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# Maintaining quality assessment practices under emergency remote online conditions

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# The challenge

Dishonest academic practices such as plagiarism increased among undergraduates when teaching, learning and assessment moved onto the online learning management system during lockdown; this was especially the case for developing world contexts like South Africa (Nwosu and Chukwuere, 2020). Based on their observation of increased instances of dishonest practices among Biology undergraduates, this article documents some of the techniques lecturers at the University of the Witwatersrand (Wits), South Africa, used in an attempt to maintain quality assessment practices that facilitated learning in higher education.

Like most South African universities, the Biology department at Wits University had conducted assessments as closed-book, timed examinations that were written in person. The swift move to assessing students online during the Covid-19 pandemic left both students and lecturers unprepared for a different mode of assessment. Often the students' completion of online assessments under emergency remote conditions came into question, and concerns were raised by lecturers with regard to increased instances of dishonest academic practices (Nguyen et al., 2020). Some students had only basic skills in navigating the online learning management system and generally needed more time to fully adapt (Le Grange, 2020). There were concerns that this lack of experience could have caused the increase in dishonest academic practices observed among undergraduates.

The Biology lecturers' observations of increased instances of academic dishonesty led to their deliberating how they could assess students online while minimising opportunities for dishonesty and mistakes. Assessments under the new online conditions required lecturers to radically adapt their pedagogical practices (Hsu, 2021). We did this by considering and formulating questions that engaged students in relating theory to practice and therefore focused more on the application of knowledge than memorisation and recall.

The key question addressed here is 'considering the move to the online platform under emergency conditions, what measures can be used to ensure quality assessment practices that reduce opportunities for dishonest academic practices such as plagiarism?'.

# The response

Constructive alignment requires alignment between the curriculum, learning outcomes, teaching activities and assessment practices (Biggs and Tang, 2007). We sought to respond to the challenge of online assessment by employing techniques that encouraged students to critically reflect on their understanding as they constructed responses to the assessment questions. The application-type questions that we designed were mostly scaffolded for first years while second and third years were challenged to think at higher-order cognitive levels, as illustrated by the examples below.

The types of questions presented below stemmed from my experiences during 2020 and 2021, and from discussions with colleagues on what worked for them. Although the assessment practices provided here emerged from the context of Biology, many of the examples could also be applied to different disciplines.

We provided assessment questions that allowed the students an opportunity to express their views by writing from a stance related to a particular role. These views were informed by the content covered during the course.

#### Example:

In 500 words, provide your view from a biomedical standpoint on whether there is a benefit to invest in the development of a vaccine against Covid-19.

We also provided links to readings and other guiding instructional questions to help students reflect on their responses so that they could establish their positions based on scientific thought. This scaffold was considered important since first-year students may not necessarily have the required training to voice their position based on scientific arguments. We posed more cognitively challenging questions for second and third-year students. These students were challenged to think about how the content in the curriculum tied in with topical Biology concepts related to Covid-19.

### Example:

Write an essay on the significance of lockdown on environmental pollution.

Instructions were provided to indicate that students needed to construct an argument by thinking about different and contrasting perspectives as they considered their standpoint. This question included a highly specific task-set, the answer to which would not be easily accessed, for example by internet search. We envisaged that this would force students to reflect on the knowledge they had gained during the course rather than allowing them to 'cut and paste' from other sources.

The following type of question added some variety to the usual type of assessment format that students were exposed to on written assessments and allowed the students the opportunity to be creative in their response to the assessment.

### Example:

Construct a 3-D model of a cell using play dough. Take two or three photographs of your model from different views. Attach these images for evaluation in your response to the assessment.

We incorporated other questions that assessed students while supporting their development of skills in reading for comprehension and critiquing a subject area. These tasks were based on probing questions linked to the students' reading and analysis of a journal article. Questions were presented to students to help them reflect at different cognitive levels.

#### Example

Identify the main argument and supporting lines of evidence for articles 'x', 'y', and 'z'. Based on the arguments posed, and considering the content covered on this topic over this semester, substantiate your viewpoint on the impact of these areas for our South African context.

This type of question brought together different topics covered over the course. To encourage student reflection through the duration of the course, they received the question at the start of the course and then built towards their response as they covered each topic.

It is important to be inclusive and acknowledge the diversity that may exist within a class, so in order to do this, students were given a choice of questions for assessment and could select one based on their own cultural experiences.

#### Example:

Provide the common and cultural names and identification methods for some indigenous medicinal plants in our local contexts. What medicinal significance do these examples have for the society in which they are used?

#### Recommendations

When different types of questions, as illustrated above, are used as tools for assessment, it is possible to engage students to reflect creatively and critically. This can especially be encouraged when topical contextual and global issues, like the effects of the Covid-19 pandemic, are included as part of the assessment. These opportunities encourage students to apply theory to practice and thus facilitate their application of knowledge. This process, therefore, enables authentic learning opportunities, and when students are stimulated to consider curricular content within the scope of 'real-life' issues, their interest can motivate their learning. This motivation helps to mitigate issues around academic dishonesty when they tackle assessments, and avoidance of dishonest academic practices in online assessments is fundamental to providing a quality learning experience and qualification.

## References

- Biggs, J. and Tang, C. (2007) *Teaching for quality learning at university: what the student does.* New York, NY: McGraw-Hill.
- Le Grange, L. (2020) 'Could the Covid-19 pandemic accelerate the uberfication of the university?' South African Journal of Higher Education 34(4) 1-10. Available at: <a href="http://dx.doi.org/10.20853/34-4-4071">http://dx.doi.org/10.20853/34-4-4071</a> (Accessed: 7 September 2021).
- Hsu, J.L. (2021) 'Promoting academic integrity and student learning in online biology classes', *Journal of Microbiology and Biology Education* 22(1) 1-7. Available at: <a href="https://dx.doi.org/10.1128%2Fjmbe.v22i1.2291">https://dx.doi.org/10.1128%2Fjmbe.v22i1.2291</a> (Accessed: 18 October 2021).
- Nguyen, J.G., Keuseman, K.J. and Humston, J.J. (2020) 'Minimize online cheating for online assessments during Covid-19 pandemic', *Journal of Chemical Education*, 97(9), pp.3429–3435. Available at: <a href="https://doi.org/10.1021/acs.jchemed.0c00790">https://doi.org/10.1021/acs.jchemed.0c00790</a> (Accessed: 18 October 2021).
- Nwosu, L.I. and Chukwuere, J.E. (2020) 'The attitude of students towards plagiarism in online learning: a narrative literature review', *Gender & Behaviour* 18(1) pp.14675-14688. Available at:

  <a href="https://www.researchgate.net/publication/343471863\_The\_attitude\_of\_students\_towards\_plagiarism\_in\_online\_learning\_A\_narrative\_literature\_review">https://www.researchgate.net/publication/343471863\_The\_attitude\_of\_students\_towards\_plagiarism\_in\_online\_learning\_A\_narrative\_literature\_review</a> (Accessed 18 October).

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