



Writing Effective Test Questions Series **PART 3: Writing “Constructed Response” Exam Questions**

Multiple choice tests can yield useful information about students’ knowledge of course content. However, these tests are invalid measures of learners’ capacity to engage in higher-level cognitive processes, such as analysis, evaluation, and/or creation. As noted in [Part 2](#), constructed response questions are more effective than selected response items at creating opportunities for students to demonstrate their reasoning, argumentative, and problem-solving skills or their ability to apply course concepts and content in authentic, real-world situations. However, because these responses require more time to generate (students) and assess (instructors), Nilson (2016) suggests using constructed response questions sparingly if possible, particularly “when the learning outcomes you are assessing requires students to generate, as opposed to select, and answer. If your outcome calls only for selection, then you might as well use [selected] items” (p. 299).

Designing effective constructed response questions

Including constructed response questions on an exam with selected response items enhances students’ opportunities to accurately demonstrate their learning. Responses to these types of questions are usually structured individually by students and are typically several sentences or several paragraphs in length, depending on the question asked or task assigned. Additionally, a well-designed constructed response question should invite several different possible answers or responses. Here are a few suggestions for how to design constructed response questions:

BEFORE you write a question:

1. Know what you hope students will be able to demonstrate.
2. Write a prompt (or question) that describes a single, complete, and novel task
3. Devise clearly articulated evaluation criteria

Strategies	Explanation	Teaching Suggestions
Clarify expectations to ensure transparency and equity	Nilson (2016) notes that each grader may prioritize different criteria, which makes having a clear rubric for graders to reference particularly important. Having clear rubrics and grading criteria is essential to ensuring that tests are graded fairly and with consistency between evaluators (McKeachie & Svinicki, 2013).	Nilson (2016) suggests discussing grading criteria for constructed response questions with the TAs and suggesting that they norm their evaluations together to ensure consistency before grading. Additionally, she suggests outlining these criteria to students prior to the exam, so that they can better prepare (for example exam rubrics, see below).
Design specific questions that ask for specific responses	Unspecific questions can lead to long “kitchen sink” responses, or conversely, very short responses as students attempt to puzzle out what your expectations are (McKeachie & Svinicki, 2013). They may also interpret the question very differently from you, especially if your question is unclear.	Nilson (2016) suggests identifying key ideas or concepts students should reference in their responses, if possible. She also suggests avoiding simple interrogative words like “how,” “what,” or “why,” and instead using descriptive verbs like “describe,” “explain,” or “evaluate.” For example, “ <i>Describe three ways that social integration could break down in the modern world, according to Durkheim. Then assess how closely each one applies to the United States today</i> ” [emphasis original] (Nilson, 2016, p. 300).



<p>Make your expectations clear</p>	<p>Prompts should align with course learning outcomes <i>and</i> the assessment criteria you provide to students. Handelsman, Miller, & Pfund, (2007) suggest providing students with copies of the grading criteria/rubrics along with the test or study guide, if possible.</p>	<p>Nilson (2016) suggests identifying the ideas, concepts, or other course material you want students to reference in their responses. For example, you could ask students to apply a course concept to a real-world scenario or provide two passages with two scholars perspectives on a particular theory or idea covered in your course, and ask students to compare. For example, “Read the two passages above from Michel Foucault and Jacques Derrida. Then, explain three key differences between these two theorists’ conceptions of the historicity of thought.”</p>
<p>Use short answer questions in place of an essay</p>	<p>Well-constructed and polished academic essays take time to write. If the purpose of the writing task is to ascertain whether students can engage meaningfully with course content, create assessment opportunities that students are actually able to accomplish.</p>	<p>Be intentional about assigning in-class writing tasks. Keep in mind that the timed nature of the task limits the validity of the assessment. In-class essay exams leave students with little opportunity for revision, which is essential to writing effectively. Therefore, expecting students to produce academic prose in a timed-writing sets everyone up for potential failure.</p> <hr/> <p>Consider employing several short answer responses that call for only a few sentences, rather than longer essay responses that call for several paragraphs (McKeachie & Svinicki, 2013). For example, you could provide a passage or scenario for students to read, and then assign several short answer questions regarding that passage.</p>
<p>Be realistic about syntax mechanics (e.g., spelling or sentence-level issues)</p>	<p>Due to the timed nature of in-class written exams, instructors need to accept that, for most learners, sentence-level writing issues (e.g., misspellings, punctuation errors) will occur. With limited time, most writers will focus on conveying their grasp of course content, and don’t always have time to edit. Take this into consideration when developing and explaining the assessment criteria for in-class writing exams.</p>	<p>To ensure validity of the assessment, focus on the <i>content</i> of students’ responses, rather than sentence-level issues—unless sentence-level issues significantly impede students’ expression of what they know.</p> <hr/> <p>Another option is to assign constructed response questions as part of take-home exams, so that students have time to carefully proofread their responses. If you choose the latter option, let students know ahead of time that the expectations include appropriate control of syntax and mechanics.</p>

Additional resources

- For example exam rubrics, see Handelsman, Miller, & Pfund, 2007; Nilson, 2016; Tierney & Simon, 2004; Walvoord, 2010.
- At UC Davis, instructors can contact Barbara Mills, Testing Specialist (bjmills@ucdavis.edu) in the Center for Educational Effectiveness for support in designing test questions.
- This resource was designed with the help of Kara Maloney, PhD, Assessment Lead in the Center for Educational Effectiveness (kmoloney@ucdavis.edu).



Citation

Center for Educational Effectiveness [CEE]. (2018). Writing Effective Test Questions Series. *Just-in-Time Teaching Resources*. Retrieved from <https://cee.ucdavis.edu/JITT>

References

Center for Research on Learning and Teaching, University of Michigan [CRLT]. (n.d.). *Framework for Designing Effective Exams*. Retrieved from <http://crlt.umich.edu/olws/6/framework>

Center for Research on Learning and Teaching, University of Michigan [CRLT]. (n.d.). *Writing Questions*. Retrieved from <http://crlt.umich.edu/olws/6/questions>

Handelsman, J., Miller, S., & Pfund, C. (2007). *Scientific teaching*. New York, NY: Macmillan.

McKeachie, W., & Svinicki, M. (2013). *McKeachie's teaching tips*. Belmont, CA: Cengage Learning.

Nilson, L. B. (2016). *Teaching at its best: A research-based resource for college instructors* (4th ed.). San Francisco, CA: Jossey-Bass.

Tierney, R., & Simon, M. (2004). What's still wrong with rubrics: focusing on the consistency of performance criteria across scale levels. *Practical Assessment, Research & Evaluation*, 9(2), 1-10. Retrieved from <http://pareonline.net/getvn.asp?v=9&n=2>

Walvoord, B. E. (2010). *Assessment clear and simple: A practical guide for institutions, departments, and general education*. (2nd ed.). San Francisco, CA: Jossey-Bass.