

Types of Quizzes and Best Practice Tips for Writing Quizzes

In online education, there are two types of quizzes that each serve a vital purpose for a student's learning. But first before we can create these quizzes, we need to define the goal or purpose of the two types of assessments they would fall into:

- [Formative assessments](#)
- [Summative assessments](#)

According to Carnegie Mellon University, the [difference between formative and summative assessment](#) is ultimately the goal. Formative assessment's goal is to *monitor student learning* and provide ongoing feedback. Summative assessment's goal is to *evaluate student learning* at the end of an instructional unit by comparing it against some standard or benchmark.

Quizzes are a great way to measure student progress throughout a course to monitor student learning and provide quick feedback. It can also be a great way to evaluate student learning if done well.

In this article, our instructional designers for UC Davis Division of Continuing and Professional Education Online Education team have provided their tips and tricks for creating both formative and summative quiz questions, including easy to use templates.

Formative Quizzes

Reviews the material for the purpose of reinforcing a lesson, such as in training. These are informal assessments that are used for practice and/or reflection, but essentially to be used as a check for understanding. These questions generally pull from the lower-level of [Bloom's Taxonomy](#). These practice quizzes are typically placed within a lecture to keep a student engaged, but can also be found after a series of lessons to reinforce the learning of a set of concepts or ideas.

Some tips to consider when writing a formative quiz:

- **Reinforce Main Points.** If your goal is to make sure learners understand a new subject, break up the instruction periodically with review material in the form of a quiz. Create questions that apply the information students have just learned to a realistic scenario, such as labeling the parts of an image.
- **Introduce New Material.** A quiz can also be an effective way to forecast material that trainees are about to learn. This proven educational technique helps people focus on the

right things during a lesson. Plus, it can also serve as a reminder that there are subjects coming that they don't understand yet, so they'd better pay close attention. Consider displaying the same quiz after a session is over to gauge how well the material was comprehended, and to show the trainee how far they've come.

- **True/False or Yes/No.** These types of questions are ok to ask for a formative quiz as we are only helping the learner to check for understanding, but they aren't great. Try to minimize to 2-3 per module at most.
- **Avoid:**
 - Negative phrasing. e.g. "Which of the following is incorrect?" or "which is not part of..."
 - vague, general options such as "always", "very", "all of the above" or "none of the above" these are too easy and give away the answer 95% of the time.
 - When considering the use of the term "all of the above" as an answer, remember that the answers do get shuffled, thus this is not an accurate term and needs to be considered when writing assessments. Plus, it is typically a gimme question as 75% of the time this becomes the answer, consider the multiple answer approach versus using this.
- **Design plausible distractors.** This can be in the form of:
 - Common errors and misconceptions
 - Familiar but incorrect phrases
 - True statements that are not correct answers to the question
 - At minimum 2-3, along with the correct answer
- **Elaborative feedback.** Elaborative feedback is critical if you are not planning on giving the feedback on a quiz directly, but likely having the learning management system auto-grade. Elaborative feedback is spelled out for both correct and incorrect answers in a formative assessment. This is a best practice as it helps reinforce the concepts for deeper learning and for incorrect answers, provides the rationale.
 - Again, since these questions are not graded, the learner is likely not to try to take the quiz again, thus providing them the right answer is fine.

An example of a formative quiz question with elaborate feedback:

1.	Which of the following should guide the design of interview questions? (Check all that apply).	Assess questions by topics Feedback: Design questions organized by topics then moving from general to more specific. Sequenced in reverse pyramid order Feedback: This means to move from general or broader questions to more specific. From specific to more general Feedback: Questions should flow from general to more specific.
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Summative Tests

Gauges comprehension for the purpose of evaluation or grading. These are formal, graded quiz questions. Unlike, formative quizzes, the goal of summative quizzes is for you to be able to evaluate and assess a learner's level of mastery of the concepts. Questions should pull from the higher-order thinking levels of [Bloom's Taxonomy](#).

- **Apply the Lessons.** Create questions that force students to apply lessons from the material to real-life scenarios. This is really the essence of what mathematics has always called 'story problems,' and it's an effective method for measuring how well one can synthesize new lessons with the surrounding world.
- **Avoid True/False:** True/false questions are usually oversimplified to begin with, and give too much credit for those who simply guess or toss a coin and get half the questions right by accident. Although you may find moments in which this form is the best choice, it's a good one to avoid as a general rule.
- **Avoid:**
 - Negative phrasing. e.g. "Which of the following is incorrect?" or "which is not part of..."
 - vague, general options such as "always", "very", "all of the above" or "none of the above" these are too easy and give away the answer 95% of the time.
 - When considering the use of the term "all of the above" as an answer, remember that the answers do get shuffled, thus this is not an accurate term and needs to be considered when writing assessments. Plus, it is typically a gimme question as 75% of the time this becomes the answer, consider the multiple answer approach versus using this.
- **Design Plausible Distractors.** This can be in the form of:
 - Common errors and misconceptions
 - Familiar but incorrect phrases
 - True statements that are not correct answers to the question
 - At minimum 2-3, along with the correct answer
- **Elaborate Feedback.** As learners have an opportunity for multiple attempts for the quizzes, elaborate feedback is given only for correct answers to measure mastery of learning. Giving them the answer will actually discourage learners as you want them to learn from their mistakes. For incorrect answers, you will give them a clue on how to approach the problem, or where in the course they can find the relevant material, etc. Just don't give away the correct answer.
- Case study type questions are encouraged to invoke higher level thinking, but will need to provide multiple choices. This may be tricky, but we need questions that are good, but the answer is better.

Whether you are writing a formative or summative quiz, the following template can be used for either. The only difference is in your goal and your elaborate feedback.

Quiz Writing Template

The feedback for the summative quiz is different from the formative. The summative quiz is graded; therefore, learners do not get elaborative feedback for **incorrect answers**. **Rather, the feedback simply refers them back to the title of the video that covered that topic**. They can watch it again and re-take the quiz. We have already put that reference line back to the video title in the right column. **Each correct answer does get affirmative feedback**. That too is in the right column, in **green** text, after the correct answer. If you have more than one correct answer **add it to right column in green**. Incorrect answers are in **red**, as is the feedback for incorrect answer. **Do not use the words “correct” or “incorrect” in your answers**, as the system automatically does this.

Lesson #	Lesson Video Title	Related Learning Objective/s	Assessment Question Tied to LOs; Feedback
L01.__ Q1	Video Lesson Title:	LO (Learning Objective question ties back to here):	Put your quiz question here Put correct answer here Put affirmative feedback to correct answer here Put incorrect option here Incorrect feedback: Please revisit lesson: Bold lesson title here Put incorrect option here Incorrect feedback: Please revisit lesson: Bold lesson title here

L01. __ Q2	Video Lesson Title:	LO:	Put your quiz question here Put correct answer here Put affirmative feedback to correct answer here Put incorrect option here Incorrect feedback: Please revisit lesson: Bold lesson title here
L01. __ Q3	Video Lesson Title:	LO:	Put your quiz question here Put correct answer here Put affirmative feedback to correct answer here Put incorrect option here Incorrect feedback: Please revisit lesson: Bold lesson title here

L01.__ Q4	Video Lesson Title:	LO:	Put your quiz question here Put correct answer here Put affirmative feedback to correct answer here Incorrect feedback: Please revisit lesson: Bold lesson title here
L01.__ Q5	Video Lesson Title:	LO:	Put your quiz question here Put correct answer here Put affirmative feedback to correct answer here Put incorrect option here Incorrect feedback: Please review video lesson, _____.

L01.__ Q6	Video Lesson Title:	LO:	Put your quiz question here Put correct answer here Put affirmative feedback to correct answer here Put incorrect option here Incorrect feedback: Please revisit lesson: Bold lesson title here
L01.__ Q7	Video Lesson Title:	LO:	Put your quiz question here Put correct answer here Put affirmative feedback to correct answer here Put incorrect option here Incorrect feedback: Please revisit lesson: Bold lesson title here

L01.__ Q8	Video Lesson Title:	LO:	Put your quiz question here Put correct answer here Put affirmative feedback to correct answer here Put incorrect option here Incorrect feedback: Please revisit lesson: Bold lesson title here
L01.__ Q9	Video Lesson Title:	LO:	Put your quiz question here Put correct answer here Put affirmative feedback to correct answer here Put incorrect option here Incorrect feedback: Please revisit lesson: Bold lesson title here

L01.__ Q10	Video Lesson Title:	LO:	Put your quiz question here Put correct answer here Put affirmative feedback to correct answer here Put incorrect option here Incorrect feedback: Please revisit lesson: Bold lesson title here
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