



UJ GUIDELINES FOR ONLINE OPEN-BOOK EXAMS

(This document is based on the Faculty of Law Guidelines developed by Professor Dawie De Villiers)

Background

UJ has supported the migration to online teaching and learning for the second term of the academic calendar with appropriate communications and guidelines. The DVC Academic and the DVC Research and Internationalisation have provided the necessary information, principles and procedures. Implementation has been supported by guidelines, most notably:

- UJ Toolkit for off-campus teaching & learning 2020
- UJ Assessment Guidelines for Learning at a Distance
- COVID-19: Guidelines for Programmes that have Workplace or Experiential / Practical Components.

In now addressing online open-book exams, this document represents a logical progression of all documentation that has preceded it.

Purpose

This document is intended to serve as a useful resource for academics.

It addresses what is, in a sense, the culminating step in the online processes of teaching and learning and assessment that academics have recently engaged with commitment and innovation: the exams. Just as the very nature of exams is summative assessment, exams are now rather like the summative major challenge in the unprecedented situation in which we find ourselves.

This document is best seen as complementary to the 'UJ Assessment Guidelines for Learning at a Distance'. It has a selective focus on online, open-book exams across all disciplines, recognising that each discipline has its own distinctive conceptual architecture and challenges.

Principles and strategies for managing online, open-book exams

Key features of open-book exams

Academics and students are thoroughly familiar with summative assessment conducted under controlled conditions that can be closely monitored. The key challenge of online, open-book exams is that there is no control over which texts and other resources students can access, and this necessitates an entirely different approach to setting, structuring and marking the exams.

- An essential characteristic of an open-book exam is that it does not rely much on students' power of recall. The focus is more on students' knowledge and skill in demonstrating an understanding of a topic and their ability to construct and justify a purposeful argument or course of action. It is not a test of memory.
- A fit-for-purpose open-book assessment will not have all the answers readily available to students who are able to access resources like class notes, study material, PowerPoint slides, textbooks and other internet sources, including Google searches.
- Research and the above two bullet points counter the common misconception that open-book exams must necessarily be easier than closed-book exams. One reason for this may be the setting of time limits. In essence, though, the level of difficulty in the open-book format is linked to a focus on higher-order thinking and writing skills that involve analysis, synthesis and application rather than on memorization (e.g. as in Bloom's revised Taxonomy under Appendix A below).
- The real strength of open-book exams is that they replicate the conditions that students will face as graduates in the real world. The open-book format makes it possible to more adequately represent real-life situations in which practitioners have access to limitless resources – but must make decisions on which information to use, and how to use it. They must also formulate judgments, strategies and solutions within given time limits. 'Thinking on your feet' is an essential skill often required in real-life situations.
- From all of the above, it follows that the open-book exam format is a possibility as a key feature of quality assessment: authenticity. As the 'UJ Assessment

Guidelines for Learning at a Distance' notes: "Apply **authentic** assessment that requires application" (p.7).

'Fairness': A key overarching principle

"Assessments must be fair and should not disadvantage any groups of students" ('UJ Assessment Guidelines for Learning at a Distance', p.3). Other UJ Guidelines also emphasise the importance of fairness, as did the DHET in a virtual meeting of the Portfolio Committee on Higher Education, Science and Technology on Thursday 14 May.

The precept of 'fairness' thus merits special consideration in the context of online, open-book exams.

A dictionary definition of fairness may be "impartial and just treatment or behaviour without favouritism or discrimination". In the context of assessment, however, the following description is equally useful. "Fairness is the concept in sociology, law and generally in society, that something should be equal and not be a contradiction to accepted standards. It is related to justice in both the legal and sociological sense. Fairness is also treating others equally or in a way that is considered right or reasonable."¹

The imperative that fairness should not contradict accepted standards is important here. It implies that there should be a balance between 'the best interest of all students taking the module' and 'the integrity of the exam paper, exam procedures, and academic standards'. As upholders of the integrity of the examination, academics must exercise professional judgment in navigating the fine line of balance in this regard. As subject experts who also know their students, they are well positioned to do this.

But determining whether an exam paper is fair, as far as the setting and marking are concerned, is no easy task. The test for fairness should mainly be an objective one noting that the same rules must be applied. This is, however, not always the reality, as subjective factors can also play a role. Fairness must be read along with 'deservedness', meaning a person should get what he or she deserves. For example, a lecturer may intentionally add a question on work that was covered in class when a large number of students were absent - in the belief that it is only fair to give the attending students some advantage. Another lecturer might be more accommodating and afterwards post the relevant content on BlackBoard.

Another example is when students are questioned on work not explicitly dealt with in class, but where students were instead referred to the prescribed textbook. Should the fact that many students could not or did not obtain the textbook make such a question unfair? Lecturers may have different views on this.

¹ <https://dictionary.cambridge.org/us/dictionary/english/fairness>

Other aspects of 'fairness' are more unproblematically related to assessment of any kind. For example, can it be fair if the whole paper represents only 30% of the work that was covered in class? A balanced question paper also tests different kinds and levels of skills, and usually has a combination of short and long questions.

However, the 'fairness' imperative becomes even more challenging with online assessments. The reality is that not all students are in the same situation as far as facilities and capacity to communicate digitally are concerned. Lecturers cannot simply ignore such differences. With limited time exams, there may be a concern that students who can type quickly will have an unfair advantage, but lecturers should be more interested in quality, not quantity. It is recommended that extended essays beyond the norm should not be expected. Students should in any event have more time compared with that governing traditional exams, so that typing speed does not become a significant factor in the student's performance.

From a 'fairness' perspective there may also be a need to be more lenient and to consider alternative options. For example: if the instructions for an online assessment specify that answers must be downloaded through the BlackBoard platform and a connectivity issue arises, an e-mail or even screenshots of a typed or written answer sheet should be accepted as valid forms of submission.

In some cases, home factors may present particular difficulties including not being the ideal environment for learning.

General considerations and suggestions for constructing valid and purposeful questions for online, open-book exams

- As with any assessment format, all questions should be framed within and with reference to specified course outcomes. Most fundamentally, has the student mastered the necessary knowledge and skills?
- Most open-book exam questions assess interpretation and application of knowledge and critical thinking skills rather than only the recall of knowledge. This means that questions set should require students to do things with the available material, and not just merely locate the question in the textbook or notes and then reproduce the information. The 'copy and paste' approach should be discouraged at all levels. Appendix B has a series of examples of questions that do not allow opportunity for 'copy and paste' answers. Although these have applicability to the study of Law, they may provide a basis for extrapolation to other fields of study.
- Online, open-book exams do make allowance for entry-level and easier or shorter questions. However, such questions should not simply require

students to recall facts and provide definitions. Action verbs such as classify, compare or distinguish can be useful.

- Most of the literature supports the idea that time limits are crucial to a successful open-book exam. Open-book questions naturally take longer to answer, so the time allocated must be realistic. This means an increase in the time limit that would have been normative for an equivalent question in a closed-book exam.²
- Consider the use of real case-based exam questions that require students to apply critical reasoning skills in response to a specific scenario.
- Consider the following question: "What would be the role of the study material that the student has access to?" This question also considers aspects of understanding organisational skills like time-management; the ability to write clearly and succinctly; to be innovative; and when appropriate, to be critical about other viewpoints.
- Given that students are new to the online format, it is particularly important that questions are clear and unambiguous to prevent unnecessary confusion and time spent understanding or interpreting the question. This does not preclude challenging questions, where the skill of identifying the real issue is part of the assessment.
- Bloom's Taxonomy is usually used as a way of differentiating between the different year levels. It may, however, be useful not only to reflect on this taxonomy again but also to take a good look at the examples of how to ask questions within the different categories (see Annexure A at the end of this document).
- Questions should not be so generic that they allow students to obtain answers through a search function using what they have electronically available.
- The same applies to questions to which students may quickly find answers off the Internet. As a check, examiners should Google questions or key words beforehand to see what comes up. Google is great when looking for facts but useless for providing interpretation. Another way to prevent students from 'Googling' questions is to structure questions in a way that the answer needs to refer to discussions that were held in class or in online teaching. Google has no way of knowing the specific context of any discussion that happened within its lecturer-student relationship in the individual module.

² There are some useful 'question and answer' discussion sites, e.g.

<https://academia.stackexchange.com/questions/19368/pedagogical-reasons-for-time-limited-exams>

- Structure questions in such a way that students need to formulate their response and examples by providing supporting arguments. Consider including some marks for originality in your mark allocation.
- An excellent way to assess whether a student can apply their understandings to a particular set of facts is to provide them with an unfamiliar scenario or situation that had not previously been discussed in class.
- Link a choice of option, like right or wrong, to a requirement that the answer must be justified. More marks should be allocated to the explanation than to the factual correctness of the answer.
- Questions based on comparison or distinction cannot quickly be answered by students trying to find the 'correct' answer. 'Contrast' or 'compare' questions can also cover more than one topic in the syllabus.
- Questions should focus on the 'why' rather than only the 'what' and the 'how' (although, depending on context, procedural knowledge has its place).
- In some fields it is necessary for students to know and understand what professionals or practitioners do in the workplace. "To design authentic assessments, think about what professionals in your field do regularly and then ask yourself how students can take the knowledge and skills from your course and apply them to those tasks. Could they design a database for real or fictional clients? Create interpretive labels for an art exhibit? Write a grant proposal? Compose a letter to a policy maker?".³
- Role-play may be a useful method to get students to address problem-based scenarios. This can be fictional, but students may relate better to real-world cases.
- When a question has no clear right or wrong answer, make sure that students are aware of that fact and that they can interpret or apply their minds in more than one way.
- Multi-step questions, where students need to build one question on the previous one, can work quite well.
- There may even be a question that is broad in scope and that requires students to select and consolidate content from across the whole curriculum.

³ Creative Methods of Assessment in Online Learning. 2020 Center for Teaching and Learning | Wiley Education Services. <https://ctl.wiley.com/creative-methods-of-assessment-in-online-learning/>

- As always when using multiple-choice questions, make sure that the different options are neither too obvious nor too complicated. The temptation will always be there for students not to apply their minds at all. Instead, they would like to find the correct answer in the material. If questions are too complicated, students may use much time in trying to find the answer to a one-mark question. A balanced approach is essential.⁴
- The risks attached to dishonesty and therefore putting the integrity of our qualification in jeopardy can be minimised by way of exam time limits. Even more important is to make sure that our exam papers are explicitly set up for the online, open-book format. For future purposes, there are other restrictions that an institution can build in so that students should not be able to message their fellow students. These are already available by using software solutions, along with locking down browsers, when students are back on campus.

Preparing students for the online, open-book exam

Students facing online exams for the first time are likely to be even more than usually apprehensive about what lies ahead for them. Academics might wish to consider communicating with their students in this regard, perhaps using the UJ Announcement Tool. While they will know best what their students need to know, the following points may have relevance.

- “Communicate clear criteria for the successful execution of tasks to students.”⁵ This important educational principle assumes even greater significance in the context of students’ first experience of the online, open-book format.
- While the open-book method may be an excellent tool for assessing depth of understanding, too many students initially – and mistakenly – may think that having the benefit of being able to look up answers means that they do not need to prepare for the exam.
- At the other end of the scale, students might derive some reassurance from the fact that there will probably be less pressure on them to try and memorise the ‘facts’. As education expert Nola Payne explains: "Open book assessments are more engaging to the students because they need to use a combination of memory, creativity and logical thinking. They also result in less pre-assessment anxiety for the students knowing they do not need to recall facts." She continues: "There is little time for students to page through their textbooks and other resources searching for answers. A good open-book assessment will not have the answers in the permitted resources, but rather refer to the methods and related content. The assessment will still need to be

⁴ https://www.newcastle.edu.au/_data/assets/pdf_file/0006/268980/Open-Book-Exams.pdf

⁵ ‘UJ Assessment Guidelines for Learning at a Distance’ (p.4).

engaged with, and students required to provide a carefully considered response."⁶

- Would it be helpful to provide students with an indication of the data demand that the exam will place on them? The University of Johannesburg has done its utmost to make the necessary digital resources available to our students not only for online learning, but also for online assessment. The availability of data was a huge issue for students to download study material and pre-recorded lectures, including PowerPoint slides (some narrated), video-clips and even scanned chapters from prescribed textbooks. The same challenge is not necessarily the case with online exams. If the BlackBoard test tool or even an assignment tool is used, the data needed to download an exam paper or assignment is very little. (At the same time, as mentioned above, we should be sensitive to Internet stability and connectivity issues.)

Conclusion

The most important generic principles that arguably emerge from this document are:

- Fairness;
- Flexibility;
- The importance of assessing higher order skills in balance with a focus on knowledge;
- The importance of authentic assessment in line with course outcomes and workplace practices.

In outlining UJ's transitioning to online teaching and learning in their communication of 3 April 2020, the DVC Academic and the DVC Research and Internationalisation concluded: "Together, we trust that we will be able in the online environment to provide the best teaching and learning experience, given the current constraints under which we are all working."

Intensive and innovative activity in the short time between then and now has justified that trust. The challenge of conducting online open-book exams comes with the opportunity to be even more thoughtful and purposeful in our assessment practices.

Annexure A: Summary of Bloom's Revised Taxonomy

⁶ <https://www.iie.ac.za/students-dont-get-tripped-up-by-open-book-assessments>

DEFINITION	BLOOM'S DEFINITION	QUESTION STEM or ACTION VERB
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 ...
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.

Annexure B: Questions in Law that minimise students' opportunity to provide 'copy and paste' answers⁷

Clarification questions

- What did the plaintiff's advocate mean by...?
- Could you put the following statement in another way?
- What do you think was the relevant issue?
- Please provide an example.
- Could you expand on your objection to the question?
- Why do you think there are exceptions to the rule?

Assumption questions

- Why would someone make this assumption?
- What is being assumed here?
- What could we assume instead?
- You seem to be assuming.
- Do you understand the majority judgment correctly?
- If this is the one school of thought, what may be the other?

Motivational questions

- What would be an example of an objection?
- Why do you think this is more probable?
- What other information could the prosecutor have provided?
- Could you explain by way of at least two reasons why the court should accept your argument?
- By what reasoning did you come to that specific conclusion?
- Can you think of any reason that anyone can doubt that evidence?
- What led you at the end to the belief that the defendant should pay for the damages?

Origin or source questions

- If you answer in the affirmative, is this your view or did you get it from someplace else?
- What are the two opposing schools of thought, and how do they differ?
- Has your viewpoint been influenced at all by something or someone?
- Where did you get that idea? Furthermore, what caused you to feel that way?

Inference and consequence questions

- What effect would that have on the outcome of the matter?
- Could that really happen or probably happen?
- What is an alternative to your original submission?

⁷ from 'Discussion document on online open-exams' (Professor Dawie de Villiers)

- What are you implying by that?
- If that really happened, what else would happen as a consequence, and why do you think that?

Point of view questions

- How would your answer be different if you appear on behalf of the other party?
- How could you reply to the objection of the opposing party? Justify your reply.
- Can you provide any alternative solution?
- How can you convince the court that your submission is on par with a reported judgment?⁸

⁸ <https://teche.mq.edu.au/2020/04/online-exam-delivery-tips-the-online-open-book-examination/>