

Open-Book Examinations

Why open-book exams?

As cited in Ferrante et al. (2011),

- “Gibbs et al. (1988) stated that professionals do not rely heavily on memory and open-book exams would therefore be closer to what graduates would be expected to do ‘on the job’.”
- “Feller (Feller, 1994) felt open-book exams more adequately represented real-life situations where problems are encountered and limitless resources are available for developing solutions.”
- “Siegel and Sorenson (1999) recognized the changing role of the practitioner requires a new skill set and approach to problem-solving.”

As cited in Ferrante et al. (2016),

- “For an introductory statistics course, Block (2012) discovered that in addition to a reduction in anxiety, the use of open-book exams increased student enjoyment while encouraging deeper student learning.”

Anxiety has a threat on the degree of validity because it increases content-irrelevant variances.

Open-book vs traditional closed-book exam

Race and Brown (2006) state that in many ways open-book exams are similar to traditional closed-book exams, but with the major difference that students are allowed to take in with them sources of reference material.

Ferrante et al. (2016): “A cross-disciplinary review of the literature appears to be inconclusive as to whether ‘better’ learning occurs, varied on whether ‘better’ preparation occurs, and consequently is diverse on which approach is superior.”

Tips on setting open-book examination questions

Race and Brown (2006) give the following tips, advantages and disadvantages among other things.

All of the suggestions regarding traditional examination questions (multiple choice and open-ended questions) still apply.

In addition:

- (Transparency) Tell the students what you expect them to do. (Many will not understand the difference between this kind of examination and traditional ones. This may result in students just trying to write out material, rather than do things with it as a resource.)
- Decide if you wish to provide photocopies of extracts from relevant set-texts.
- (Validity) Set questions which require students to do things with the information available to them (rather than merely summarizing it and giving it back). The questions should be measured at higher levels from application to synthesis/creation.
- (Validity) Focus the performance criteria on what students have done with the information (and not just on them having located 'the correct information').
- (Validity) Expect shorter answers. (Students doing open book examinations will be spending quite a lot of their time searching for, and making sense of, information and data. They will, therefore, write less per hour than students who are answering traditional examination questions 'out of their heads'.)

- (Validity & Objectivity) Make the actual questions particularly clear and straightforward to understand. (The fact that students will be reading a lot during the examination means that care has to be taken that they do not read the actual instructions too rapidly.)

Advantages

These have many of the advantages of traditional examinations, with the addition of:

- (Reliability) Less stress on memories. (The emphasis is taken away from students being required to remember facts, figures and other such information.)
- (Validity) Measuring retrieval and transfer skills. (It is possible to set questions which measure how well students can use and apply information and how well they can find their way round the contents of books and even databases.)
- (Validity & Reliability) Slower writers helped (if coupled with a relaxation in the 'timed' dimension).

Disadvantages

- Not enough books. (It is hard to ensure that all students are equally equipped regarding the books they bring into the examination; some students may be disadvantaged.)
- Need bigger desks. (Students necessarily require more desk space for open-book examinations if they are to be able to use several sources of reference.)
- Shorter answers.

Variation of open-book exam

Sometimes, in addition, the 'timed' element is relaxed or abandoned, allowing students to answer questions with the aid of their chosen materials and at their own pace.

Reference

Feller, M. (1994). Open-book testing and education for the future. *Studies in Educational Evaluation*, 20, 235-238.

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Ferrante, C. J., Green, S. A., & Heppard, K. A. (2016). Using open-book exams to enhance student learning, performance, and motivation. *Journal of Effective Teaching*, 16(1), 19-35.

Gibbs, G., Habeshaw, S., & Habeshaw, T. (1988). *53 Interesting ways to assess your students*. Bristol, United Kingdom: Technical and Educational Services Ltd.

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Siegel, G., & Sorensen, J. (1999). *Counting more, counting less: Transformation in the management accounting profession*. Montvale, NJ: Institute of Management Accountants.