critical thinking, creativity, and effective communication.

## Preventing Plagiarized Assignments and Promoting Academic Integrity

Plagiarism remains a significant challenge in academic settings, undermining the integrity of educational institutions and devaluing the hard work of honest students. As educators, it is our responsibility to create an environment that promotes academic integrity and deters dishonest practices. This chapter explores effective strategies for preventing plagiarism, including the use of TurnItIn and designing plagiarism-proof assignments.

### Promoting Academic Integrity

Academic integrity is the cornerstone of a credible educational system. It ensures that students are evaluated based on their own work and merit. Promoting this integrity involves not only setting clear expectations but also creating a culture where honesty is valued and celebrated. Here are key steps to fostering an environment of academic integrity:

1. **Clearly Communicate Expectations:** Educate students about what constitutes plagiarism and the consequences of engaging in it. Provide clear guidelines on citation practices and the importance of original work.
2. **Foster a Culture of Trust and Respect:** Encourage open communication and build trust with your students. When students feel respected and supported, they are less likely to resort to dishonest practices.
3. **Provide Resources and Support:** Offer resources such as writing centers, citation guides, and workshops on academic integrity. Support students in developing their research and writing skills.

## Use of TurnItIn

TurnItIn is a widely used tool that helps detect and prevent plagiarism by comparing student submissions against a vast database of academic work, websites, and other sources. Here's how TurnItIn can be effectively utilized:

1. **Submission and Originality Reports:** Require students to submit their assignments through TurnItIn. Review the originality reports generated to identify potential instances of plagiarism.
2. **Educate Students on TurnItIn:** Explain to students how TurnItIn works and how it can benefit them by

highlighting areas that need proper citation. This transparency can encourage students to engage more deeply with their own work.

3. **Use TurnItIn as a Learning Tool:** Rather than solely a policing mechanism, use TurnItIn to educate students about proper citation and the importance of academic integrity. Provide feedback on how they can improve their writing and avoid unintentional plagiarism.

## Designing Plagiarism-Proof Assignments

Designing assignments that are challenging to plagiarize is a proactive way to prevent academic dishonesty. Plagiarism-proofing assignments involves making them more specific, personal, and process-oriented. Below are strategies for creating such assignments:

1. **Use Unique and Specific Prompts:** Tailor prompts to the course material and student interests. This specificity makes it difficult for students to find pre-written answers online.
2. **Personalize Projects:** Encourage students to connect assignments to their personal experiences or future career goals. Personal reflections are inherently unique and harder to plagiarize.
3. **Incorporate Current Events:** Use recent developments

in the field to keep topics fresh and less likely to be found in existing sources.

4. **Focus on the Creation Process:** Require multiple drafts and check-ins for larger papers and projects. This ongoing engagement makes it harder for students to submit plagiarized work.
5. **Include Reflective Essays:** Ask students to explain their work and decision-making process. Reflective essays help verify the authenticity of their submissions.
6. **Test Your Prompts:** Search the assignment directions online or use an AI tool like ChatGPT to generate responses. This can help you gauge how easily your prompts can be plagiarized and adjust accordingly.

## Example: Plagiarism-Proof Assignments

### Not Plagiarism-Proof

**Essay Prompt:** The Evolution of Modern Architecture

**Instructions:** Write a 1,000-1,200 word essay discussing the evolution of modern architecture.

Consider the following points: Key characteristics of modern architecture, influential architects, technological advancements, and changes in urban landscapes.

**Why It's Not Plagiarism-Proof:** This prompt is generic and easily searchable, with many pre-written essays available online.

## Plagiarism-Proof Version

### **Personal Exploration of Modern Architecture's Evolution**

**Instructions:** Write a 1,000-1,200 word essay exploring the evolution of modern architecture through a personalized lens. Incorporate the following elements:

**Local Case Study:** Select a modern building or project in your city. Describe its key characteristics and how it exemplifies modern architectural principles.

**Architect Interview:** Conduct a brief interview with a local architect or architecture professor to gain insights. Include quotes and reflections from the interview.

**Personal Experience:** Reflect on a modern architectural space you have visited. Discuss how the design impacted your experience and understanding of modern architecture.

**Technological Influence:** Analyze how technological advancements influenced the building in your local case study.

**Additional Requirements:**

Original Photos or Sketches: Include photographs or sketches of the building.

Process Documentation: Document your research process, including selecting your case study, conducting your interview, and gathering reflections.

**Why It's Plagiarism-Proof:** This prompt requires original research, personal reflection, and locally-sourced material, making it difficult to plagiarize.

Preventing plagiarism and promoting academic integrity are

critical aspects of fostering a trustworthy and effective educational environment. By utilizing tools like TurnItIn and designing plagiarism-proof assignments, educators can create a learning atmosphere where honesty is paramount and students are encouraged to produce original, thoughtful work. Embracing these strategies ensures that academic achievements genuinely reflect students' knowledge and efforts, ultimately enriching the educational experience for all.

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## 4.

# DISCUSSIONS

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Asynchronous discussions are a fundamental part of online education. They are one of the main ways that online courses facilitate learner-learner interaction and can also enhance learner-instructor interaction when used properly. The mere presence of a course discussion does not guarantee meaningful engagement, participation, or interaction. Many instructors struggle to make discussion board forums a vibrant, engaging space for students to genuinely interact with one another.

Do you hate discussions? Maybe you're just doing them  
wrong.

(and I mean this in the nicest way possible)

This sentiment underscores the common challenges instructors face when trying to have good online course discussions. Because well, in our experience as instructional designers, instructors who say they hate online discussions simply aren't using them correctly. And, as instructional designers and as faculty, we recognize that in light of all the

best practices surrounding the design of effective online discussions, it is hard to create good, quality discussions that students actually engage with. Often, discussions are marred by one-correct-answer prompts, overly prescriptive instructions, and lackluster participation, resulting in stagnant, uninspiring exchanges that fail to fully engage students. However, there is hope. By exploring innovative strategies and leveraging emerging technologies, instructors can revolutionize the online discussion experience, turning it into a dynamic and enriching platform for learning and collaboration.

This chapter discusses artificial intelligence (AI), specifically ChatGPT, as a tool to enhance online discussions, revolutionizing the way educators facilitate and engage with their students in online learning environments. This chapter is to offers a comprehensive synthesis of existing literature, highlighting the value of online course discussions and demonstrating how instructors are integrating AI alongside research-backed best practices for online discussions and the use of AI.

## The Value of Discussions in Online Courses

One function of online discussions is to facilitate and encourage social interaction among students. Since at least the

year 2000, online course discussions have been shown to establish a strong sense of community among learners when used appropriately (Poole, 2000). Poole's (2000) case study examined students' participation in online course discussions in a graduate-level course taken by K-12 teachers. This seminal article, published 25 years prior to the writing of this chapter, highlights the continued importance of fostering social presence in online learning environments. In the context of online classrooms, social presence "refers to a student's sense of being in and belonging in a course and the ability to interact with other students and an instructor" (Picciano, 2002, p. 22). The theory of social presence explains the effect media can have on communication (Short et al., 1976). Over time, the theory has evolved to include the examinations of how new media affects online learning and has demonstrated how the use of select media affects social presence in online learning environments (Lowenthal, 2009).

Current research continues to highlight the significance of social presence in promoting engagement, collaboration, and a supportive learning atmosphere, emphasizing its crucial role in enhancing the overall learning experience for students. For instance, Cho and Tobias (2016) used the community of inquiry theory to examine the impact of online discussions on student learning experiences. Over three consecutive semesters, the same instructor taught the same online course under three conditions: no discussion, discussion without instructor participation, and discussion with active instructor

participation. Their results showed no significant differences in cognitive or instructor presence across conditions. However, there was a significant difference in social presence. Interestingly, no significant differences were observed in time spent on the platform, course satisfaction, or student achievement among the conditions (Cho & Tobias, 2016). Likewise, Swan and Shih (2019) also found that the perceived presence of the instructor could be more influential for student satisfaction than the perceived presence of peers.

Truhlar et al. (2018) explored the impact of chat roles and reflections on student interactions in an online sustainability course. Assigned roles increased critical student-student interactions, while self-reflections had no effect. Groups completing group reflections showed more critical interactions.

These findings are important for a few reasons. First, they suggest that the presence of an instructor in discussions might enhance social interaction among students, but it may not significantly impact cognitive or instructor presence. This implies that the role of the instructor in online discussions may be more crucial for fostering social connections among students rather than directly influencing the depth of cognitive engagement or the instructor's teaching presence. Additionally, the study indicates that the mere presence of online discussions, regardless of instructor involvement, does not significantly affect factors such as the time students spend

on the platform, their overall satisfaction with the course, or their academic achievement. Therefore, educators should carefully consider the purpose and desired outcomes of incorporating online discussions into their courses, recognizing that instructor participation may primarily influence social dynamics rather than academic performance.

Students are choosing to take online classes at an increasingly high rate (Tirado-Morueta et al. 2017); therefore, it is increasingly important to provide students with learning environments that afford them high levels of engagement. Many communication technologies including videos and online chats have made their way into the online classroom to help provide a more engaging environment. While these technologies help increase the instructor's presence and student engagement, many online students still feel like they lack a relationship with their instructor (Cherney et al., 2018; Dyer et al., 2018). Prior research has shown that students' perceptions of their instructor's social presence contributes to students' perceived learning (Richardson & Swan, 2003) and that instructors can create personal connections with students when they are more responsive (Young et al., 2011). Despite having known this information for decades, the idea of using online discussions in online courses is a point of contention for many instructors and students alike. The next section reviews some of the well-established best practices for online discussions.

## Best practices for online Discussions

In online courses, there are only so many ways to achieve learner-learner interaction, and one of those is through asynchronous discussions. This chapter discusses strategies for making good online discussions that students interact and engage with. The most common mistake instructors make is setting their discussions up like an assignment and simply expecting students to know how to engage with them. Some signs that your discussion prompt is really an assignment prompt in disguise include discussion prompts that. . .

- have only one correct answer
- lead to predictable or generic responses, hindering meaningful dialogue
- too broad or vague, making it challenging for students to provide focused and insightful responses
- overly prescriptive, leaving little room for interpretation or diverse viewpoints
- lack of clarity on what students are expected to do or how to structure their responses

There are a lot of ways to make discussions more engaging. For example, you could:

- allow flexibility for varied interpretations, encouraging a

more dynamic and open discussion

- craft prompts that invite critical thinking, prompting students to analyze, synthesize, or apply knowledge
- provide clear instructions on the desired format of responses or actions students should take
- illustrate how the discussion relates to real-world situations, experiences, or examples (Woods & Bliss, 2016)
- include enough context to guide students and facilitate a meaningful discussion
- ask students to come to a consensus and get buy-in from the whole discussion group (Truhlar et al., 2018)

Of course, not every discussion will be able to do all of these things, and some are topic-dependent. But, you can always be creative, participate in the discussion, give response directions, and make sure there is more than one way to respond. Woods and Bliss (2016) compiled a list of best practices based on existing research, which are summarized below.

## 1. Ensure Response Variety

The first best practice seems pretty obvious, but it's just to make sure there are various ways to respond to the prompt. You should choose something that has many different correct answers and that can be looked at from more than one perspective. For example, in Figure 1, students are asked to

choose an article from a series. So, already, we'll have students choosing to write about different articles. The initial post further asks students how the article can be applied to their lives and what they took away from it, which will also be different for each student (note: this sample comes from a graduate course in social work).

*Figure 1. Sample discussion with various ways to reply*

### **Initial Post**

Explore NPR's Special Series – Bill of The Month:  
Bill of The Month Series.[Links to an external site.](#)

Choose one story from the website and provide a summary of the story. Your summary should encompass the billed cost of care, reasons behind the bill, details of the services provided, and what was covered and not covered.

Discuss what insights you gained from the selected story and how this learning can be applied to future practice when working with patients and their families. Share your reflections in your own words.

### **Replies**

Engage with your peers by responding to their summaries and reflections. Explore similarities or differences in the challenges presented in each story and discuss potential strategies for addressing such healthcare cost issues in practice.

This discussion aims to foster a collective understanding of real-world healthcare cost challenges and encourages collaborative reflections on practical applications in future healthcare practice.

## 2. Ask Students To Do Something

Second, make sure you're actually asking students to do something, preferably from a higher level of Bloom's taxonomy, like create, evaluate, or analyze. I've seen a lot of discussions out there that don't clearly ask students to do anything, which makes it hard to respond to and practically impossible to discuss. For example, the discussion prompt in Figure 2 asks students to create some kind of multimedia based on the readings and then discuss them with their classmates (note: this sample comes from a graduate course on multimedia design tools).

*Figure 2. Sample discussion asking students to do something.*

### **Overview**

After reading the module materials, select something from the assigned readings to convert into a simple multimedia element of your choice to share and discuss. Remember to keep the principles discussed in the module in mind when creating the multimedia for the discussion.

### **Part 1: Initial Post**

1. Select something from the assigned readings to convert into a simple multimedia element.
2. Create the multimedia element (this can be anything you want and can use any technology you want: a short video, an infographic, an image, a presentation slide, etc.).
3. Post your multimedia element to this discussion by the Wednesday before the discussion's due date.

### **Part 2: Replies**

Look at the multimedia that your classmates

have created, and reply to at least two of them with the following:

1. Identify something you like about their multimedia. Be specific.
2. Evaluate how they used the multimedia tool and whether it's appropriate (i.e., would future students find it valuable when learning this content?).
3. A question you have for them (e.g., how they made something) OR something they could do to make the multimedia even better.

### 3. Relate The Topic To Personal Experiences

Third, having students relate the topic to a personal experience is a great way for students to get to know one another while building community in the course (de Abreu, 2023). It also gets students to think about concepts in various relatable contexts. This is a good thing to do especially if you're working with adult learners who have work experience in the area. Also,

people generally like talking about themselves, so this type of discussion usually goes over well with students. For example, in Figure 3, students are specifically asked to relate the materials to their own experiences and perspectives (note: this sample comes from a graduate course on multimedia design tools).

*Figure 3. Sample discussion asking students to incorporate their experiences*

### **Part 1: Initial Post**

For this discussion, please respond to the following questions based on your experience and understanding of health insurance and the US healthcare system.

1. Share your positive views on the US healthcare system, considering your political perspective and personal experiences within the national or international healthcare context. Discuss any encounters with health insurance, whether personal or assisting someone close to you (anonymously if needed), highlighting the positive aspects.
2. Reflect on the drawbacks and challenges

you see within the US healthcare system. Discuss issues such as accessibility, affordability, or any personal encounters with complications in health insurance processes, keeping confidentiality in mind.

3. On a scale of 1 to 10, how would you rate your knowledge of health insurance and how it works? Please explain. (10 being very knowledgeable about health insurance companies, insurance terms, payments, claims, etc.).
4. Why do you think social workers or other disciplines (nursing, educators, psychologists) should have an understanding of health insurance?

## **Part 2: Replies**

After posting your initial response, engage with your peers by replying to at least two classmates' posts. In your responses:

1. Acknowledge your peers' perspectives, validating their experiences and opinions regarding the US healthcare system and health insurance.

2. Share any insights or experiences you have that align with or differ from your peers' perspectives. Respectfully contribute to the conversation, promoting diverse viewpoints.
3. Encourage further discussion by posing thoughtful questions related to your peers' posts. These questions can delve deeper into their experiences or opinions, fostering a meaningful dialogue.
4. Remember to maintain a respectful and inclusive tone throughout your responses, promoting an atmosphere of open-mindedness and understanding.

## 4. Use Current Events

Next, use current events. When students read about something in a textbook, they often dissociate it from things happening around them or in the news, so this is a great way to bridge that gap. For example, in Figure 4, students are asked to find a current article related to a social policy; later, in their replies, they are asked to read articles that other post and say what policy it's related to and the social problem that's

addressed (note: this example comes from a graduate course in political science).

*Figure 4. Sample discussion with current events or articles*

### **Part 1**

The course materials this week discussed social insurance and how social policy has evolved over time. In your initial post (due the Wednesday before the discussion due date), find and post a recent article (from 2020 to the present) that describes or discusses a recent policy change. You just need to post the link to the article in your initial post.

### **Part 2**

Then, for your replies, choose two other articles to respond to and say what kind of policy it is, describe the policy itself (cite if needed), and the social problem it addressed.

## 5. Include Directions For Initial Posts And For Replies

Fifth, sometimes you'll have a great prompt, and then be

disappointed when students have lackluster discussion replies. One way to deal with this is to also have directions telling students what they should be doing in their responses. Ideally, they should be building on another student's response in some way. To do this, think about what students have said in in-person courses when asked a similar question, or try to anticipate how they might respond to the prompt and how they could use that to reply to others. A great way to do this is to have directions for an initial post, and then additional directions for reply posts. Figures 1, 2, 3, and 4 are all examples of how you might do this with different kinds of discussions.

## 6. Participate In The Discussion

Sixth, and this is another general best practice, is to consistently participate in the discussion. First, you should really be checking in as a moderator and to make sure the discussion is going the way you thought it would so you can redirect the conversation if needed. It also lets students know that you're there and a real person. You do not have to reply to every post, but you should choose at least several to reply to. In your replies, you could model good replies by asking follow-up questions, providing additional examples, or relating the discussion back to the course materials.

## 7. Be Creative!

Finally, be creative, and be yourself! Add in videos and images to give more context. Think outside the box! Here are some suggestions.

Case study scenarios are a common way discussions are used. Instructors often provide a case study and questions for students to respond to and they discuss various outcomes for a case. This would be an incredibly relevant choice in criminal justice specifically.

Watch and respond to or discuss a relevant video. This is a great way to include videos in your course, and it helps make sure students are watching them.

Research related sources and share with the class – this could be good if you're having students write a research paper and need to also find sources for that. It could also be good in courses where you want to emphasize the relevancy of certain topics. For example, if relevancy to current events is important in your course, you could have students find current events related to the topic and discuss them in relation to course concepts.

Teach a topic – there's a lot of research out there about this one and how having to teach something helps you learn it better. One good time to do this is in a module with a lot of

complex topics. You could do this individually or in groups depending on the class size and number of topics.

Project/paper presentations – this is a fun one, I think. I always think it's weird when students record videos and then the instructor is the only person who can see them. This also gives students an idea of what their classmates were working on

Multi-step – along with the presentations, this one is a little more logistically challenging in that students would need to make an initial post earlier in the week. So to go back to the example I gave with James earlier, he could have students find current events related to materials, have them post those articles, and then to make it a multi-step, he could ask students to reply to another student's article post by saying which course concepts are present in the article.

Brainstorming ideas for projects or papers. Here you could have students introduce their topics and ask others for feedback, you could also include things like finding relevant resources and outlining in these types of discussions.

## The future of presence

If you're thinking that all of that is too much to do, you're not on your own. You can use AI to help you make your discussions good. For instance, Chat GPT is a great tool to

help you achieve these discussion best practices. For example, you may ask Chat GPT to . . .

- Can you suggest a follow-up prompt for this discussion so students know how to reply?
- Can you suggest follow-up questions to extend the discussion based on this prompt?
- How can I add depth and complexity to this discussion prompt?
- What modifications can I make to encourage critical thinking in responses to this prompt?
- What can I add to this prompt to encourage reflective responses?
- What can I do to prompt consideration of alternative viewpoints in response to this question?
- What multimedia elements can I add to enhance this discussion prompt?
- How can I connect this discussion prompt to real-world applications?

## Examples

Okay so let's take a look at some examples.

## Example 1

Read this prompt and think about how you or your students might reply to it.

### Original

If a particular neighborhood won an award for the state's best neighborhood watch program of the year, what would you expect that neighborhood would be doing to earn such recognition?

Okay, now think about how we could revise it to make it better.

### Revised

Your neighbors are complaining that their garden gnomes are being stolen so you're creating a new neighborhood watch program in your

neighborhood. In your initial post, describe what you might want your neighborhood watch to do to reduce theft.

How would you get others to participate?

Then, read a classmate's post and describe what might work well and what might not work so well in their neighborhood watch plan. Be sure to use concepts from class to support your answer.

The revised prompt introduces a practical scenario (garden gnome theft) for relatability, enhancing engagement. It incorporates a second part that encourages interaction, critical thinking, and the application of class concepts when analyzing a classmate's post, thereby deepening the discussion and promoting a comprehensive understanding.

## Example 2

Okay, now let's take a look at another example.

## Original

### **Read**

Virtual team development (Kahlow, 2024)

### **Post**

Answer at least three of the questions from the end of the chapter using the readings from this module and the information provided in the case study.

## Revised

### **Read Virtual team development (Kahlow, 2024)**

This case study follows Jackie as she begins working on a remote team for her new job. In addition to highlighting some of the challenges and benefits of finding and performing remote work, this case study provides further insight

into the stages of group development in an online team. The case study background information about related concepts are present within the case; these include the hiring process, socialization, phases of group development, and some general challenges and benefits associated with working remotely. The case concludes by asking students to consider ways that primarily virtual teams could best use the time they have together in person.

### **Initial Post**

In your initial post, answer at least three of the questions from the end of the chapter using the readings from this module and the information provided in the case study.

### **Replies**

- Discuss your answers to the questions with your classmates. In doing so you might. . .
- Reflect on the challenges and benefits Jackie faces in her remote work journey.
- Unpack the stages of group development in online teams. Have you witnessed

similar stages in your virtual teams?

- Dive into the hiring process and socialization in a remote setting. What creative onboarding strategies can you suggest for virtual teams?
- Imagine the possibilities! How can primarily virtual teams make the most of their in-person time together?

The revised prompt gives background on the reading, improves structure and expectations for replies, and prompts students to share personal experiences, adding a practical and relatable aspect to the discussion.

### Example 3

#### Original

What rights do you have when you stand accused?

The Sixth Amendment governs the rights of an accused once the trial process has commenced. You need to have read Chapter 10 of the Courts and Criminal Justice System in America text to answer the discussion questions below.

Answer and discuss the following questions

Of the enumerated rights guaranteed to a criminal defendant, which, in your opinion, is the most vital to his ability to put on an effective defense?

Which of the rights guaranteed to a criminal defendant is the least important or the least vital to his ability to put on an effective defense?

This original prompt is fine, but how could it be even better?

## Revised

We're diving into the realm of the Sixth Amendment, a cornerstone in the rights of an

accused during the trial process. Before we embark on this journey, make sure you've delved into Chapter 10 of the Courts and Criminal Justice System in America text. 📖👮♂

### **Initial Post**

**Most Vital Right:** Of the enumerated rights guaranteed to a criminal defendant, which, in your opinion, is the most vital to their ability to put on an effective defense? Share your insights asynchronously, providing examples or scenarios that highlight the importance of your chosen right.

**Least Important or Vital:** On the flip side, which of the rights guaranteed to a criminal defendant do you consider the least important or the least vital to their ability to put on an effective defense? Explain your reasoning, drawing connections to real-life cases or legal principles.

### **Replies**

When replying to your classmates, consider adopting the role of a legal commentator. Offer constructive feedback on their choices, and if you have a different perspective, present it

respectfully. This is our virtual courtroom, and diverse opinions contribute to a richer discussion!

Challenge your peers respectfully by asking them to cite specific cases or legal precedents that support their viewpoints. Let's build a library of legal references!

The revised prompt is more engaging, has clearer instructions, and gives suggestions for interacting with students.

## Conclusion

Online discussions serve as a pivotal avenue for learner-learner interaction in online courses. This chapter has delved into strategies to transcend conventional discussions, transforming them into dynamic, engaging, and creative prompts that evoke thoughtful responses. The identification of common pitfalls, such as disguised assignment prompts, has been highlighted, emphasizing the need for a shift toward more interactive approaches. Several best practices have been elucidated, urging instructors to allow flexibility in interpretations, pose higher-order thinking questions, and facilitate personal connections with topics. Emphasizing real-world relevance, providing clear

instructions, and fostering contextual understanding have been underscored as essential elements.

The incorporation of creativity, coupled with personal engagement, stands out as a recurring theme. The encouragement of instructors to actively participate in discussions ensures a guiding presence and humanizes the online learning environment. Practical suggestions, such as the addition of videos, case study scenarios, and research source sharing, further enrich the discussion landscape.

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5.

# QUIZZES

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The digital transformation in education has revolutionized the way assessments are conducted. Online quizzes and exams have become integral components of both traditional and virtual learning environments, offering flexibility, immediacy, and a range of interactive possibilities. This chapter explores the essential elements and best practices for creating effective online assessments that accurately measure student learning and foster engagement. Online assessments serve multiple purposes:

- **Evaluating Learning:** They help measure students' understanding and retention of course material.
- **Providing Feedback:** Instant feedback mechanisms in online quizzes can guide students in their learning journey.
- **Encouraging Engagement:** Interactive and diverse question types can make learning more engaging.

## To Quiz or not to Quiz

Exams may not be the best fit for all courses. Exams are stressful, inequitable, logistically difficult, not empathetic, and frankly, no one likes them (Saucier et al., 2022). Quizzes may not be the best assessment fit for a course, but they could be a great activity for a course.

There are a lot of fun technologies out there (e.g., Google Forms, Kahoot, H5P, Genially, Canva, and Quizlet) that provide additional functionalities for creating engaging and interactive quizzes that you could use as an interactive activity. However, be sure to be prepared to make accommodations for students facing technical issues or requiring additional support.

To start, are you sure a quiz is your best option? Recall Bloom's taxonomy wheel from the page on selecting an assessment type. According to that wheel, how many levels of Bloom's learning verbs can be assessed with a multiple-choice quiz? Right, only two learning objectives are tested with multiple-choice questions. Those types of questions are most



Crawford, Stephen (2012).  
Aligning Assessments with  
Learning Objectives.  
<http://teachonline.asu.edu/2012/10/aligning-assessments-with-learning-objectives/>.

beneficial when assessing if students can remember factual information. And **yet they are the go-to assessment** strategy a majority of the time. If you only use multiple choice quizzes in your course, how are you going to find out if students can apply and analyze the knowledge you have given them? As you study the wheel, you will see that to bring students up to using higher-order thinking skills, you will need to vary your assessment techniques. However, there are some strategies you can use that I'll discuss here to get your quiz questions up to higher levels of Bloom's taxonomy.

Sometimes you will have to use multiple choice tests because of time or grading constraints or the content covered in the course (e.g., it would probably be fine to forgo quiz assessments in an introduction to communication course, but it might be less fine to forgo quizzes in a course where you're literally teaching future doctors how to be a doctor. In this case, you can still write your multiple choice questions to test students on levels above the knowledge level. Here is an example.

## Original Question

Place the steps in order, from start to finish, for designing a course with backward alignment.

- A. Write measurable, action-oriented learning objectives that address the appropriate level of Bloom's Taxonomy.
- B. Choose assessment methods that indicate students' mastery of the objectives and materials.
- C. Choose instructional materials that help students work towards those objectives

## Rewritten Question

Tyler is using the backward design method to develop his course. He has written his learning

objectives for the lesson. What will he choose in his next step?

- A. Assessment methods
- B. Instructional activities
- C. LMS tools
- D. Technology resources

The question has been taken from the knowledge level to the application level. Students have to know the order of steps (knowledge level) and then apply it to a situation (application level). We are testing both with one question.

## Aligning Quiz Questions

Effective quizzes and exams **must align with the course's learning outcomes**. Each question should directly relate to a specific objective, ensuring that the assessment accurately measures the intended outcomes. Incorporating a mix of question types can assess different levels of cognitive skills, from basic recall to higher-order thinking:

- **Multiple-Choice Questions:** Good for assessing factual

knowledge and comprehension.

- **True/False Questions:** Useful for quick checks of understanding.
- **Short Answer and Essay Questions:** Evaluate deeper understanding and the ability to articulate complex ideas.
- **Matching and Ordering Questions:** Test recognition and understanding of relationships between concepts.
- **Scenario-Based Questions:** Present real-life scenarios to assess application and analysis skills.

Online assessments support a variety of question types; refer to the list below for question types, descriptions, Bloom level, advantages, and disadvantages of each.

Question Type	Description	Advantages	Disadvantages
Multiple Choice	Multiple choice questions present a question and ask students to choose from a list of possible options/answers. Most MCQs feature one correct answer, and two to four “distractor” choices that are incorrect. Questions can take the form of incomplete sentences, statements, or complex scenarios. MCQs are most appropriate for <b>factual, conceptual, or procedural</b> information. Some simple rules of thumb that can make for more effective questions:	MCQs are the most versatile of the closed-ended question types. This versatility stems from the fact that the questions can contain more elaborate scenarios that require careful consideration on the part of the student. The probability of student guessing is also relatively low.	When compared to true/false and matching, multiple-choice items can be more challenging to write. They also require the creation of plausible “distractors” or incorrect answer options. As with other closed-ended questions, multiple-choice assesses recognition over recall.
Multiple Response	MRQs are very similar to the MCQs except that it has more than one correct answer. MRQs present a question and ask students to choose multiple options from a list of possible options/answers and usually has more than one correct answer.	MCQs are most appropriate for factual, conceptual, or procedural information	Scoring can be complicated if students don’t select all of the correct answers, which can make these questions seem more difficult than they really are.

Question Type	Description	Advantages	Disadvantages
Fill-in-the-blanks	<p>Fill-in-the-blank questions are “constructed-response,” that require students to create an answer and typically one word answers. Completion questions are also similar to fill-in-the blank question types. Fill-in-the-blank questions are most appropriate for <b>questions that require student recall over recognition</b>. Examples include assessing the correct spelling of items or in cases when it is desirable to ensure that the students have committed the information to memory.</p>	<p>Fill-in-the-blank questions assess unassisted recall of information, rather than recognition. They are relatively easy to write.</p>	<p>FIB questions are only suitable for questions that can be answered with short responses. Additionally, because students are free to answer any way they choose, FIB questions can lead to difficulties in scoring if the question is not worded carefully.</p>

Question Type	Description	Advantages	Disadvantages
True/False	<p>True/false questions present a statement, and prompt the student to choose whether the statement is true. Students typically have a great deal of experience with this type of question. T/F questions are most appropriate for <b>factual information and naturally dichotomous information</b> (information with only two plausible possibilities). Dichotomous information is “either/or” in nature.</p>	<p>True/false questions are among the easiest to write.</p>	<p>True/false questions are limited in what kinds of student mastery they can assess. They have a relatively high probability of student guessing the correct answer (50%). True/false also assesses recognition of information, as opposed to recall.</p>

Question Type	Description	Advantages	Disadvantages
Matching	<p>Matching questions involve matching paired lists that require students to correctly identify, or “match” depending on the relationship between the items. These are most appropriate for <b>assessing student understanding of related information</b>. Examples of related items include states and capitals, terms and definitions, tools and uses, and events and dates.</p>	<p>Matching items can assess a large amount of information relative to multiple-choice questions. If developed carefully, the probability of guessing is low.</p>	<p>Matching assesses recognition rather than recall of information.</p>

Question Type	Description	Advantages	Disadvantages
Essay/Short Answer	Essays and short-answer types are constructed-response questions. However, essay answers are typically much longer than those of short-answer, ranging from a few paragraphs to several pages. Most appropriate for assessments that cannot be accomplished with other question types. Because essays are the only question types that can effectively assess the highest levels of student mastery, they are the only option if the goal of testing is the assessment of synthesis and evaluation levels.	Essay questions are the only question type that can effectively assess all six levels of Bloom's Taxonomy. They allow students to express their thoughts and opinions in writing, granting a clearer picture of the level of student understanding. Finally, as open-ended questions, they assess recall over recognition.	There are two main disadvantages to essay questions — time requirements and grading consistency. Essays are time-consuming for students to complete. Scoring can be difficult because of the variety of answers, as well as the “halo effect” (students rewarded for strong writing skills as opposed to demonstrated mastery of the content).

## Writing Good Quiz Questions

In contemporary education, multiple-choice examinations are inescapable. Yet, studies over decades confirm that many of the questions used in these tests are of dubious validity because of shoddy construction. This activity provides a stepwise guide to construct good multiple-choice questions (MCQs). Before

you get started writing a question, be certain that you are testing an important concept—a “take-home” message that you really want the learners to understand and remember. Questions about minutiae are easier to write, so avoid the temptation.

## What are the parts of a question?

- The stem is the part that asks the question.
- The distractors are the incorrect answer options.
- The key is the correct answer choice.

## Writing The Stem

Probably, the most important single concept in writing a strong MCQ is to have a well-focused stem. That means that the main idea of the question must be found in the stem. A good way to test the quality of your stem is to cover the options and see if you can answer the question.

## Examples of good, well-focused stems

- “On computed tomography (CT), what is the typical contrast enhancement pattern of a hepatic cavernous hemangioma?”

- “What pancreatic tumor most often shows radiographically evident calcification?”

## Examples of poor, unfocused stems

- “Which of the following is true regarding dual-energy CT?” “Concerning ovarian carcinoma, it is correct that:”
- Such unfocused stems turn an MCQ into a group of loosely related true-false questions.

In creating your stem, use simple wording and avoid any extraneous information not needed to answer the question.

## Example of a stem with extraneous information

- “Numbness of the right side of the lower lip of a 60-year-old woman with facial injury due to a motorcycle accident is most likely caused by a fractured mandible with displacement of the \_\_\_\_\_.”

## Unnecessary information removed

- “With mandibular fracture, displacement of what structure is the most likely cause of lower lip numbness?”

Test takers benefit from clarity and conciseness. Be sure to avoid “negative” constructions:

- “...each of the following EXCEPT,”
- “Which of the following is NOT associated with...”

You want the test takers to stay in “find the right answer” mode.

## Writing the Answer Choices

### The correct answer (or key)

The most important attribute is that the choice identified as correct must be 100% incontrovertible. Ideally, you should have a manuscript citation or reference available for corroboration. In writing the correct answer, avoid nebulous terms such as “frequently,” “often,” “rarely,” or “sometimes” because they can give clues as to what the correct answer is.

### The distractors

From the psychometric standpoint, having two distractors is fine, although three is more typical. These can be the most challenging part of constructing a good question because plausible distractors are difficult to write. Your distractors should be plausible and not be obvious “throw-away” options.

Using plausible distractors helps ensure the learner really knows the correct answer and isn't just deducing the right answer. For similar reasons, "all of the above" and "none of the above" are frowned upon. Each question should test a single concept.

## Avoiding clues in the answer options

Examples of constructions that draw attention to one of the choices:

- One option is significantly longer or shorter than the others (longer answers are usually correct).
- Definite modifiers such as "always" or "never" (clues that an answer is false)
- A choice "highlighted" by capitalization, quotation marks, or parentheses
- A choice whose grammar doesn't agree with the stem
- And don't include two options that form a mutually exclusive pair, such as "Worse when the patient inhales" and "Worse when the patient exhales" because frequently, one of the pair is the correct answer, improving the guessing odds for the test taker.

## Purpose of Bloom's Taxonomy

Bloom's Taxonomy provides a framework for creating well-structured quiz questions that assess different levels of cognitive skills. When writing Multiple Choice Questions (MCQs) or Multiple Response Questions (MRQs) (where students can select more than one correct answer), it's important to align each question with the appropriate cognitive level.

While MCQs and MRQs are typically associated with lower-level thinking, such as recall and comprehension, but with thoughtful question crafting, they can reach the **Evaluate** and **Create** levels of Bloom's Taxonomy.

## Questions by Bloom's Level

### Remember

The remembering level forms the base of Bloom's Taxonomy pyramid. Because it is the lowest complexity, many of the verbs in this section are in the form of questions. You can use this level of questioning to ensure students can recall specific information from the lesson.

## Best Practices

- Keep the questions straightforward.
- Use simple, clear language.
- Ensure distractors (incorrect answers) are plausible to avoid guesswork.

## Examples

- Define mercantilism.
- Name the inventor of the telephone.
- List the 13 original colonies .
- Label the capitals on this map of the United States.
- Locate the glossary in your textbook.
- Match the following inventors with their inventions.
- Select the correct author of “War and Peace” from the following list.

## Understand

At the understanding level, you want students to show that they can go beyond basic recall by understanding what the facts mean. The questions at this level should allow you to see if your students understand the main idea and are able to interpret or summarize the ideas in their own words.

## Best Practices

- Focus on questions that ask students to explain or classify concepts.
- Use distractors that test common misconceptions.
- Ensure correct answers involve interpretation, not mere recall.

## Examples

- Explain the law of inertia using an example from an amusement park.
- Outline the main arguments for and against year-round education.
- Discuss what it means to use context to determine the meaning of a word.
- Translate this passage into English.
- Describe what is happening in this Civil War picture.
- Identify the correct method for disposing of recyclable trash.
- Which statements support implementing school uniforms?

## Apply

At the applying level, students must show that they can apply the information they have learned. Students can demonstrate

their grasp of the material at this level by solving problems and creating projects.

## Best Practices

- Use real-world scenarios to assess how students can apply their learning.
- Ensure distractors represent common mistakes or incorrect applications of knowledge.
- Provide sufficient context to make the scenario clear.

## Examples

- Using the information you have learned about mixed numbers, solve the following questions.
- Use Newton's Laws of Motion to explain how a model rocket works.
- Using the information you have learned about aerodynamics, construct a paper airplane that minimizes drag.
- Create and perform a skit that dramatizes an event from the civil rights era.
- Demonstrate how changing the location of the fulcrum affects a tabletop lever.
- Classify each observed mineral based on the criteria learned in class.
- Apply the rule of 70 to determine how quickly \$1,000

would double if earning 5 percent interest.

## Analyze

Analyze questions need to assess the ability to break information into components and understand their relationships. These questions often require students to examine data, compare different ideas, or determine relationships.

## Best Practices

- Ask students to identify relationships, causes, or underlying principles.
- Provide scenarios that require critical thinking and comparison.
- Use distractors that represent incomplete or incorrect analysis.

## Examples

- Which of the following best explains the relationship between supply and demand in a competitive market?
- Which of the following factors likely contributed to the economic recession of 2008?

## Evaluate

Evaluate questions ask students to assess the ability to make judgments based on criteria and standards. These questions often involve decision-making, prioritizing options, or determining the best course of action.

### Best Practices

- Focus on real-life dilemmas or problems that require students to make informed judgments.
- Ensure distractors represent common but flawed evaluations.
- Make the criteria for evaluation clear, even if implicit.

### Examples

- Which of the following actions would be the most ethical response in a case of workplace discrimination?
- Which of the following policies would be most effective in reducing unemployment?

## Create

Create questions typically are not best suited for a quiz, but it could be done through essay questions. Asking students to “create” something in a quiz can be challenging, especially

when quizzes are often designed for objective assessments. While it's possible to integrate creation-focused tasks into a quiz by using innovative question types that encourage students to apply higher-order thinking, these types of assessments are typically better suited as assignments.

## Best Practices

- **Clarity and Guidelines:** Since creation tasks are more subjective, ensure that questions are clear and provide specific expectations for what students should create.
- **Rubrics:** Use detailed rubrics that outline criteria like originality, depth of thought, relevance, and adherence to course content. Rubrics will help in grading creative assignments more objectively.
- **Scaffolded Support:** Consider scaffolding the creation process. For example, if the final product is complex, you can ask students to submit drafts or preliminary ideas in earlier quizzes.

## Examples

- Ask students to create a thesis statement based on provided data or readings.
- Provide a real-world problem and ask students to design a solution or response

## Overall Tips for Writing Good Quiz/Exam Questions

To write effective multiple-choice and multiple-response questions, follow these guidelines to ensure clarity, fairness, and alignment with learning outcomes.

- Questions should be clear, concise, and free of ambiguity to prevent misinterpretation.
- Distractors (incorrect answer options) should be plausible so that students can't easily eliminate them, and terms like "always" or "never" should be avoided to prevent obvious answers.
- Options like "all of the above" and "none of the above" should be used sparingly.
- Ensure that questions are culturally neutral, accessible to all students (including those with disabilities), and free of bias.
- Each question should be directly related to a learning outcome and cover a single concept, with simple and precise language. Incorporating a variety of question difficulties will help differentiate levels of student understanding.

When designing a quiz or exam,

1. Determine its purpose: formative (to provide ongoing

- feedback) or summative (for final evaluation).
2. Choose question types that align with your learning objectives and cover a range of cognitive levels.
  3. Provide timely feedback so that students can learn from their mistakes.
  4. Before releasing the assessment, test it yourself or with a colleague to ensure clarity, technical functionality, and appropriate timing.
  5. After the assessment, analyze the results to spot trends or issues that can highlight areas where students struggled, potentially indicating gaps in instruction.

To ensure your questions are focused, make sure the main idea is clearly stated in the question stem and use simple wording. All answer options should be plausible, avoiding complex or tricky language. Remember, bad questions are easier to write than good ones. While writing effective questions can be challenging, these straightforward principles will help create assessments that are clear, fair, and valid, providing better learning opportunities for your students.

## Security and Academic Integrity

There are also several things you can do to maintain the integrity of online assessments:

- **Randomize Questions:** Use question pools and

randomization to create unique quizzes for each student.

- **Timed Assessments:** Limit the time available to complete the quiz to reduce the likelihood of cheating.
- **Proctoring Tools:** Use online proctoring services if necessary to monitor exams. Respondus Monitor helps maintain academic integrity in high-stakes online exams by providing secure proctoring environments.

## Conclusion

Creating effective online quizzes and exams requires careful planning, a deep understanding of assessment principles, and the strategic use of technology. By aligning assessments with learning objectives, diversifying question types, ensuring clarity and fairness, and leveraging digital tools, educators can design assessments that not only measure student learning accurately but also enhance the overall learning experience.

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## 6.

# CHOOSING THE RIGHT TOOL

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## How Technology Helps Measure Student Learning

Technology is a powerful ally for teachers, especially in measuring student learning. With the use of digital formative assessments, teachers can expedite their ability to provide student feedback in real-time. Also, students are interacting with their assignments, receiving teacher input, and invested and motivated in their learning (Timmis et al., 2016).

Timmis, Broadfoot, Sutherland, and Oldfield (2016) encourage teachers to reflect on the “four C’s” when using technology to enhance a lesson. Ask yourself, does the use of technology allow for increased collaboration or critical thinking opportunities? Are students able to communicate their ideas uniquely and are students able to demonstrate

creative thinking? Following this format provides for lessons that foster student engagement, with technology as an enhancement tool. Digital formative assessments provide teachers the opportunity to give individual feedback quicker and in real-time than traditional non-digital paper and pen formative assessments. Thus, when students are engaging, receiving timely feedback from their teachers, and intrinsically motivated by the feedback they are receiving from their teacher, learning is taking place (Timmis et al., 2016).

## Types of Assessments and Tools

There are a plethora of ways in which assessment can occur. Assessment is a broad term that encompasses all actions that teachers and students engage in to retrieve information that can be used to evaluate and change teaching and learning at the end of a given time period (Timmis et al., 2016). Teachers are able to experience drastic improvements in their skills when making regular use of assessment methods.

As previously mentioned, assessment falls into two broad categories: formative and summative approaches. Formative assessment is a means for determining how the learning is taking place, on the way toward meeting some end goal. Alternatively, the final outcome of a learning intervention is measured through summative assessment. Both of these types

of assessment are crucial in supporting current and future students in their learning.

## **Formative Assessment Technology Tools**

Gone are the days of simple clickers and bells. Educators now have access to a variety of tools that allow for instant feedback. Retrieval Practice is an assessment tool that takes place during the learning process to help build knowledge networks in students' minds and help reinforce their learning. It allows the educator to continuously gauge student learning while making it effortful and challenging (Agarwal, 2017).

### **Retrieval Practice Applications**

Retrieval practice focuses on helping students retrieve information out of their heads, instead of focusing on pouring knowledge into their heads (Agarwal, 2017). It allows the educator to ensure that accurate questions and assessment tools are being utilized to effectively analyze student learning. Instant feedback may be gathered on an individual basis or as a group, depending on the dynamics of the classroom.

Socrative, Kahoot, Quizziz, and Quizlet are all examples of examples of educational technologies that allow teachers and students to attain instant results on the learning taking place. The students may access the system using a variety of different

technological tools. They might use the tool from within a learning management system (LMS), or on a mobile device.

Teachers can have students work through retrieval practice together (such as when using a polling tool like PollEverywhere or a game-like tool like Kahoot).

There are also educational technology tools that are more self-paced and provide opportunities for learners to work at their own pace. Many of these services are starting to allow for either approach to be used. Quizlet flashcards and some of their games such as Scatter, Match, and Gravity can be used in a self-directed way by students. Quizlet also has a game called Quizlet Live that can be used with a group of students at one time for retrieval practice.

## **Summative Assessment Technology Tools**

Learning outcomes must also be observed from a broader scope, allowing for benchmarks of achievement to be evaluated. Summative assessment tools allow educators to analyze the overall achievement of students. Two broad methods for using technology for summative assessment are discussed in this section: The Learning Management System (LMS) and electronic portfolios (e-Portfolios).

## Learning Management Systems

A learning management system (LMS) is often considered the centerpiece of a teacher's summative assessment toolbox. Accessibility is a vital part to utilizing both formative and summative assessment tools virtually. Teachers must have differentiated technology tools that are aligned with student learning outcomes and that allow the effective gauging of student learning (Steele, 2015). Most Learning Management Systems have embedded tools that allow for the ease-of-access by most teachers, regardless of their technology familiarity.

The LMS allows for transparency amongst all stakeholders in the learning process. Students can access resources and assignments while communicating with their peers and teacher. Parents may monitor student progress while also communicating with the teacher. Often times what is communicated in class does not make it home to the parents. The LMS removes this hindrance in communication.

Finally, for the teacher, the LMS is the ultimate assessment tool. The most beneficial part of the LMS is that both formative and summative assessments may be given through it. If your school or district has already adopted an LMS, it is best to use it since students, parents, and other stakeholders will already be familiar with it.

If your school or district has not adopted an LMS, there are

still options available. You may choose to operate your course by using a LMS like Schoology, Jupiter Ed, Engrade, Canvas, or Google Classroom. Many school districts have implemented gradebooks that mimic the LMS gradebook, but lack the accessibility in linking and hyperlinking to the array of assessment tools that they use regularly. The systems previously mentioned allow you to run your course, virtually as minimally or involved as you would like, and are tailored to accommodate all levels of technology users. The experienced or novice teacher may manipulate the LMS in a way that suits the needs of their students and their course design.

## **ePortfolios**

One method of helping students demonstrate their global learning is through the use of an eportfolio. An E-Portfolio is an electronic account of student work/progress used at all educational levels from early education through higher education. Eportfolios can support deep learning and support reflective practices across various learning contexts as they facilitate overall learning. The blend of learning products that exist within the eportfolio makes learning visible to all stakeholders, but especially the student. The eportfolio allows for students to reflect on and integrate their work to view overall learning progress. The reason that eportfolios have become a successful assessment tool is because they require significant and purposeful work from the student. During the

development process students may experience student–faculty interaction, which allows students to evaluate and discuss their own learning over time (Harring & Luo, 2016).

Through websites like Google an educator may receive step-by-step guidance on how to create an eportfolio with their students. This tool would of course be most effective if linked to the LMS already utilized by the institution. If the school-site is not accessing a LMS, an eportfolio is still an option, as the student may compile the artifacts via an alternative fashion. Eportfolios make learning visible to all stakeholders. Most importantly to the students, it can help heighten self-efficacy. This powerful pedagogical tool can support deep and integrative learning. Deep learning may occur as students are able to make their learning relative to their own experiences. Developing an eportfolio allows the students to make connections to their everyday life, while showcasing their areas of strength. Eportfolios allow students to show their experiences, along with reflecting on their own learning and the progress made therein (Harring & Luo, 2016).

The artifacts, rubrics, and criteria for the eportfolio will vary based on the course layout and educational level of the students. Ultimately, the eportfolio would involve signature assignments representative of student learning over a longer period. The period may span a semester, a school year, or even a school career. Digital assignments through the LMS may allow for summative assessments to be less stressful. Students

have different approaches to learning and to foster and enhance their education we need to understand their learning style. This includes how assessments have a direct impact in learning, and how they perceive themselves (Al Kadri et al., 2009). The students verbalized the negative impact felt from the limited learning opportunities that summative assessments offer and expressed preference for formative assessment, which may foster a deeper approach to learning. Student achievement is elevated when they are able to participate in both formative and summative assessment to guide learning. During the summative assessment process students may be allowed to upload videos, files, and documents they originate for benchmark assignments developed by their teacher to show their overall learning.

## Tool Selection

The accessibility of the technology tools and apps can be overwhelming for any teacher to choose. Picking the right app or tool that your students can easily navigate while driving home your lesson objectives. When you are selecting a tool take into consideration the following items:

### Start small

Trying to get a handle on too many technologies causes unnecessary stress. Learning a digital instrument takes time

and applying it as part of the lesson can range from an hour to a couple of days. Knowing if it will work smoothly during the class session. You also must provide secure and specific directions that you go over, demonstrate and have availability all semester. Having clear instructions that you review, model and have available all semester is helpful.

## **Focus on your goals**

It can be tempting to get caught up in the list of features a technology tool provides and miss determining whether or not the educational goal will be met through its use. Choose a few tools at a time and try them out. Give them a test run to see which are the easiest to learn and use. Read the reviews to gauge whether they met the basics needs other customers and how likely will the product align your lesson goals. This method leads to the actual picking of the best tools that will serve your needs. The more you try out the tools, the easier it gets because you will know what you want. Move on to another if the app no longer meets your demands.

## **Assess what you have**

Take stock of the technology available in your class and on your campus. Knowing the technology capabilities determines in what capacity the app is useful. Also, you should find out what websites and apps your students used in the past. Be

mindful of district firewalls, therefore check ahead if the technology is capable.

## **Consider whether to pay for tools**

As a teacher, the excitement of a new tool and the possibilities of enhancing your lessons is overpowering. Getting clear on how you intend to pay for them is crucial. Questions to ask yourself include are you willing to pay or go the free route? If you are ready to pay, who will be paying for the tool? What are the included features in the tech and how much of a difference does paying make? How does the company make their money and stay sustainable, when they give their tool away for free? Is there a potential for our students' data to be the produce that is being bought and sold?

## **Revise and reflect**

Go back to your goals and reflect on how well has the tool fulfilled your needs. How long and often is the app used? Do any problems arise while using the new tech? Remember, if it is not working well enough, you can pick another. Determine how it will be paid for – this reflection can reinforce the digital divide if we do not think carefully about who will bear the cost.

### Some technology-based assessment tools and resources

- [Retrieval Practice Tool](#)
- [Socratic](#)
- [Kahoot](#)
- [Quizizz](#)
- [Quizlet](#)
- [Poll Everywhere](#)

## Conclusion

The selection of tools may seem like a difficult process at first glance. However, when you take into consideration the hype of the tool, privacy, and the legal ramifications you may have using a tool, take a deep breathe and start small and determine whether the tool you are selecting will achieve the goals you have for using it in your classroom. By utilizing the steps of selecting tools discussed in this chapter, you will be trying the best tools for your classroom that are available. Also, you will more likely implement and keep the tools you select. Therefore, take your time, go through the steps discussed in this chapter, and you will have plenty of powerful tools to utilize in your classroom.

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## 7.

# SUBJECT EXPERTISE AND EVALUATION

Jessica Kahlow

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Instructional designers (IDs) play a pivotal role in the design and evaluation of educational experiences. Their expertise in pedagogy, learning theory, and educational technology equips them to design courses that foster meaningful learning. However, a common question arises: *How can IDs design and evaluate courses when they don't know the content?* This chapter explains why instructional designers do not need to be SMEs to be effective, the value they bring to the educational process, and how they collaborate with SMEs to create impactful learning experiences.

## The Role of the SME in Evaluation

But first, let's talk about the role of the SME in evaluating courses. In the process of designing and evaluating educational courses, instructional designers (IDs) and subject matter experts (SMEs) play distinct yet complementary roles. While

IDs focus on course structure, pedagogy, and user experience, SMEs bring specialized knowledge that ensures the course content is both accurate and relevant. This chapter delves into the crucial role SMEs play in course evaluation, highlighting their responsibilities and how they collaborate with instructional designers to create high-quality learning experiences.

## **1. Ensuring Content Accuracy and Relevance**

One of the primary roles of an SME during course evaluation is to verify the accuracy of the content. SMEs meticulously review the material to confirm that all facts, data, and information are correct and align with current academic research or industry standards. This step is vital for maintaining the credibility of the course and ensuring learners are provided with reliable information.

SMEs also assess the content's relevance to the stated learning objectives. They ensure that all topics covered contribute meaningfully to the learning outcomes and that the material reflects the real-world applications necessary for the learner's success in the field.

## 2. Reviewing Depth and Breadth of Content

SMEs evaluate whether the course content offers an appropriate level of complexity for the target audience—whether it is introductory, intermediate, or advanced. They consider whether the material is presented at a depth that matches the learners’ needs, ensuring it neither overwhelms novices nor underserves advanced learners.

In addition, SMEs ensure that the course covers all necessary topics thoroughly. They check for balanced coverage, making sure that no critical details are left out and that excessive or unrelated content is avoided. This helps create a comprehensive learning experience that is neither too superficial nor overly detailed.

## 3. Reviewing Instructional Material Quality

SMEs contribute to the clarity and comprehensibility of instructional materials. They review explanations, examples, and supplementary resources to ensure that complex concepts are conveyed in a way that learners can understand. This feedback can help refine content so that learners at various levels can grasp the information effectively. SMEs may also suggest additional readings, articles, or multimedia resources

that enhance the learner's understanding of the topic. Their expertise allows for recommendations that add depth and variety to the learning experience.

## The Role of Instructional Designers in Evaluation

Instructional designers are experts in the art and science of learning. Their competencies include understanding how learners absorb, retain, and apply information, as well as how to design content that supports these processes. These skills enable IDs to:

- **Apply Learning Theories:** IDs use theories such as constructivism, behaviorism, and cognitivism to shape learning environments that encourage active participation and knowledge retention.
- **Utilize Design Frameworks:** Models like ADDIE (Analysis, Design, Development, Implementation, Evaluation) and Bloom's Taxonomy are central to how IDs approach course creation and feedback, ensuring that each stage is purposeful and effective.
- **Incorporate Universal Design Principles:** IDs integrate strategies that make learning accessible and inclusive, considering varied learning styles, abilities, and needs.

## Why Instructional Designers Don't Need to Be SMEs

The ID's strength lies in their specialized knowledge of instructional design principles, which are transferable across disciplines. Here's why they don't need to be subject matter experts:

### 1. Focus on Pedagogy Over Content

Instructional designers are experts in *how* content should be taught, not necessarily *what* content is being taught. Their role centers on facilitating learning through effective course structure, intuitive navigation, engaging multimedia, and assessment alignment. By focusing on the design aspect, IDs ensure that learners can interact with content in a way that maximizes comprehension and retention.

### 2. Collaboration with Subject Matter Experts

The most successful course development

projects are collaborative. SMEs contribute the content knowledge that is essential for accuracy and comprehensiveness, while IDs contribute their design and pedagogical expertise. This partnership allows each professional to work to their strengths.

As an instructional designer, I am not an expert in every course I design. I've designed courses in everything from microbiology to astrophysics to social work (and more). Am I an expert in any of those things? No. Are they still good courses? Yes.

### **3. Objectivity and a Fresh Perspective**

An ID's distance from the content can be an asset. Without being immersed in the subject, IDs can evaluate courses from a learner's perspective, identifying areas where instructions may be unclear, learning objectives may be misaligned, or engagement may be lacking. This objectivity enables them to focus on the user experience and learning flow, ensuring that courses meet the needs of diverse learners.

Evaluation is a key part of the instructional design process. When IDs assess a course, their focus is on elements such as:

- **Alignment of Learning Outcomes and Assessments:** IDs ensure that the learning goals stated at the beginning of a module are effectively assessed by the end.
- **Content Organization and Navigation:** They review whether the course structure allows for logical progression, easy navigation, and minimal cognitive load.
- **Engagement and Interactivity:** IDs evaluate whether the course incorporates elements that engage learners, such as multimedia, discussion forums, or practical exercises.
- **Accessibility and Inclusivity:** IDs check that the course adheres to standards for accessibility, making content available to learners with different needs and abilities.

These factors are essential regardless of the specific subject matter. By concentrating on these components, instructional designers ensure that a course meets quality standards and fosters a positive learning experience.

## Common Myths: Instructional Designers and Subject Expertise

It is a common misconception that instructional designers need to be SMEs to provide valuable feedback or create meaningful courses. Let's debunk some of these myths:

- **Myth 1: Only SMEs Can Ensure Content Accuracy**

While SMEs are essential for content accuracy, IDs are crucial for making that content teachable and learnable. IDs ask questions and guide SMEs on how to present information so that it is digestible to the learner.

- **Myth 2: IDs Without Subject Expertise Cannot Create Deeply Engaging Content**

Engagement comes from how content is presented, not just what it is. IDs know how to weave engagement strategies into any content by leveraging design principles and interactive tools.

- **Myth 3: IDs Can't Effectively Evaluate Courses Outside Their Subject Area**

IDs bring an understanding of evaluation frameworks and learner-centric design that allows them to assess a course's quality, regardless of the topic. Their evaluations focus on whether the course structure supports learning, not on the depth of content knowledge.

## Wearing Both the ID and SME Hats

In some cases, professionals may find themselves taking on both the role of an instructional designer and a subject matter expert. This dual role can be both advantageous and challenging. When one person embodies expertise in both course design and the subject content, there are unique considerations to keep in mind to maintain objectivity, quality, and balance throughout the course development and evaluation processes.

## Advantages of Being Both ID and SME

1. **Streamlined Communication:** One of the most significant advantages of wearing both the ID and SME hats is the elimination of back-and-forth communication between separate roles. Decisions can be made more swiftly, as the person in the dual role already possesses the relevant knowledge and design expertise.
2. **Deep Integration of Content and Pedagogy:** With expertise in both areas, the dual-role professional can seamlessly align course content with instructional strategies. This integration ensures that the learning materials and assessments are pedagogically sound and content-rich.
3. **Unified Vision:** The course can reflect a cohesive vision because one individual oversees both content accuracy and instructional strategy. This unity can help create a course that is both engaging and informative without disconnects between the content and its presentation.

## Challenges of Being Both ID and SME

1. **Potential Bias:** One of the main challenges is maintaining objectivity. As an SME, there is a natural tendency to focus heavily on content depth and complexity. However, when acting as an ID, the goal is to simplify complex topics for the target learner.

Balancing this dual focus can be difficult; there may be a risk of overloading learners with information or, conversely, oversimplifying key concepts.

2. **Balancing Detail with Pedagogy:** SMEs often have extensive knowledge and may assume that certain advanced details are necessary for learners. As an ID, it is important to step back and determine which details are truly essential and which might overwhelm or distract from the learning objectives.
3. **Managing Time and Resources:** Combining the roles of ID and SME can be time-intensive. The individual must allocate sufficient time to both aspects of course development, which requires disciplined time management and clear prioritization.

Wearing both the ID and SME hats can be a rewarding challenge that combines deep content knowledge with effective course design strategies. While this dual role offers significant advantages, such as streamlined decision-making and a unified course vision, it also demands careful balance, objectivity, and time management. By approaching each phase of the course creation process with a clear focus and involving external reviewers for additional perspectives, professionals can create courses that are engaging, learner-centric, and content-strong.

## Conclusion

Instructional designers are the bridge between content experts and learners. They don't need to be subject matter experts because their role is to shape how content is delivered in a way that enhances learning. By partnering with SMEs, maintaining an objective viewpoint, and applying universal instructional design principles, IDs create courses that are effective, engaging, and accessible. The distinct yet complementary expertise of both IDs and SMEs ensures that learners receive high-quality education that is both accurate and pedagogically sound.

## Discussion Questions

1. Do you think instructional designers (IDs) need to be subject matter experts (SMEs) in the content they are designing courses for? What role does this distinction play in the design process?
2. In your opinion, what are the most significant benefits of having instructional designers and subject matter experts collaborate on course design and evaluation? How does this partnership enhance the quality of the learning experience?
3. The chapter mentions that an instructional designer's distance from the content allows them to evaluate courses from a learner's perspective. How does this

- “outsider” view contribute to better course design?
4. Consider the myths about instructional designers (e.g., they need to be SMEs to ensure content accuracy or create engaging content). How do these myths impact the understanding of the role of instructional designers in the educational process?
  5. What are some strategies that instructional designers can use when evaluating a course without being an expert in its content? How can they ensure that the course meets educational goals even without deep subject knowledge?
  6. Discuss the pros and cons of wearing both the instructional designer and subject matter expert hats. How can someone balancing both roles ensure that they remain objective and effective in both areas?
  7. Why is it important for an instructional designer to focus on pedagogy and learner experience, rather than content expertise? How does this focus align with modern educational goals?



PART II

# GENERATIVE AI AND ASSESSMENTS



## 8.

# INSTRUCTORS' USE OF AI IN TEACHING

Jessica Kahlow

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With the onset of AI and its increased availability, it has become a hot topic in higher education. In their 2023 literature review, Pradana et al. synthesized 93 articles about the use of ChatGPT in education, highlighting its increasingly profound popularity, since ChatGPT did not become available until 2021. While most of this conversation is centered around students' use of AI in the classroom, less has been said about how faculty might benefit from AI in their teaching. One thing the research does seem to agree on is that AI and Chat GPT are good at reorganizing existing information and are less good at making up new information. For instance, Kiryakova and Angelova (2023) explored Bulgarian university professors' perspectives on the potential and challenges of integrating ChatGPT into teaching activities. Their survey results indicated overall positive attitudes toward using ChatGPT to support teaching tasks, engage learners, and promote critical thinking (Kiryakova &

Angelova, 2023). Therefore, this chapter focuses on how instructors use AI in higher education teaching. Instructors primarily use AI to help them develop content in two ways: to create content and to deliver content.

## On using AI to develop content

Instructors can use AI tools to generate or curate educational content, such as quizzes, assignments, rubrics, lecture materials, presentation slides, and reading lists. They may also use it to create brief summaries of assigned course materials, module or course overviews and recaps, and even to reply to student messages and give feedback (Crompton & Burke, 2023; Joyce, 2023; LaPierre, 2023; Mondal et al., 2023). Meron and Araci (2023) looked at ChatGPT's potential to help instructors design higher education courses. In their article, they used ChatGPT to develop materials and then reflected on what that process looked like by evaluating the strengths and weaknesses they encountered. They noted that ChatGPT was great for saving time, structuring text, and aiding brainstorming, its weaknesses included generating generic content requiring substantial human intervention and refinement (Meron & Araci, 2023).

## On using AI to deliver content

AI can also be used to help instructors deliver content to students, and this is particularly the case in online courses. Instructors might use text-to-speech to create a voiceover with an AI-generated voice, they might use an avatar instead of their real image, or they might use an AI rendering to create video and/or audio.

In terms of using AI to create audio content, research so far has focused on the quality of the audio and how humanlike it sounds. For instance, Kim et al. (2022) found that AI instructors with humanlike voices are seen as more credible than those with machinelike voices. Additionally, the perceived social presence mediates this relationship, and credibility influences students' intentions to enroll in future AI-led courses. This highlights the significance of creating AI instructors that students perceive as credible.

In terms of using AI to create video content, research so far has focused on whether instructors include themselves in the video versus an avatar of some kind. For instance, Yuan et al. (2021) explored how changes in instructors' image and voice in online video courses impact learner outcomes. Two experiments were conducted with college students, altering instructor images and voices. Results showed that videos without instructor images led to better academic performance and less boredom. Real instructor images enhanced satisfaction with interaction

and teaching. Real images were preferred over virtual ones, and beautified images over original ones. Real voices were preferred over synthesized ones. Positive evaluations of instructor image and voice correlated with social presence, satisfaction, enjoyment, and negatively with boredom. Instructor image positively predicted transfer learning achievement. The study suggests integrating instructor presence with course design and utilizing technology for image and voice processing in online course development.

Finally, in terms of using AI to create audio and video content,

For instance, Pi et al. (2022) explored the effectiveness of using AI-generated virtual instructors in video lectures as a cost-effective alternative to real human instructors. Their results indicated that the AI likable instructor significantly improved students' learning performance and motivation without diminishing their attention to the learning materials. This suggests that instructional designers can leverage AI voices and images of likable humans to enhance student motivation and learning outcomes in instructional videos.

## Best Practices for Ethically Using AI to Create or Develop Content

Almost every study also considers, to varying extents, the ethics of using AI to develop and deliver content. However,

almost all of these considerations are rather vague statements indicating that more research is necessary. In this section, we summarize these vague statements into a couple of best practices that we use and hope that others can use as they develop content with AI. Based on this, there seem to be two main best practices for integrating AI:

1. always review AI-generated content for accuracy and quality
2. always cite any AI tools used to help make content

The first best practice is to cite the AI tools or resources employed, similar to how you would cite any other source or technology used in your research or educational materials. There are several ways you could do this, depending on the AI and how it is used. You could:

**In-Text Citations:** One option would be to include the name of the AI tool or technology and the year of its publication or development in parentheses within the text where it is first mentioned. For example: “This content was drafted using OpenAI’s ChatGPT-3 model (OpenAI, 2024).” You could put these in-text citations in everything in the course that you use AI for, including paragraphs of text, videos, slides, etc. This might be a good option if you regularly used AI throughout the course to develop content.

**Reference List:** Another option would be to include a full

citation in the reference list at the end of your course materials. The citation should include the author (if applicable), the name of the AI tool or technology, the year it was developed or published, and any other relevant information. For example: “OpenAI. (2024). ChatGPT-3.” You could even link to the exact chat you used for full transparency.

**Course Design Acknowledgements:** Finally, you may also include a more general statement in your course that specifies the technologies you used in the course and how you used them. For example, you might say something such as “Some of the content in this course was drafted or refined using AI (Open AI, ChatGPT version 3.5). All content has been reviewed and meets the university, instructor, and instructional design team’s standards for quality.” This might be a good option if you primarily used AI to refine your existing content.

Related to these best practices, you may also consider including a notice about your expectations and preferences for students using AI in your course by clarifying whether students are permitted to use AI for the assignments in the course. For example, you might include a statement like

In this course, you are encouraged to use AI tools to support your work. To maintain academic integrity, if you use AI tools, you must disclose that you used the AI tool and properly attribute it using in-text citations and quotations and listing it on the reference page. This should

include the name(s) of the tool(s) used and a note about how the tool was used for the assignment.

Whatever you choose, by citing AI tools and resources properly, you give credit to the developers and provide transparency to your audience about the sources and technologies used in your course materials. Further, citing the AI materials used in your course, you demonstrate to students the importance of academic integrity and proper attribution in academic work. This modeling encourages students to follow ethical practices in their own research and writing, fostering a culture of honesty and respect for intellectual property. It also helps students understand the significance of giving credit to the creators of the AI tools and resources they rely on, promoting responsible scholarship and integrity in their academic endeavors.

Second, always verify the accuracy and quality of AI-generated content before incorporating it into the course. Review the material for factual errors, clarity, and coherence to maintain credibility and promote effective learning. There are also several best practices for doing this, including:

Read, listen, and watch any content that you used AI to make. Verify the accuracy of information presented in the content. AI may sometimes generate inaccurate or outdated information, so it is essential to fact-check and ensure that the content aligns with current knowledge and standards in

the field. You never know when it might decide to throw something completely random, off-base, or inappropriate out there.

Verify that the content is original and not plagiarized from other sources. AI-generated content should be unique and add value to the course rather than simply replicating existing materials.

Verify the answers to multiple-choice questions generated with AI. Even if you gave it the exact text to create the questions, be sure that there is only one correct answer and that it is actually the correct answer.

By following these best practices, educators can harness the power of AI to create high-quality, engaging, and effective content for online higher education courses while supporting student learning and success.

## Teaching Contexts for AI Use

### Quizzes

Using ChatGPT to create effective online quizzes and quiz questions involves a few key steps. Here's a guide to help you get started:

1. Identify what is being Assessed

- Determine the key concepts, skills, or knowledge areas your quiz will cover.
- Align questions with these objectives to ensure the quiz effectively measures the desired outcomes.

## 2. Decide on Question Types

- Multiple Choice: Good for assessing recognition and recall.
- True/False: Useful for checking basic understanding.
- Short Answer: Tests recall and comprehension.
- Fill-in-the-Blanks: Measures understanding of key terms or concepts.
- Matching: Helps assess the ability to connect related concepts.

## 3. Prompt ChatGPT to Create Questions

- Provide context and specify the type of questions you need.
- Example prompts:
  - *“Generate a multiple-choice question about the causes of World War II.”*
  - *“Create a true/false question on the fundamentals of photosynthesis.”*
  - *“Provide a short answer question about the water cycle.”*

#### 4. Ensure Quality and Accuracy

- Review the questions for clarity and correctness.
- Make sure there's only one correct answer for multiple-choice questions and that the options are not misleading.

#### 5. Create Explanations

- Generate feedback or explanations for each question to enhance learning.
- Example prompt: *“Provide an explanation for why the answer to the following multiple-choice question is correct.”*

#### 6. Test

- Test your quiz with a small group to identify any issues.
- Use feedback to refine questions and improve clarity.

## Example Interaction with ChatGPT

**Prompt:** *“I need a multiple-choice question on the basics of machine learning, including four answer options with one correct answer.”*

### **ChatGPT Response:**

*Question:* What is the primary purpose of supervised learning in machine learning?

- a. To find hidden patterns in data
- b. To make predictions based on labeled data
- c. To group similar items without prior labels
- d. To evaluate the performance of a model

*Answer:* b) To make predictions based on labeled data

**Feedback:** Supervised learning involves training a model on a labeled dataset, which means the data includes input-output pairs. The goal is to make predictions or decisions based on this labeled data.

Using these steps and examples should help you effectively create and refine online quizzes with the assistance of ChatGPT.

OpenAI. (2024). *How to use ChatGPT to make quizzes*. ChatGPT 3.5.

## Assignments

Instructors can use ChatGPT to create clear, engaging, and well-structured assignment prompts by leveraging its ability to generate ideas, improve wording, and ensure alignment with learning objectives.

## ChatGPT for Brainstorming Assignment Ideas

One of my favorite ways to use ChatGPT is for brainstorming assignment ideas. Instructors can use ChatGPT to brainstorm different types of assignments (essays, presentations, case studies, etc.) related to course content. ChatGPT can suggest creative approaches to assessing student understanding.

- **Example:** “I need assignment ideas for my environmental science class.”
- **ChatGPT Output:** “1) Write a research paper on the impact of plastic pollution on marine life. 2) Create a public awareness campaign on climate change for your community. 3) Design a sustainable city plan that addresses water conservation, energy use, and waste management.”

By using ChatGPT as a brainstorming partner, instructors can develop more engaging, clear, and effective prompts that align with learning objectives and enhance student performance.

## ChatGPT for Instructions

ChatGPT can help instructors create prompts that target different cognitive levels, from basic recall to higher-order thinking skills like evaluation and creation.

- **Example:** “Can you write assignment prompts that target different Bloom’s Taxonomy levels for a business ethics course?”
- **Output:** “1) **Remember:** Define corporate social responsibility. 2) **Understand:** Explain how corporate social responsibility affects consumer behavior. 3) **Apply:** Analyze a case study of a company facing an ethical dilemma and suggest a course of action. 4) **Evaluate:** Critically assess the effectiveness of corporate social responsibility initiatives at a global corporation. 5) **Create:** Develop your own ethical framework for businesses operating in developing countries.”

Instructors can provide a brief description of the course or unit objectives, and ChatGPT can suggest assignment prompts that align with the intended learning outcomes. It can also help refine the scope and focus of the assignment.

- **Example:** An instructor teaching critical thinking could ask, “Can you help me craft a prompt that encourages students to analyze a historical event from multiple perspectives?”
- **Output:** “Analyze the causes and consequences of the American Civil War from both the Union and Confederate viewpoints. Discuss how differing ideologies on state rights and slavery influenced the outcome.”

ChatGPT can help instructors refine the language of their assignment prompts to make them clearer and more accessible to students. It can suggest edits to avoid ambiguity, clarify expectations, and ensure instructions are easy to follow.

- **Example:** “Can you make this assignment prompt clearer? ‘Write a report on climate change and its global impact.’”
- **Output:** “Write a 5-page report that explains the causes of climate change, its effects on different regions of the world, and possible solutions to mitigate its impact. Include specific examples and cite at least three sources.”

ChatGPT can suggest ways to differentiate assignments for diverse learners, including students with different learning needs, preferences, or proficiency levels. It can also suggest alternative formats (like presentations instead of essays) to accommodate different skills.

- **Example:** “How can I adapt this assignment for students with different learning styles?”
- **Output:** “For students who prefer visual learning, offer the option to create an infographic instead of writing a report. For those who prefer hands-on activities, allow them to design a field study or an experiment related to the topic.”

## Discussions

If you're thinking that all of that is too much to do, you're not on your own. You can use AI to help you make your discussions good. For instance, Chat GPT is a great tool to help you achieve these discussion best practices. For example, you may ask Chat GPT to . . .

- Can you suggest a follow-up prompt for this discussion so students know how to reply?
- Can you suggest follow-up questions to extend the discussion based on this prompt?
- How can I add depth and complexity to this discussion prompt?
- What modifications can I make to encourage critical thinking in responses to this prompt?
- What can I add to this prompt to encourage reflective responses?
- What can I do to prompt consideration of alternative viewpoints in response to this question?
- What multimedia elements can I add to enhance this discussion prompt?
- How can I connect this discussion prompt to real-world applications?

## Examples

Okay so let's take a look at some examples.

## Example 1

Read this prompt and think about how you or your students might reply to it.

### Original

If a particular neighborhood won an award for the state's best neighborhood watch program of the year, what would you expect that neighborhood would be doing to earn such recognition?

Okay, now think about how we could revise it to make it better.

### Revised

Your neighbors are complaining that their garden gnomes are being stolen so you're creating a new neighborhood watch program in your neighborhood. In your initial post, describe what

you might want your neighborhood watch to do to reduce theft.

How would you get others to participate?

Then, read a classmate's post and describe what might work well and what might not work so well in their neighborhood watch plan. Be sure to use concepts from class to support your answer.

The revised prompt introduces a practical scenario (garden gnome theft) for relatability, enhancing engagement. It incorporates a second part that encourages interaction, critical thinking, and the application of class concepts when analyzing a classmate's post, thereby deepening the discussion and promoting a comprehensive understanding.

## Example 2

Okay, now let's take a look at another example.

## Original

### **Read**

Virtual team development (Kahlow, 2024)

### **Post**

Answer at least three of the questions from the end of the chapter using the readings from this module and the information provided in the case study.

## Revised

### **Read Virtual team development (Kahlow, 2024)**

This case study follows Jackie as she begins working on a remote team for her new job. In addition to highlighting some of the challenges and benefits of finding and performing remote work, this case study provides further insight into the stages of group development in an

online team. The case study background information about related concepts are present within the case; these include the hiring process, socialization, phases of group development, and some general challenges and benefits associated with working remotely. The case concludes by asking students to consider ways that primarily virtual teams could best use the time they have together in person.

### **Initial Post**

In your initial post, answer at least three of the questions from the end of the chapter using the readings from this module and the information provided in the case study.

### **Replies**

- Discuss your answers to the questions with your classmates. In doing so you might. . .
- Reflect on the challenges and benefits Jackie faces in her remote work journey.
- Unpack the stages of group development in online teams. Have you witnessed similar stages in your virtual teams?

- Dive into the hiring process and socialization in a remote setting. What creative onboarding strategies can you suggest for virtual teams?
- Imagine the possibilities! How can primarily virtual teams make the most of their in-person time together?

The revised prompt gives background on the reading, improves structure and expectations for replies, and prompts students to share personal experiences, adding a practical and relatable aspect to the discussion.

## Rubrics

Making good rubrics with specific and detailed criteria for each rating can be difficult and time-consuming. Enter—Chat GPT. Chat GPT can transform existing assignments and discussion prompts into detailed and specific rubrics. Chat GPT is great at restructuring information (Estrada & Fabián, 2024), so it's a great way to make a rubric if you already have the assignment directions made. Such an approach expedites the rubric-making process and ensures that the rubric aligns well with the existing assessment. Chat GPT can be very

helpful in developing assessment rubrics (Estrada & Fabián, 2024). Estrada and Fabián (2024) found that the AI-generated rubric in their study provided a clear and transparent framework for evaluating student work. So, Chat GPT allows instructors to efficiently generate rubrics, so long as the goal is to use the generated rubric, or parts of it, that align with the goals and outcomes of the assessment (Estrada & Fabián, 2024). While instruments are not fully replicable due to Chat GPT's unique responses in each interaction, their responses can serve as a great starting point for developing rubrics. Estrada and Fabián (2024) recommend developing a clear and specific prompt in the message sent to Chat GPT. The directions should include instructions for what you want Chat GPT to do, the format you want the output to be in, and any other restrictions you have for the rubric (Estrada & Fabián, 2024). As with anything generated with AI, they noted the importance of reviewing the generated content for accuracy.

## How To Make A Rubric With Chat GPT

### **Step 1: Locate the assessment you want to make a rubric for.**

Before you can use Chat GPT to make a rubric, you need to have your assignment or rubric.

For the purposes of this example, we're using the example in Box 1. The assignment directions outlined in Box 1 are from a

graduate course in assessment and evaluation. The assignment is for students to write a 1-2 page reading reaction where they engage with the materials assigned in that module.

## **Box 1: Reading Reaction Assignment**

### **Directions**

After reading the assigned materials for the module, you will write a two-page (or one-page single-spaced) paper to react to the assigned readings in this module. Do not simply summarize the reading. Instead, engage the content by agreeing, disagreeing, applying, questioning, and/or extending the course materials. In doing so, you may write about anything that stood out to you as valuable in the materials. I've included questions below to get you thinking about the material more, but you can reply to some or none of these.

- How do diverse assessment methods like simulations and e-portfolios enhance learning engagement and authenticity?
- What are the benefits and challenges of integrating peer assessment and multimedia in educational settings?
- Reflect on how technology can be effectively utilized to improve assessment practices in your own teaching or learning context.
- What are the key factors influencing the high-stakes nature of assessment in higher education?

- How can educators balance the pressures of quality assurance, employability needs, and diversity considerations in assessment practices?
- Discuss strategies or reforms that could potentially alleviate challenges such as grade inflation and student dissatisfaction.
- Compare and contrast formative and summative assessment approaches. How can each type contribute to enhancing student learning outcomes?
- Reflect on how assessment data can be effectively used to inform instructional decisions and program improvements.
- Discuss the importance of aligning assessment strategies with educational goals and student needs.
- Why is it important for assignments to resonate culturally and hold significance for students? How can instructors achieve this in diverse educational settings?
- Reflect on your own experiences with culturally affirming assignments. How did they impact your learning and engagement?
- Discuss practical strategies for communicating course design and assignment expectations effectively through the syllabus.
- How are you doing? Is there anything you'd like me to know or share?

## **Guidelines**

- Refer to the rubric for additional grading criteria.
- Do not simply summarize the reading. Instead, engage the content by agreeing, disagreeing, applying, questioning, and/or extending the course materials.
- Cite any additional materials used in APA format.

## Step 2: Decide if you have any specific criteria and ratings in mind.

### Criteria

You don't need to know exactly what your criteria will be, but it does help to have a general idea of what they should be. Ideally, the criteria for the rubric should align with the assessment and the learning outcomes associated with that assessment (Chen & Ho, 2019). Generally speaking, you should aim to have about three to nine criteria for any given assessment. Unless you tell it to give you fewer, Chat GPT will often give you a lot of criteria, so even if you don't have something specific in mind you still might want to specify the number of criteria you're looking for.

### Ratings

As Chan and Ho (2019) describe, writing the descriptions for each rating is the most challenging part of creating rubrics (p. 542). This is where Chat GPT really shines when you're using it to help you make rubrics. Again, if you want all your rubrics

to use a consistent rating scale, it would be good to tell Chat GPT which one you want to use, or, again, at the very least, the number of ratings you want to have. Some common ratings include:

- Met and not met or marks and no marks
- Meets expectations, approaching expectations, does not meet expectations (this is my favorite)
- Excellent, Average, Poor
- A, B, C, D, F or 5, 4, 3, 2, 1

In any case, you will want to include an explanation of the expectations for each rating, including a description of the characteristics of that level of work. This is where Chat GPT comes in.

### Step 3: Write and enter your Chat GPT prompt

Now that you have your prompt and any criteria or ratings identified, you can enter your prompt into Chat GPT using the following template:

“Can you make a rubric in table format with the following ratings **[insert ratings you selected in step 3]** and with these criteria **[insert criteria you identified, if any, in step 2]** for this assignment: **[copy and paste assignment directions]**?”

For this example, I used this prompt: Can you make a rubric in table format that uses the following ratings: meets expectations, approaching expectations, and does not meet expectations; and the following criteria: content, examples, and writing quality; for this assignment: [here I copy and pasted the entire assignment directions from Box 1]?

The complete response from Chat GPT is provided in Box 2.

### **Box 2: Chat GPT's Rubric**

Absolutely! Here's a rubric for the Reading Reaction Assignment using the ratings "Meets Expectations," "Approaching Expectations," and "Does Not Meet Expectations":

### **Reading Reaction Assignment Rubric**

Criteria	Meets Expectations	Approaching Expectations	Does Not Meet Expectations
<b>Content</b>	<p>Thoroughly engages with the reading material. Demonstrates a deep understanding by agreeing, disagreeing, applying, questioning, and/or extending the course materials. Directly addresses relevant themes or questions.</p>	<p>Engages with the reading material, showing some understanding. Response includes some agreement, disagreement, application, questioning, and/or extension, but may lack depth or direct focus on relevant themes or questions.</p>	<p>Minimally engages with the reading material. Lacks depth, analysis, or a direct focus on relevant themes or questions. Response may be mostly summary or off-topic.</p>

Criteria	Meets Expectations	Approaching Expectations	Does Not Meet Expectations
Examples and Reflections	Effectively uses specific examples from the readings to support analysis. Includes thoughtful reflections that connect personal insights or experiences to the readings. Demonstrates originality and depth in reflections.	Uses examples from the readings, but may lack specificity or relevance. Reflections show some connection to personal insights or experiences but are not fully developed. Demonstrates some originality in reflections.	Lacks specific examples from the readings. Reflections are superficial or unrelated to personal insights or experiences. Lacks originality or depth in reflections.

Criteria	Meets Expectations	Approaching Expectations	Does Not Meet Expectations
<b>Writing Quality</b>	Writing is clear, coherent, and well-organized. Free of significant grammatical or spelling errors. Follows assignment guidelines, including length, format, and citation requirements.	Writing is mostly clear but may have minor organizational issues or some grammatical and spelling errors. Mostly follows assignment guidelines, with minor deviations in length, format, or citation.	Writing is unclear, poorly organized, or difficult to follow. Contains significant grammatical or spelling errors. Does not follow assignment guidelines, with major deviations in length, format, or citation.

This streamlined rubric should provide clear guidance on the key aspects you want to assess in the Reading Reaction Assignment.

Note: The information in this box was generated completely by Chat GPT 3.5 using the previously disclosed prompt.

### Step 4: Regenerate, revise, and make your final rubric

Then, I used the parts of Chat GPT's rubric that I liked to

finalize the rubric for the assignment, which is provided in the table below. Be sure to also assign point values that match the point values in your assignment and syllabus, since sometimes Chat GPT likes to put random values in there for you. Keep in mind that the point value you assign to each criteria helps highlight the priority or importance of each (Chen & Ho, 2019).

For the rubric in Box 3, most of it looks pretty similar to the rubric Chat GPT gave me in Box 2. I really only summarized or combined pieces of information to make it a little bit more workable to the assignment and my preferences.

### **Box 3: Final Edited Rubric**

Criteria	Meets Expectations	Approaching Expectations	Does Not Meet Expectations
<b>Content</b>	10 to > 7 pts	7 to > 5 pts	5 to > 0 pts
	Thoroughly engages with the reading material by agreeing, disagreeing, applying, questioning, and/or extending the course materials to address relevant themes or questions.	Engages with the reading material, showing some understanding but may lack depth or focus on relevant themes or questions.	Minimally engages with the reading material; response is primarily a summary of the readings.
<b>Examples and Reflection</b>	10 to > 7 pts	7 to > 5 pts	5 to > 0 pts
	Provides insightful analysis and reflection on key points. Clearly addresses at least one of the provided questions or independently raises valuable points. Effectively uses specific examples from the reading and/or personal experience to support points.	Offers some analysis and reflection but may lack depth or clarity. Partially addresses at least one provided question or raises some points. Uses examples, but they may be vague or not fully support the points made.	Lacks analysis and reflection. Does not address provided questions or raise independent points. Does not use examples or the examples provided are irrelevant or insufficient.

Criteria	Meets Expectations	Approaching Expectations	Does Not Meet Expectations
Writing Quality	5 to > 4 pts	4 to > 2 pts	2 to > 0 pts
	Writing is clear, coherent, and well-organized. Free of significant grammatical or spelling errors. Follows assignment guidelines, including length, format, and citation requirements.	Writing is mostly clear but may have minor organizational issues or some grammatical and spelling errors, but they do not hinder understanding. Mostly follows assignment guidelines, with minor deviations in length, format, or citation.	Writing is unclear, poorly organized, or difficult to follow. Contains significant grammatical or spelling errors. Does not follow assignment guidelines, with major deviations in length, format, or citation.

Note: The information in this box is based on the content generated by Chat GPT 3.5 in Box 2.

Once you have everything just the way you want it, you can copy and paste the rubric into Canvas or whatever LMS you’re using. Refer to the links below for help adding a rubric to your assignments and discussions in Canvas.

- [How to add a rubric to an assignment in Canvas](#)
- [How to add a rubric to a discussion in Canvas](#)

Then, as always, be sure to test out the rubric. If you can, you can use a previous student's assignment to make sure the rubric works the way you want it to before actually using it in a course. After you use it in a course, consider how well students met the criteria and whether it was easy to use it to grade the assignment; you want to make sure that the rubric aligns well with the assignment, outcomes, and the quality of work you get from students. As you use the rubric for grading, be sure to note anything you didn't like or would want to change for next time.

- If the rubric is resulting in unexpected grades, you may need to rebalance the number of points for the criteria to better align with your expectations.
- If you consistently scored students lower on specific criteria, consider whether you can make the wording clearer or more objective.
- If you had to frequently adjust how you interpreted the rubric, you may need to revise your criteria to better match the outcomes associated with the assignment.
- If a criteria was consistently difficult to grade, you might need to add more criteria or split one criteria into multiple so you can describe them with a bit more detail.

Remember that regularly reflecting on and revising your rubrics helps make sure it is doing what it's supposed to be doing and is helpful for both instructors and students.

## Feedback

Using ChatGPT to provide students with feedback can be a great way to offer personalized and constructive comments. Here's how you can effectively utilize ChatGPT for this purpose:

### 1. Identify what feedback is needed

- Determine whether you need feedback on specific assignments, quizzes, essays, or general performance.
- Consider the level of detail and the tone appropriate for your students.

### 2. Generate feedback by providing context and specifics

- Input the student's response or work into ChatGPT along with any relevant criteria or guidelines.
- Example prompts:
  - *"Here is a student's essay on climate change. Provide feedback focusing on clarity, structure, and argumentation."*
  - *"This is a student's answer to a math problem. Give feedback on accuracy and problem-solving approach."*

### Example Interaction:

**Student Submission:** *“The causes of climate change are natural and man-made. Natural causes include volcanic eruptions and variations in solar radiation. Human activities such as burning fossil fuels contribute to climate change.”*

**Prompt for ChatGPT:** *“Provide feedback on the following student answer about climate change, focusing on completeness and accuracy.”*

**ChatGPT Response:** *Feedback:* “Your answer provides a good overview of climate change causes. You correctly mention both natural and human-induced factors. To strengthen your response, consider elaborating on how human activities contribute specifically to greenhouse gas emissions and their impact on global temperatures. Additionally, providing examples of recent studies or data could enhance the depth of your analysis.”

### 3. Personalize the Feedback

- Customize the feedback to address individual strengths and areas for improvement.
- Use student names and refer to specific aspects of their work to make feedback more personal.

### 4. Encourage improvement by offering actionable suggestions

- Include clear, actionable steps for improvement.
- Example prompt: *“Provide suggestions for improving this student’s essay on the impact of technology on education.”*

**ChatGPT Response:** *Suggestions:* “To improve your essay, consider adding more examples of technological advancements and their specific impacts on educational practices. Additionally, addressing counterarguments and discussing potential drawbacks of technology in education would provide a more balanced perspective.”

## **5. Provide encouragement by maintaining a positive and supportive tone**

- Acknowledge the effort and progress the student has made.
- Example prompt: *“Generate a positive and encouraging comment for a student who has shown improvement in their writing skills.”*

**ChatGPT Response:** *Encouragement:* “Great job on your recent writing assignment! I noticed significant improvement in your use of descriptive language and organization. Keep up the good work, and continue to focus on developing your ideas further. You’re making excellent progress!”

## **6. Integrate Feedback into Learning**

- Suggest resources or activities that can help the student improve in specific areas.
- Example prompt: *“Suggest resources or exercises for a student who needs help with essay structure.”*

**ChatGPT Response:** *Resources:* “For improving essay structure, you might find these resources helpful: ‘How to Write an Effective Essay’ by [Author], available at [Link], and practice exercises on essay organization at [Website]. Additionally, reviewing sample essays and analyzing their structure can provide valuable insights.”

By following these steps, you can use ChatGPT to provide detailed, personalized, and constructive feedback that helps students understand their strengths and areas for improvement.

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## 9.

# AI RUBRICS

Jessica Kahlow

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This chapter applies to various contexts and has been used to create rubrics in various disciplines, including accounting, biology, communication, criminal justice, education, nursing, physics, political science, and social work. This has also been used in undergraduate and graduate courses and for various assignment types, including everything from short answer quiz questions to discussion boards to research papers.

After spending hours perfecting your assignment directions, you might be glad to just be done with that step; but an important—yet often overlooked—component of assignment design is rubric creation. This chapter discusses the benefits of rubrics for both instructors and students. Then, it outlines directions and an example of how to use OpenAI’s ChatGPT version 3.5 or Microsoft Copilot to make rubrics for your existing assignments.

## Why Use Rubrics

Rubrics are assessment tools that outline important criteria and expectations for specific graded assignments or discussions (Andrade, 2005; Taylor et al., 2024). Rubrics are a way for instructors to communicate to students what counts as quality work by outlining different criteria specific to the assessment and provide multiple ratings for each of those criteria (Brookhart & Chen, 2015). In other words, rubrics describe both the desirable qualities expected within student work and pitfalls in student work, which help students think through the assignment more and produce higher quality work (Andrade, 2005). Good rubrics help ensure consistent grading and lead to more objective evaluations of student work (Chan & Ho, 2019). In short, we know rubrics are helpful for both instructors and students.

## How Rubrics Help Instructors

Instructors have long-held predispositions toward not liking rubrics (Reddy & Andrade, 2010). Still, in Reddy and Andrade's (2010) literature review, they noted that when instructors do use rubrics, they appreciated that the rubrics helped them grade more consistently and efficiently.

- Rubrics help instructors give more informative feedback without spending as much time doing so (Andrade,

2005; Gezie et al., 2012).

- Rubrics help instructors provide more consistent evaluations of student work (Taylor et al., 2024), particularly when multiple instructors are grading the same assessment (Chan & Ho, 2019).
- Artificial Intelligence (AI) accelerates the rubric creation process by efficiently generating rubrics based on input information (Estrada & Fabián, 2024).

## How Rubrics Help Students

The benefit of rubrics on student learning has also been well-documented in the literature.

- Rubrics help students understand the goal of the assignment and focus their efforts accordingly (Andrade, 2005; Reddy & Andrade, 2010; Gezie et al., 2012), which also helps boost their confidence and lessen their anxiety about the assessment (Taylor et al., 2024).
- Students perceive assessments with rubrics as more transparent (Chan & Ho, 2019; Gezie et al., 2012; Jonsson, 2014; Reddy & Andrade, 2010).
- Students perform better on assessments and have deeper learning when there are rubrics available (Reddy & Andrade, 2010).
- Feedback received from descriptive rubrics improves students' learning (Andrade, 2005).

## How to use AI for Rubrics

Making good rubrics with specific and detailed criteria for each rating can be difficult and time-consuming. Enter—ChatGPT. ChatGPT can transform existing assignments, and discussion prompts into detailed and specific rubrics. ChatGPT is great at restructuring information (Estrada & Fabián, 2024), so it is a great way to make a rubric if you already have the assignment directions made. Such an approach expedites the rubric-making process and ensures that the rubric aligns well with the existing assessment. ChatGPT can be very helpful in developing assessment rubrics (Estrada & Fabián, 2024). Estrada and Fabián (2024) found that the AI-generated rubric in their study provided a clear and transparent framework for evaluating student work. So, ChatGPT allows instructors to efficiently generate rubrics, so long as the goal is to use the generated rubric, or parts of it, that align with the goals and outcomes of the assessment (Estrada & Fabián, 2024). While instruments are not fully replicable due to ChatGPT's unique responses in each interaction, their responses can serve as a great starting point for developing rubrics. Estrada and Fabián (2024) recommend developing a clear and specific prompt in the message sent to ChatGPT. The directions should include instructions for what you want ChatGPT to do, the format you want the output to be in, and any other restrictions you have for the rubric (Estrada & Fabián, 2024). As with anything

generated with AI, they noted the importance of reviewing the generated content for accuracy.

## Step 1: Select the assignment you want to make a rubric for.

Before you can use ChatGPT to make a rubric, you need to have your assignment directions and grading criteria finalized.

The assignment directions outlined in Box 1 are from a graduate course in assessment and evaluation. The assignment is for students to write a 1-2 page reading reaction where they engage with the materials assigned in that module.

### **Box 1: Reading Reaction Assignment**

#### **Assignment Directions**

After reading the assigned materials for the module, you will write a two-page double-spaced (or one-page single-spaced) paper to react to the assigned readings in this module. Do not simply summarize the reading. Instead, engage the content by agreeing, disagreeing, applying, questioning, and/or

extending the course materials. In doing so, you may write about anything that stood out to you as valuable in the materials. I have included questions below to get you thinking about the material more, but you can reply to some or none of these.

- How do diverse assessment methods like simulations and e-portfolios enhance learning engagement and authenticity?
- What are the benefits and challenges of integrating peer assessment and multimedia in educational settings?
- Reflect on how technology can be effectively utilized to improve assessment practices in your own teaching or learning context.
- What are the key factors influencing the high-stakes nature of assessment in higher education?
- How can educators balance the pressures of quality assurance, employability needs, and diversity considerations in assessment practices?
- Discuss strategies or reforms that could

potentially alleviate challenges such as grade inflation and student dissatisfaction.

- Compare and contrast formative and summative assessment approaches. How can each type contribute to enhancing student learning outcomes?
- Reflect on how assessment data can be effectively used to inform instructional decisions and program improvements.
- Discuss the importance of aligning assessment strategies with educational goals and student needs.
- Why is it important for assignments to resonate culturally and hold significance for students? How can instructors achieve this in diverse educational settings?
- Reflect on your own experiences with culturally affirming assignments. How did they impact your learning and engagement?
- Discuss practical strategies for communicating course design and assignment expectations effectively through the syllabus.

- How are you doing? Is there anything you would like me to know or share?

### **Guidelines**

- Refer to the rubric for additional grading criteria.
- Do not simply summarize the reading. Instead, engage the content by agreeing, disagreeing, applying, questioning, and/or extending the course materials.
- Cite any additional materials used in APA format.

Step 2: Decide if you have any specific criteria and ratings in mind.

### **Criteria**

You do not need to know exactly what your criteria will be, but it does help to have a general idea of what they should be. Ideally, the criteria for the rubric should align with the assessment and the learning outcomes associated with that assessment (Chen & Ho, 2019). Generally, you should aim to have about three to nine criteria for any assessment. Unless you

tell it to give you fewer, ChatGPT will often give you a lot of criteria, so even if you do not have something specific in mind you still might want to specify the number of criteria you are looking for.

## Ratings

As Chan and Ho (2019) describe, writing the descriptions for each rating is the most challenging part of creating rubrics (p. 542). This is where ChatGPT really shines when you are using it to help you make rubrics. Again, if you want all your rubrics to use a consistent rating scale, it would be good to tell ChatGPT which one you want to use, or, again, at the very least, the number of ratings you want to have. Some common ratings include:

- Meets expectations, approaching expectations, does not meet expectations (this is my favorite)
- Excellent, Average, Poor
- A, B, C, D, F or 5, 4, 3, 2, 1

In any case, you will want to include an explanation of the expectations for each rating, including a description of the characteristics of that level of work. This is where ChatGPT comes in.

## Step 3: Write and enter your ChatGPT prompt

For this example, I used this prompt: Can you make a rubric in table format that uses the following ratings: meets expectations, approaching expectations, and does not meet expectations; and the following criteria: content, examples, and writing quality; for this assignment: [here I copy and pasted the entire assignment directions from Box 1]?

Now that you have your prompt and any criteria or ratings identified, you can enter your prompt into ChatGPT using the following template:

### Box 2: Sample Template

“Can you make a rubric in table format with the following ratings **[insert ratings you selected in step 2]** and with these criteria **[insert criteria you identified, if any, in step 2]** for this assignment: **[copy and paste assignment directions from Box 1]**?”

The complete response from ChatGPT is provided in Box 3.

### **Box 3: ChatGPT's Rubric**

Absolutely! Here is a rubric for the Reading Reaction Assignment using the ratings "Meets Expectations," "Approaching Expectations," and "Does Not Meet Expectations":

#### **Reading Reaction Assignment Rubric**

Criteria	Meets Expectations	Approaching Expectations	Does Not Meet Expectations
Content	Thoroughly engages with the reading material. Demonstrates a deep understanding by agreeing, disagreeing, applying, questioning, and/or extending the course materials. Directly addresses relevant themes or questions.	Engages with the reading material, showing some understanding. Response includes some agreement, disagreement, application, questioning, and/or extension, but may lack depth or direct focus on relevant themes or questions.	Minimally engages with the reading material. Lacks depth, analysis, or a direct focus on relevant themes or questions. Response may be mostly summary or off-topic.

Criteria	Meets Expectations	Approaching Expectations	Does Not Meet Expectations
Examples and Reflections	Effectively uses specific examples from the readings to support analysis. Includes thoughtful reflections that connect personal insights or experiences to the readings. Demonstrates originality and depth in reflections.	Uses examples from the readings, but may lack specificity or relevance. Reflections show some connection to personal insights or experiences but are not fully developed. Demonstrates some originality in reflections.	Lacks specific examples from the readings. Reflections are superficial or unrelated to personal insights or experiences. Lacks originality or depth in reflections.

Criteria	Meets Expectations	Approaching Expectations	Does Not Meet Expectations
Writing Quality	Writing is clear, coherent, and well-organized. Free of significant grammatical or spelling errors. Follows assignment guidelines, including length, format, and citation requirements.	Writing is mostly clear but may have minor organizational issues or some grammatical and spelling errors. Mostly follows assignment guidelines, with minor deviations in length, format, or citation.	Writing is unclear, poorly organized, or difficult to follow. Contains significant grammatical or spelling errors. Does not follow assignment guidelines, with major deviations in length, format, or citation.

This streamlined rubric should provide clear guidance on the key aspects you want to assess in the Reading Reaction Assignment.

Note: The information in this box was generated completely by ChatGPT 3.5 using the previously disclosed prompt.

Step 4: Regenerate, revise, and make

## your final rubric

Then, I used the parts of ChatGPT's rubric that I liked to finalize the rubric for the assignment, which is provided in the table below. Be sure to also assign point values that match the point values in your assignment and syllabus, since sometimes ChatGPT likes to put random values in there for you. Keep in mind that the point value you assign to each criteria helps highlight the priority or importance of each (Chen & Ho, 2019).

For the rubric in Box 3, most of it looks pretty like the rubric ChatGPT gave me in Box 2. I only summarized or combined pieces of information to make it more workable for the assignment and my preferences.

### **Box 4: Final Edited Rubric**

<b>Criteria</b>	<b>Meets Expectations</b>	<b>Approaching Expectations</b>	<b>Does Not Meet Expectations</b>
	10 to > 7 pts		
<b>Content</b>	Thoroughly engages with the reading material by agreeing, disagreeing, applying, questioning, and/or extending the course materials to address relevant themes or questions.	7 to > 5 pts  Engages with the reading material, showing some understanding but may lack depth or focus on relevant themes or questions.	5 to > 0 pts  Minimally engages with the reading material; response is primarily a summary of the readings.

Criteria	Meets Expectations	Approaching Expectations	Does Not Meet Expectations
Examples and Reflection	10 to > 7 pts		
	Provides insightful analysis and reflection on key points. Clearly addresses at least one of the provided questions or independently raises valuable points. Effectively uses specific examples from the reading and/or personal experience to support points.	7 to > 5 pts Offers some analysis and reflection but may lack depth or clarity. Partially addresses at least one provided question or raises some points. Uses examples, but they may be vague or not fully support the points made.	5 to > 0 pts Lacks analysis and reflection. Does not address provided questions or raise independent points. Does not use examples or the examples provided are irrelevant or insufficient.

Criteria	Meets Expectations	Approaching Expectations	Does Not Meet Expectations
	5 to > 4 pts	4 to > 2 pts	2 to > 0 pts
<b>Writing Quality</b>	Writing is clear, coherent, and well-organized. Free of significant grammatical or spelling errors. Follows assignment guidelines, including length, format, and citation requirements.	Writing is mostly clear but may have minor organizational issues or some grammatical and spelling errors, but they do not hinder understanding. Mostly follows assignment guidelines, with minor deviations in length, format, or citation.	Writing is unclear, poorly organized, or difficult to follow. Contains significant grammatical or spelling errors. Does not follow assignment guidelines, with major deviations in length, format, or citation.

Note: The information in this box is based on the content generated by Chat GPT 3.5 in Box 2.

Once you have everything just the way you want it, you can copy and paste the rubric into Canvas or whatever LMS you are using. Refer to the links below for help adding a rubric to your assignments and discussions in Canvas.

- [How to add a rubric to an assignment in Canvas](#)
- [How to add a rubric to a discussion in Canvas](#)

Then, as always, be sure to test out the rubric. If you can, you can use a previous student's assignment to ensure the rubric works the way you want it to before using it in a course. After you use it in a course, consider how well students met the criteria and whether it was easy to use it to grade the assignment; you want to make sure that the rubric aligns well with the assignment, outcomes, and the quality of work you get from students. As you use the rubric for grading, be sure to note anything you did not like or would want to change for next time.

- If the rubric is resulting in unexpected grades, you may need to rebalance the number of points for the criteria to better align with your expectations.
- If you consistently scored students lower on specific criteria, consider whether you can make the wording clearer or more objective.
- If you had to frequently adjust how you interpreted the rubric, you may need to revise your criteria to better match the outcomes associated with the assignment.
- If a criterion was consistently difficult to grade, you might need to add more criteria or split one criterion into multiple so you can describe them with a bit more detail.

Remember that regularly reflecting on and revising your rubrics helps make sure it is doing what it is supposed to be doing and is helpful for both instructors and students.

## Disclosures

This chapter contains AI-generated content; the example rubric was created using ChatGPT 3.5.

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# LINKS BY CHAPTER

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Links by chapter are provided in the order that they appear in the chapter.

## Choosing the right tool

- [Retrieval Practice Tool](https://www.retrievalpractice.org/)  
– <https://www.retrievalpractice.org/>
- [Socrative](https://www.socrative.com/) – <https://www.socrative.com/>
- [Kahoot](https://kahoot.com/welcomeback/) – <https://kahoot.com/welcomeback/>
- [Quizizz](https://quizizz.com/) – <https://quizizz.com/>
- [Quizlet](https://quizlet.com/) – <https://quizlet.com/>
- [Poll Everywhere](https://www.polleverywhere.com/) – <https://www.polleverywhere.com/>
- [Schoolology](https://www.schoolology.com/) – <https://www.schoolology.com/>
- [Jupiter Ed](https://login.jupitered.com/login/) – <https://login.jupitered.com/login/>
- [Google Classroom](https://classroom.google.com/u/0/h) – <https://classroom.google.com/u/0/h>
- [H5P](https://h5p.org/) – <https://h5p.org/>

## AI Rubrics

- [How to add a rubric to an assignment in Canvas](#) –

<https://community.canvaslms.com/t5/Instructor-Guide/How-do-I-add-a-rubric-to-an-assignment/ta-p/1058>

- [How to add a rubric to a discussion in Canvas](https://community.canvaslms.com/t5/Instructor-Guide/How-do-I-add-a-rubric-to-a-graded-discussion/ta-p/1062) – <https://community.canvaslms.com/t5/Instructor-Guide/How-do-I-add-a-rubric-to-a-graded-discussion/ta-p/1062>

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## Selecting Aligned Assessments

Crawford, Stephen (2012). Aligning Assessments with Learning Objectives. <http://teachonline.asu.edu/2012/10/aligning-assessments-with-learning-objectives/>.

## Quizzes

Crawford, Stephen (2012). Aligning Assessments with Learning Objectives. <http://teachonline.asu.edu/2012/10/aligning-assessments-with-learning-objectives/>.

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