Essay Question Development & Analytic Thinking

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OCT. 10, 2014

Assessment Workshops - Oct. 10, 2014

East AM
10 am - noon
Essay Question Development - 8-144 (2 PD)

West PM
3 pm - 5 pm
Essay Question Development - 11-216 (2 PD)

* Introductory Writing and Discussion....

► Please write one essay question specific to your discipline – of no more than four sentences (you will not have to turn it in.)

► Which kind of exam questions do you prefer to create and why? (For example, essay questions, multiple choice questions MCQ, etc.) What do you hope to get out of this workshop....

► A bit of background: composition theory, performance assessment, computerized grading, game design, UCF graduate students....

Purpose

► This workshop has been designed to share research findings and effective practices for writing and grading essay exam questions.

► We will practice critiquing questions and developing our own. We will also look at controversial issues related to this form of assessment.

► The workshop has been designed around the blue book Analytic Thinking by Dr. Linda Elder and Dr. Richard Paul (2010.) Participants should be able to apply the standards they provide to (1) develop effective essay questions (2) critique essay questions and (3) create learning activities to prepare students for this kind of assessment.
Learning Outcomes

Participants should be able to....

- Apply standards for analytic thinking to:
  - Create your own essay questions
  - Critique your own essay questions
  - Teach students how to answer essay questions
- Cite key research findings regarding the impact of essay questions on students' thinking skills.
- Distinguish between effective and ineffective questions.
- Develop an activity to teach students how to tackle essay questions.
- Share five tips for more reliable and effective grading of essays.
- Discuss current innovations such as computerized grading for essay exams.

Constructed Response (Essays) Questions

Restricted + Extended Response


**Restricted response** essays limit both content and response as indicated within the question. The restricted response essay addresses a limited sample of the curriculum or learning outcomes.

Restricted Response

May commonly be known as:

**Problem solving exercises** focus on solving a problem and decision making processes. In nursing contexts, clinical data is presented and the learner must demonstrate their ability to assess, analyse, plan, implement and evaluate.

**Case studies** present certain, but not all, key elements of a clinical situation resembling real-life scenarios. The learner must combine these elements with information acquired from previous educational experiences. With additional resources the learner works through a sequence of increasingly complex activities.

Other terms may be used to describe these assessment methods, they include scenario-based activities or context-dependent item sets.
Extended response essays can be considered a form of performance assessment or complex achievement. These essays provide the freedom of response to a question and assess the ability to research a topic, creatively organize, integrate and evaluate ideas, and construct an argument.

* Brainstorm.... How to decide....

What are questions we can ask....

Do you have a large group of students?
Do you plan to reuse the exam?

Are you confident in your ability to objectively grade essays?
Are you confident in your ability to write clear MCQ items?

What are your intended learning outcomes....
**A checklist of questions you can ask to target intellectual standards...** (The Blue Book, p. 9)

1. Think of how you would use this list to develop essay questions with the goal of asking students to apply their analytical thinking skills....

2. Looking at your prior reflective writing, see if you can modify it by adding some of the questions from this list.

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**What if MCQs were the only option...?**

- What is gained and what is lost in a world where, as a student, you can only take MCQ exams?

- What is gained and what is lost in a world where, as an instructor, you can only create MCQ?

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**Sample Prompt 1**

**Assignment:** Does a person’s character determine that person’s success in life? Plan and write an essay in which you develop your point of view on this issue. Support your position with reasoning and examples taken from your reading, studies, experience, or observations.

- What could we learn when reading their responses [in terms of their academic skills]?
- What else would you want to see demonstrated that this question does not get at...
- What prior [classroom] experiences did they need to have in order to be able to respond?
- What values are we communicating to the students through the kinds of essay questions we ask?

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**Sample Prompt 2**

As you read the passage below, consider how [the author] uses:

- evidence, such as facts or examples, to support claims.
- reasoning to develop ideas and to connect claims and evidence.
- stylistic or persuasive elements, such as word choice or appeals to emotion, to add power to the ideas expressed.

(Source Text Will Appear Here)

Write an essay in which you explain how [the author] builds an argument to persuade [his/her] audience that [author's claim]. In your essay, analyze how [the author] uses one or more of the features listed above (or features of your own choice) to strengthen the logic and persuasiveness of [his/her] argument. Be sure that your analysis focuses on the most relevant aspects of the passage.

Your essay should not explain whether you agree with [the author's] claims, but rather explain how the author builds an argument to persuade [his/her] audience.
To evaluate thinking we must apply intellectual standards (The Blue Book, p. 8)

We can apply these standards as we evaluate our own essay questions...

Example Sent to Me 1

**Question:**

Both Oedipus and Othello show leadership qualities, a great sense of responsibility to their community or constituents, and an incredible sense of guilt for actions they may not ultimately have been responsible for.

Write an essay arguing which of the two was the more noble character. Use references from text to support the argument you make.

Type your essay in the space provided.
You have 4 hours to do the exam.
Which is better and why?

Comparative Examples of Essay Questions - 1

Discuss the role of women in Shakespeare’s tragedies.

Comparative Examples of Essay Questions - 2

Evaluate three of the critical justifications of Hamlet’s madness: which theory do you find most convincing and why? -

Comparative Examples of Essay Questions - 3

Discuss the importance of slavery for Melville and Stowe. How is it different for Thoreau and Douglass?

Example Sent to Me 2

Hotel Room Rates

- The Hotel Orlando has 115 rooms, which are rarely all full during the off season. Hotel records show that at $46 per night they average 81 occupied rooms during the off season; at $54 per night 69 rooms are occupied, while at $58 only 63 rooms are filled. While in a manager’s meeting, the owners ask you to analyze this data to determine how many rooms would fill if they charged $40 per night.

- Part I Instructions: Using the data given create a mathematical model, an equation that you can use to provide the owners with the information they have requested. Be sure to answer their question and to clearly indicate how you arrived at that answer. Show your work! (Even if using a calculator, show how and why you took the steps you did, not just what buttons you pushed.)

- Mathematical model:
Number of rooms filled if they charge $40:
Discipline Specific Considerations: Mathematics

Assessment Pyramid

- Levels of Thinking
- Answers
  - Level I: Analysis
  - Level II: Connections
  - Level III: Analysis

Discipline Specific Considerations: The Health Sciences

- Modified essay question (MEQ) is a useful "paper and pencil" instrument designed to assess students' clinical reasoning skill, abilities in problem solving, decision making and understanding of problem-related content from the basic and clinical sciences. Problems presented are based on an actual case or professional interaction situation.

For more information see...
- CRESST Report Mc Neil Math Questions TEC H449
- Lekhakula, A. and Pinaikul, S. (ND)
Don’t be driven by the question – begin with the competencies first...

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<th>No. of Items</th>
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A TOS, sometimes called a test blueprint, is a table that helps teachers align objectives, instruction, and assessment (e.g., Notar, Zielke, Wilson, & Yunker, 2004). This strategy can be used for a variety of assessment methods but is most commonly associated with constructing traditional summative tests.


*Take “Analyzing Problems” and apply it as a model for writing an essay question in your discipline or field* (The Blue Book, p. 26)

For example on that page take “... some important assumptions” and adapt the phrase to ask your student “What are some of the assumptions that you...”
Teaching your students to “question an issue or a central problem” p. 44

1. How could this page be used to teach students strategies for answering essay questions?

2. Provide one example of an activity or assignment you might develop for your students.

Research: Students Benefit from Practice Writing Questions….

The Effects of Student-Written Questions on Student Test Performance
Paul W. Foos Florida International University (1989)

The effects of student-written test questions on student test performance were examined in an Introductory Psychology class. Before each of three tests, randomly assigned students wrote essay questions, multiple choice questions, or no questions. All tests contained essay and multiple-choice items but no questions written by students.

Question writers performed significantly better than non-writers on the first two tests; the difference on the third test was marginally significant. No differences were found between students who wrote essay and those who wrote multiple-choice questions.

Question writing appears to be an effective study technique.

Research: More Deep Learning When Students Integrate Texts in Essay Writing

The Effects of Tasks on Integrating Information from Multiple Documents (2008)
Raquel Cerda and Eduardo Vidal-Abarca, Catholic University of Valencia

The authors examine 2 issues: (a) how students integrate information from multiple scientific documents to describe and explain a physical phenomenon that represents a subset of the information in the documents; and (b) the role of 2 sorts of tasks to achieve this type of integration, either writing an essay on a question requiring integration across texts or answering shorter intra-text questions that require students to integrate information within a single text, while superficial and deep comprehension measurements are obtained.

Results showed that the integration question increased integration and decreased the processing of isolated units of information, which enhanced deep learning, whereas no differences between the 2 sorts of tasks on memory recall were apparent.

Overall Essay Writing Shown to Have an Impact

An Investigation of the Effects of Exam Essay Questions on Student Learning in United States History Survey Classes
Sara Brooks Sundberg University of Central Missouri

Three hundred sixty-five students, who both the pre-test and post-test. The total number of students enrolled in the course during the course of the study was five hundred and two students. The thirteen sections of the course that took both the pretest and the post-test ranged in overall size from thirty-three students to forty-nine students in a section with an average of thirty-nine students per section.

Essay writing on exams made a difference in students' scores, and potentially their understanding, as reflected in the greater net gain of the post-test over pre-test scores for the nine sections in the first three semesters when essay questions were part of the exams. During these semesters average scores increased between twenty and thirty percent. These results support the assertion that essay writing improves history learning; the gain was statistically significant.
How can we improve our question development and implementation?

* Write the Book

Pooling our collective wisdom....

... if we were to write a book to help others grade essay exams what are five key points or tips you would want to include.

Guidelines for Grading Essay Questions More Reliably – Before You Begin

- Before grading, list the main points you expect a good answer to cover.
- Decide in advance how you will handle factors such as spelling and grammar, and apply the rules consistently.
- Before grading, read through a few sample student answers to get a general idea of the quality level.

Steps to Take....

- To counteract the “halo” effect, try to grade answers without knowing the student’s identity.
- Grade one question for all students before going on to the next question.
- If possible, read each answer twice, shuffling the order the second time through.
- Reschedule the papers after completing each item.
Added Steps to Take....

► Sort papers into “high,” “medium,” and “low” stacks before assigning final grades.

► Write comments so that students understand why answers were good or poor.

► More detailed reading about the use of rubrics and scoring related to reliability and validity are available outside of the scope of this workshop. See: Examining Design and Inter-Rater Reliability of a Rubric Measuring Research Quality across Multiple Disciplines: http://pareonline.net/pdf/v14n12.pdf.

Current Issues and Points of Controversy

► Computerized grading
► New possibilities within video games
► BlackBoard tools provide more options

“According to professor of theory of knowledge Leon Trotsky, privacy is the most fundamental report of humankind. Radiation on advocates to an orator transmits gamma rays of parsimony to implode.”

Considerations

► Is the Essay Question the best option for you?
► What considerations are important in your field?
► What do you need to consider about your students?
► What will they learn from you as they take your test?
► What steps can you take to strengthen validity and reliability?
Final Reflection

- One Take-Away
- One Surprise
- One Area to Explore Further...

Handout 1 - A Quick Guide to Better Tests from BEST 1-6-2011.pdf (107 KB)
Handout 2 - Thesaurus of Verbs and MLO Criteria.pdf (199 KB)
Handout 3 - Constructing Essay Exams - Study Guides Overview.pdf (909 KB)
Handout 4 - Quiz - Choosing between Objective and Subjective Test Items.pdf (86 KB)