

A GUIDE FOR ACADEMICS - OPEN BOOK EXAMS

What is it?

- An "open book examination" is an assessment method designed in a way that allows students to refer to either class notes and summaries or a "memory aid", textbooks, or other approved material while answering questions. An open book exam can also mean that students are provided with the exam questions prior to sitting the formal exam or are to complete as a 'take-home' exam.

Why use them?

- The main premise for open book exams is that teachers can devise questions that require students to answer in more critical and analytical ways thus encouraging high-order thinking skills in their students; as compared to closed book or traditional exams that tend to encourage rote learning and more superficial application of knowledge.

For further details about the teaching and learning philosophy that underpins open book exams-
<http://www.iiserpune.ac.in/~mohanan/educ/openbook.pdf>

What are the pitfalls?

- The main issues that arise when making use of open book exams is that teachers may not know how to develop and devise effective exam questions that require students to apply their knowledge through analysis and critical thinking; and students may be lulled into a false sense of security and fail to properly prepare for an open book exam. Students may falsely assume that the exam will be easy, and they will be able to find all the answers in the textbook or on their memory aid.

Considerations when designing open book exams

- Questions in open book exams need to be devised to assess the interpretation and application of knowledge, comprehension skills, and critical thinking skills rather than only knowledge recall
- Make use of case-based exam questions that require students to apply critical reasoning skills in response to a trigger scenario
- Devise clear and unambiguous questions to limit student confusion and time spent interpreting the question so students can spend their time making use of their textbook or memory aid to effectively answer the questions
- Devise questions that require students to apply and make use of the information from their textbook or notes rather than simply requiring them to locate and re-write this information
- Design your questions and overall exam paper with the learning outcomes in mind i.e. what skills and knowledge are you assessing?

Example ways of designing open book exam questions

- Structure your exam questions around problem-based scenarios or real-world cases, requiring students to apply their skills and knowledge to the given problem or scenario
- Provide information or background information on a given topic or area of study
- Present relevant qualitative or quantitative data and then ask students interpretative and application questions – What does the data show? What relevance does this data or does the scenario have in terms of [component of current topic]? What other factors could potentially affect this data? How would you test for these?
- Structure content or topic questions in a way that tests for an ability to apply, analyse, evaluate, create, synthesise, interpret etc.
- When devising questions to probe student understanding, skills and knowledge, the socratic questions and questions reflective of levels and stages of learning may be useful (please see below).

Socratic Questions

Type of Socratic Question	Example questions and starters
Clarification questions	<ul style="list-style-type: none"> ▪ What do you mean by...? ▪ Could you put this another way? ▪ What do you think is the main issue? ▪ Could you provide an example? ▪ Could you expand upon that point further?
Assumption questions	<ul style="list-style-type: none"> ▪ Why would someone make this assumption? ▪ What is _____ assuming here? ▪ What could we assume instead? ▪ You seem to be assuming _____ . ▪ Do I understand you correctly?
Reason and evidence questions	<ul style="list-style-type: none"> ▪ What would be an example? ▪ Why do you think this is true? ▪ What other information do we need? ▪ Could you explain your reason to us? ▪ By what reasoning did you come to that conclusion? ▪ Is there reason to doubt that evidence? ▪ What led you to that belief?
Origin or source questions	<ul style="list-style-type: none"> ▪ Is this your idea or did you hear it from some place else? ▪ Have you always felt this way? ▪ Has your opinion been influenced by something or someone? ▪ Where did you get that idea? ▪ What caused you to feel that way?
Implications and consequence questions	<ul style="list-style-type: none"> ▪ What effect would that have? ▪ Could that really happen or probably happen? ▪ What is an alternative? ▪ What are you implying by that? ▪ If that happened, what else would happen as a result? Why?
Viewpoint questions	<ul style="list-style-type: none"> ▪ How would other groups of people respond to this question? Why? ▪ How could you answer the objection that _____ would make? ▪ What might someone who believed _____ think? ▪ What is an alternative? ▪ How are _____ and _____'s ideas alike? Different?

Bloom's Taxonomy

Type or level of question	Students are asked to ...	Example questions and starters
Knowing and remembering	recall knowledge of subject matter relevant to the discussion.	<ul style="list-style-type: none"> ▪ What, where, who, when, where ...? ▪ How many ...? ▪ List ... ▪ Describe ... ▪ Define ...
Understanding	demonstrate understanding by constructing meaning from information.	<ul style="list-style-type: none"> ▪ In your own words, ... ▪ Explain how ... ▪ What did X mean when ...? ▪ Give an example of ...
Applying	apply knowledge and understanding to a particular task or problem.	<ul style="list-style-type: none"> ▪ How would you use ...? ▪ What examples can you find to ...? ▪ How would you solve ___ using what you've learned? ▪ What would happen if ...?
Analysing	examine different concepts and make distinctions between them.	<ul style="list-style-type: none"> ▪ What are the parts or features of ...? ▪ What are the competing arguments within ...? ▪ Why is X different to Y? ▪ Compare and contrast ... ▪ What is the relationship between A and B?
Evaluating	make judgements about concepts or ideas.	<ul style="list-style-type: none"> ▪ What is most important/effective? ▪ Which method is best? ▪ Which is the strongest argument?
Creating	develop new ideas from what they know and understand.	<ul style="list-style-type: none"> ▪ How would you design a ...? ▪ What alternatives are there to ...? ▪ What changes would you make? ▪ What would happen if ...? ▪ Suppose you could ___ what would you do? ▪ How would you evaluate ...? ▪ Can you formulate a theory for ...?

Anderson, L. & Krathwohl, D. (2001). *A taxonomy for learning, teaching and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Longman.

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