

Deborah Lowry

School of Pharmacy and Pharmaceutical Sciences, Ulster University, Coleraine
d.lowry@ulster.ac.uk

Introduction

Active learning puts students at the heart of their learning experience enabling them to become more engaged with their own learning building knowledge through their own experiences¹. Staff-student partnerships have been shown to enhance educational practice and have students taking a more active role in decision-making². Subjects and lecturers that stimulate interest have a positive effect on engagement with evidence showing the presence and behaviour of the lecturer is key to student engagement³. Active methodologies are therefore important in addition to lectures as this helps build knowledge through critical analysis and finding solutions⁴.

To improve engagement of students with online modules a co-development project was conducted to develop educational escape rooms allowing students to be involved with the development of clues for a drug delivery module. Educational escape rooms are effective pedagogical tools used to develop students' knowledge and skills and have been positively received by students, increasing knowledge and serving as a platform for teamwork⁵.

Study Design

Engagement study

Blackboard Learn analytics were used to investigate if any correlation was identified with engagement with learning materials and grades received.

Online consultation and Questionnaire

An online consultation was conducted with five 3rd year MPharm students to gather opinions on online delivery and the use of educational games.

Student opinions on online delivery specifically the use of lecture recordings, online synchronous sessions and having to manage their own time was gathered using questionnaires and consultations.

Co-design sessions

The co-design sessions involved students identifying important theories and concepts in the learning materials which they believe are important to understand in order to complete the coursework. The coursework involves the development of a scientific poster including discussing scientific results.

Following this students had an opportunity to develop questions that could be used in an escape room. It is hoped that understanding of complicated concepts will be improved as students have been involved with developing questions. The questions were further developed by staff in order to have students apply their knowledge of concepts and theories. The escape rooms will be added to the module and delivered as synchronous sessions in addition to tutorials.

References

1. Friedrich, C., Teaford, H., Taubenheim, A., Boland, P. and Sick, B. (2019) Escaping the professional silo: An escape room implemented in an interprofessional education curriculum. *Journal of Interprofessional Care*, 33(5), 573-575.
2. Cook-Sather, A. (2014) Student-faculty partnership in explorations of pedagogical practice: A threshold concept in academic development. *International Journal of Academic Development*, 19(3), 186-198.
3. Muir, T., Milthorpe, N., Stone, C., Dymont, J., Freeman, E. and Hopwood, B. (2019) Chronicling engagement: Students experiences of online learning over time. *Distance Education*, 40(2), 262-277.
4. Lee, C.Y., White, P.J. and Malone, D.T. (2018) Online Educational Games improve the learning of cardiac pharmacology in undergraduate pharmacy teaching. *Pharmacy Education*, 18(1), 298-302.
5. Kinio, A.E., Dufresne, L., Brandys, T. and Jetty, P. (2019) Break out of the classroom: The use of escape rooms as an alternative teaching strategy in surgical education. *Journal of Surgical Education*, 76(1), 134-139.

Results

Engagement Study

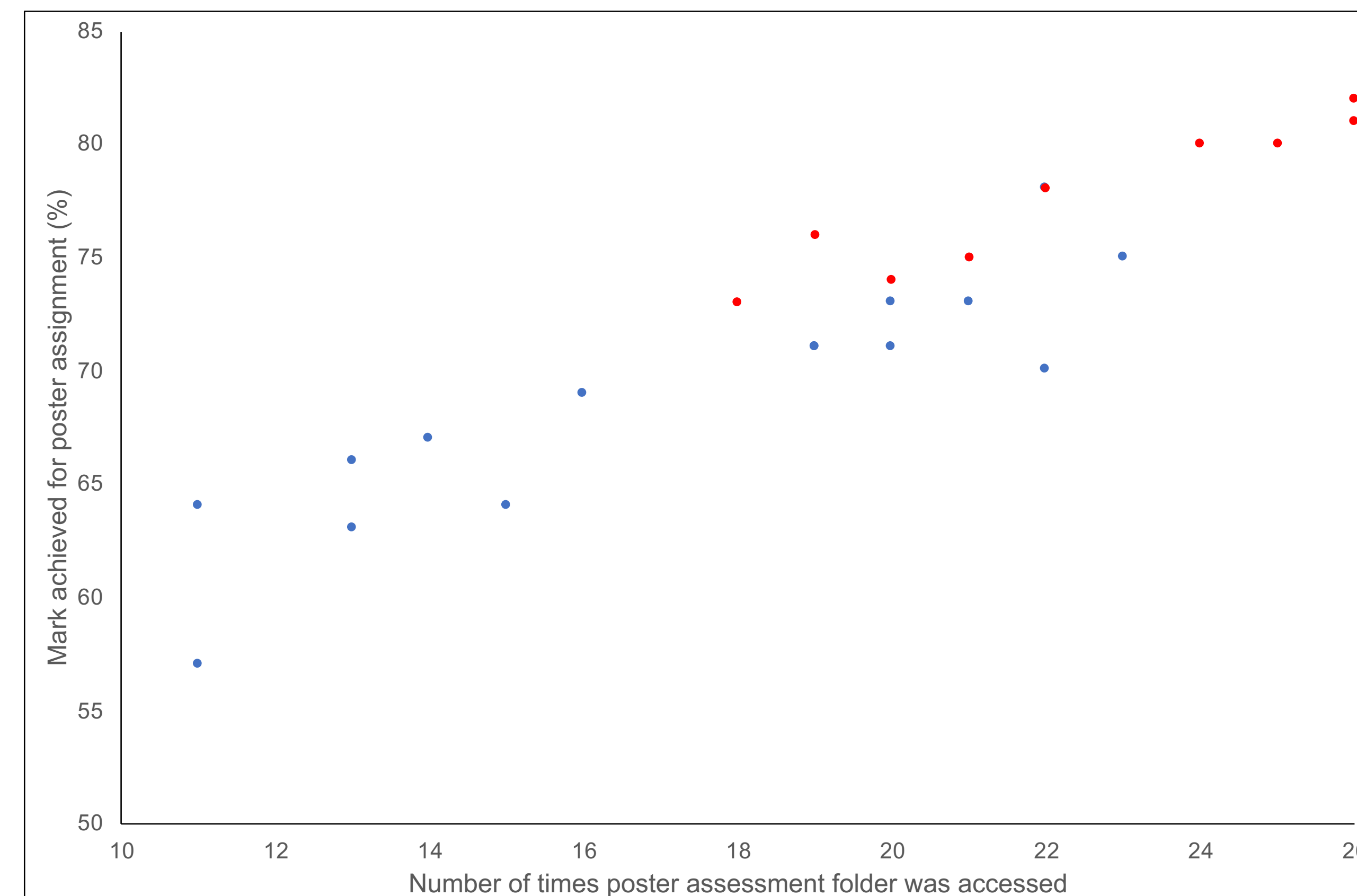


Figure 1. Number of times the poster folder was accessed against the mark obtained by each student. Those who received feedback for draft posters are coloured red.

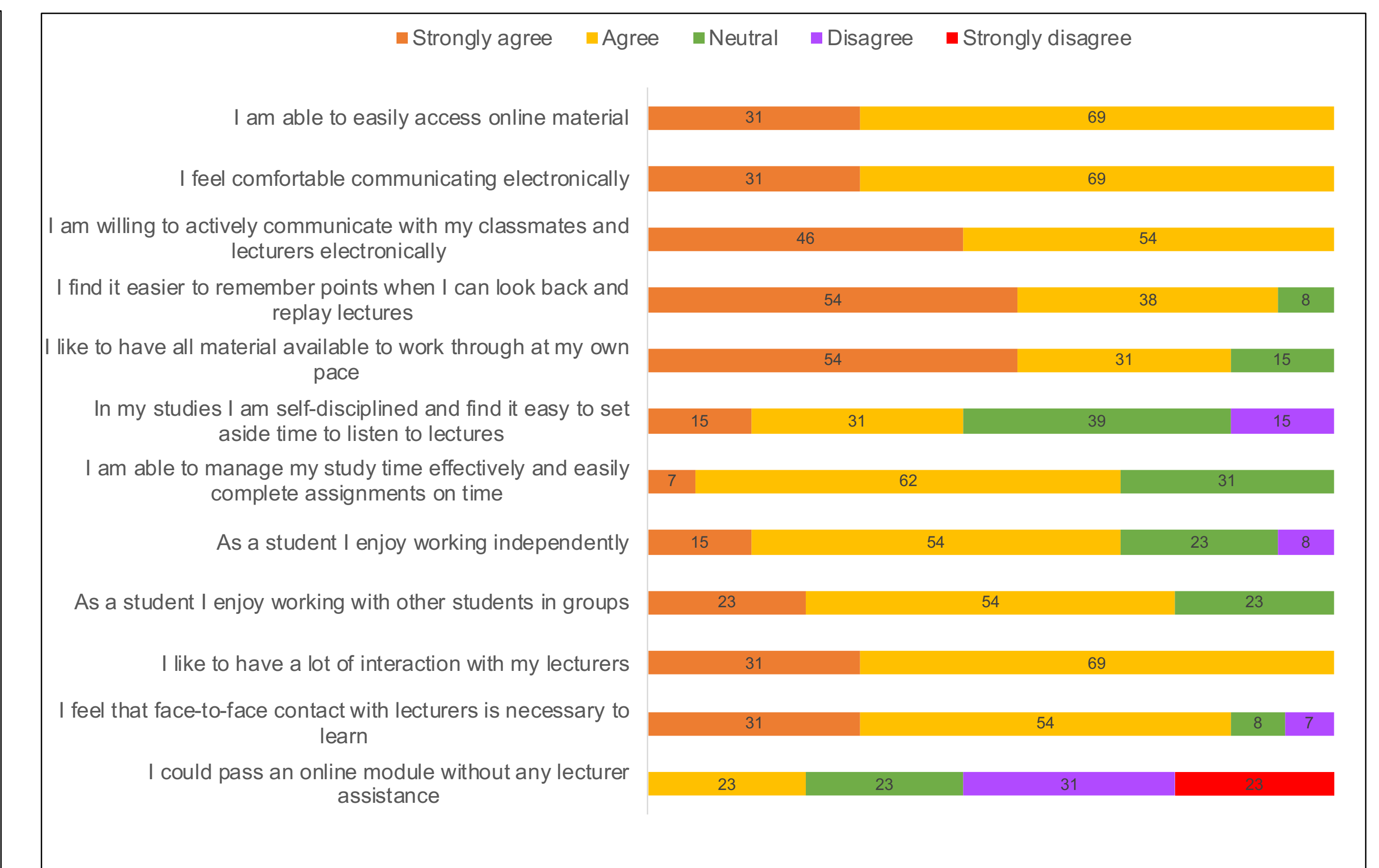


Figure 2. Responses obtained from students registered on the MPharm course regarding online delivery

Online consultation and Questionnaire

Test understanding of lecture material

'I feel that this would help pin-point what you understand and what you need to work on more'.
'Online quizzes and games would be a good way for students to determine their level of understanding'.

Interactivity would be useful

'More interactivity would aid understanding'
'I find it quite difficult to stay concentrated for longer online sessions, or long recorded videos, so having some kind of interactive content to keep me engaged would go a long way to helping me retain information from synchronous sessions'.

Conclusions

- Figure 1 shows that increased engagement with learning materials and with academic staff increased grades received for the poster assessment. The poster folder contained all information to complete the assessment (guidelines, rubrics, scientific results).
- Figure 2 shows the responses from students regarding online delivery and table 1 the themes which were identified from responses to the use of educational games. The majority of students liked online delivery with recorded lectures as they could work through materials at their own pace. They did however state they need interactivity with the academic staff.
- The co-design sessions highlighted students can identify the main concepts and theories that are required to provide critical analysis of scientific results.
- Students stated that following the co-design sessions they had a better understanding of what was required by academic staff as they had worked together in order to develop the escape room questions.
- All students stated that the use of escape rooms would increase their interest in the learning materials and would add 'some fun' to synchronous sessions.