

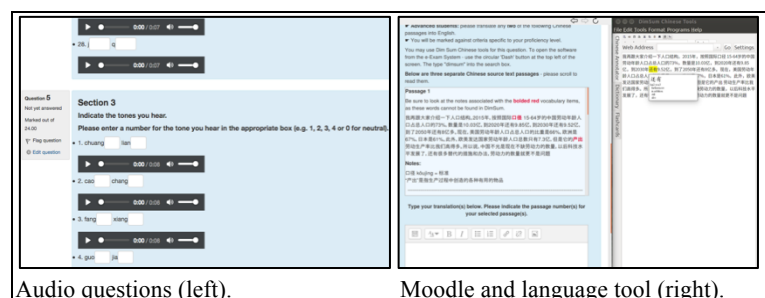
# Case study: Monash University – robust Moodle exams (2018)

## Summary

e-Exam trials using a 'robust' online Moodle implementation were carried out in first year and a third year units in Chinese language as in-class tests. Durations ranged from 30 mins to 1 hour. Typing was optional in the first year unit and strongly encouraged in the third year unit. The test had traditionally been a paper based and invigilated. A range of question types were used including multiple choice, true/false, gap-fill and short text responses involving translation (Chinese to English and English to Chinese). Some tests included audio listening tasks. The third year unit included use of two third party Chinese language applications alongside Moodle.

The e-Exam was conducted by starting laptops from e-Exam USBs that included Safe Exam Browser. This connected to specially configured Moodle server equipped with multi-layered protection against network outages. Test preparation time was in-line with standard Moodle quiz style set-up. The conversion of audio files ogg format was the only additional step. Time was saved due to automatic marking of selected and convergent responses and ease of reading typed responses compared to handwritten responses in the past.

Discipline	Chinese Language
School	Languages, Literatures, Cultures and Linguistics
Institution	Monash University
Level	Undergraduate, first and third year.
Class size	21 first year and 75 third year.
Mode	On campus blended teaching.
e-Exam	In-class, typing optional. Moodle quiz. BYO and university laptops.
Assessment	30 min to 1 hour tests, various weighting. Mix of multiple choice, true/false, fill-in-the blank, short text and audio. Some automatic marking.



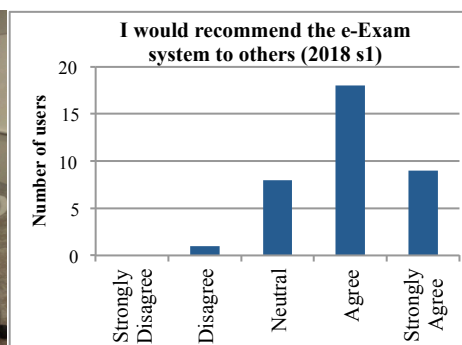
Audio questions (left).

Moodle and language tool (right).

Challenges encountered were: allaying students' fears of the 'unknown' particularly relating to possible technology failure (something that was much reduced following use). The limited availability of suitable 3<sup>rd</sup> party Chinese language tools that will work offline led to a clunky tool being used and this was reflected in student feedback comments. Campus networking threw up a couple of issues relating to student access during the practice runs and loss of WiFi connectivity for

two students. The network outage protection of the e-Exam System worked to prevent data loss and allowed students to successfully complete their exams.

Surveys following both the practice and actual exams showed that students who used the e-Exam system felt that it was easy to use. The majority said that they would like to use it again in the future, that it was safe against cheating and that they would recommend it to others (see chart). Some doubts remained regarding the reliability of using their own laptops for an exam and around the logistics of getting connected to the network – but once connected it was fine!



Key features of this case study include:

- Chinese language exam with audio files and additional applications working alongside the Moodle LMS.
- The built-in protection against network outages for online Moodle exams was successful allowing robust use.

## Acknowledgements

The project team would like to thank Dr Scott Grant, Monash University staff and the students for their participation. Support for this project has been provided by the Australian Government Department of Education and Training. The views expressed in this project do not necessarily reflect the views of the Department of Education and Training. Further information about the e-Exams project is available from TransformingExams.com. Further detail on this case is available: Hillier, M., Grant, S., & Coleman, M. (2018) Towards authentic e-Exams at scale: robust networked Moodle, Australasian Society for Computers in Learning in Tertiary Education conference, 25-28 Nov, Geelong, Australia, pp. 133-143