

# Online multiple-choice and short answer examinations

This document summarises recent research that articulates the benefits, issues and recommended practices online multiple-choice and/or short-answer examinations. These are assessments, mediated by Moodle tools in the Learning Management System (LMS), which at USQ is referred to as StudyDesk.

Benefits	Potential issues	Suggestions
<ul style="list-style-type: none"> <li>» Keeps students up to date with key concepts (Salas-Morera, Arauzo-Azofra, &amp; García-Hernández, 2012)</li> <li>» Timed assessments leave less opportunity for cheating compared with face-to-face examinations (D'Souza &amp; Siegfeldt, 2017)</li> <li>» Students perceive repeated use as positive because they help with memory (Boitshwarelo, Reedy, &amp; Billany, 2017)</li> <li>» Multiple attempts or instances of online exams of this type develop student mastery (Boitshwarelo et al., 2017; Salas-Morera et al., 2012)</li> </ul>	<ul style="list-style-type: none"> <li>» Careful design is required to ensure higher order learning, and avoid student guessing (Hemming, 2010)</li> <li>» Student learning success requires immediate, quality feedback (Boitshwarelo et al., 2017)</li> <li>» Students perceive online tests to be "easy" (Hemming, 2010)</li> <li>» Un-proctored online tests linked to cheating, and hacking (Boitshwarelo et al., 2017)</li> </ul>	<ul style="list-style-type: none"> <li>» Scaffold the test with multiple practice tests (Salas-Morera et al., 2012)</li> <li>» Use case study questions to trigger higher order thinking (Boitshwarelo et al., 2017)</li> <li>» Develop customized, automated feedback for immediate student correction (Gamage, Ayres, Behrend, &amp; Smith, 2019; Hastie &amp; Goldfinch, 2010)</li> <li>» Create new questions for each test and avoid publisher test banks (Boitshwarelo et al., 2017)</li> </ul>

## References

- Boitshwarelo, B., Reedy, A. K., & Billany, T. (2017). Envisioning the use of online tests in assessing twenty-first century learning: a literature review. *Research and practice in technology enhanced learning*, 12(1), 16-16. doi:10.1186/s41039-017-0055-7
- D'Souza, K. A., & Siegfeldt, D. V. (2017). A Conceptual Framework for Detecting Cheating in Online and Take-Home Exams. *Decision Sciences Journal of Innovative Education*, 15(4), 370-391. doi:10.1111/dsji.12140
- Gamage, S. H. P. W., Ayres, J. R., Behrend, M. B., & Smith, E. J. (2019). Optimising Moodle quizzes for online assessments. *International Journal of STEM Education*, 6(1), 27. doi:10.1186/s40594-019-0181-4
- Hastie, D., & Goldfinch, T. (2010). *Evaluating online multiple choice quizzes as formative assessment tools in an engineering subject*. Paper presented at the Proceedings of the 2010 AaeE Conference, Sydney. <http://aaee.com.au/conferences/AAEE2010/PDF/AUTHOR/AE100014.PDF>
- Hemming, A. (2010). Online tests and exams: lower standards or improved learning. *The Law Teacher*, 44(3), 283-308. Retrieved from <https://heinonline.org/HOL/P?h=hein:journals/lwtch44&i=291>
- Salas-Morera, L., Arauzo-Azofra, A., & García-Hernández, L. (2012). Analysis of online quizzes as a teaching and assessment tool. 2012, 2(1), 7. doi:10.3926/jotse.30

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