Case study: University of South Australia – Mathematics Education

Summary

A trial e-exam was carried out in Semester 1 2017 and 2018 in the post graduate curriculum course in Mathematics for Secondary Teaching. Students had the opportunity to volunteer to choose an e-exam using laptops or paper-based to complete the final exam, worth 40 per cent. Nine students from a class of 24 opted to do the e-exam in 2017 while in 2018, 32 typed of the 33 enrolled. Those students who volunteered to undertake an e-exam were given a demonstration of the exam environment and processes 2 weeks prior to the actual exam. The e-exam process was discussed and demonstrated during class workshops. Students had the opportunity to ask questions and then try the system before the exam. The students felt it was straightforward and chose not to do the practice session. It was decided by the course coordinator that university owned

Discipline	Education
School	Education
Institution	University of South Australia
Level	Post graduate.
Class size	2017 (9 typed of 24), 2018 (31 typed of 33).
Mode	On campus blended teaching.
e-Exam	In-class, typing optional. Word processed document. University owned laptops.
Assessment	A 2 hour final exam worth 40%, with 3 short answer questions of 600 words each.

laptops would be used for the first run to ensure consistency and minimise the chance of needing to trouble shoot hardware issues. The course coordinator created the USB sticks and supervised the exam session. In 2017 two separate sittings of the exam were used due to some students being on placement at the time of the exam. The exam was run on the university campus where there were sufficient power plugs for laptops. Students had to nominate their choice of typing or handwriting in advance of the exam. This meant that a room could be set up beforehand with laptops. Typists and hand writers sat the exam in the same room. Given the relatively small number of students in each sitting they were well spread out in the room.
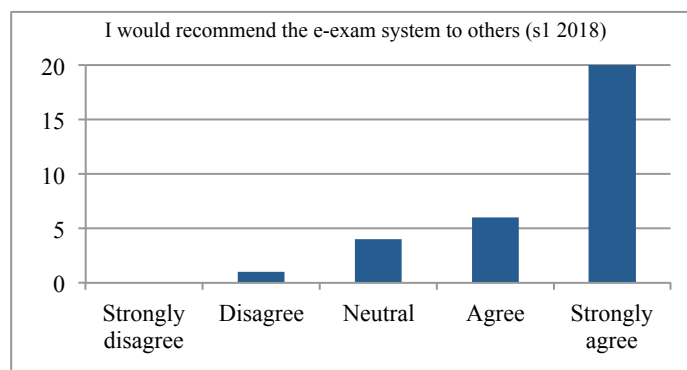
The exam events ran smoothly without any problems. Feedback from students indicated that they wanted to use their own computer and this would be implemented next time. Staff found that typed responses were easier to mark because they were easily decipherable. This was in contrast to some of the handwritten responses that were found to be almost illegible. Staff viewed the e-exam as very suitable for exams with essay type questions and recognised the potential to add different styles of questions that would add value to having an e-exam. There was a desire to be able to offer an e-exam as an option in the future and the possibility of allowing students to use their own laptops.

Challenges encountered were: In 2017 the initial setup of e-Exam USB sticks was found to be a little problematic because an older version of the e-exam administration software was used but overcome with the use of the latest version. This was not a problem in 2018 using the new version of the software.

A student survey followed the exam session, the majority of students who used the e-Exam system showed a preference to do an e-exam again in the future and indicated it was easy to use. Those surveyed in 2018 would recommend the e-Exam system to others (See chart). They commented that they felt that typing was easier and faster than handwriting. Students also commented that they word processed all their assignments. Students said that typing allowed for easy movement between questions in an exam and ease of editing responses. They could construct their

work by adding points into their answers as they went without creating a mess on the page, as would have been the case with handwriting. Some doubts remained regarding reliability of technology in general, especially on the part of those who chose to handwrite. Those that handwrote cited familiarity with the process and that they felt it was easier to focus their thinking when using a pen.

I would recommend the e-exam system to others (s1 2018)

Key features of this case study include:

- Post graduate Mathematics education for secondary school teachers, course with small numbers.
- University owned laptops used.

Acknowledgements