Development of inclusive online resources to support experiential learning in laboratory classes

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Background and Aims

Experiential learning (1) in laboratory classes contributes significantly to student understanding of pharmacological topics. Additionally, knowledge and/ or experience of a range of practical techniques is highly beneficial for securing and succeeding in placements, research projects, PhDs and employment. Due to resource implications, laboratory time is becoming more restricted and the challenges of delivering a high-quality, practical experience, to all students, is increasingly difficult. Many students with disabilities or long term health-related issues may find it difficult to engage fully with practical classes whilst students absent through illness also miss these learning opportunities.

In collaboration with our Disability services, it was proposed to develop a suite of online, accessible resources to support students in gaining knowledge of practical techniques if unable to undertake them first-hand. As with most inclusive approaches, such resources would also be of benefit to all students as additional learning materials.

Summary of work and outcomes

The project is very much in the pilot stage and will be developed over the coming months with the first learning package to be launched in November. Short video recordings explain the theory and methodology underpinning each technique and how they would be used in a research or drug development setting. Close-up filming of the laboratory technique, carried out in a stepwise manner, provides explanations at each stage of the procedure, outlining the purpose and the outcome. An online quiz enables students to self-assess their knowledge and includes a range of questions about the rationale, methodology, potential failures or challenges and safety or ethical implications of the technique. Finally, data sets are provided for analysis. All materials have been created using accessibility guidelines to provide an inclusive learner experience (2).

Discussion

Following the launch of the pilot, student feedback will be sought on the benefits, usability and accessibility to help inform the development of subsequent resources. The availability of the open resource will be disseminated to other relevant disciplines within the institution.

Conclusion

Such online resources, although unable to address the issue of development of practical competency has the potential to provide an alternative mechanism for students to achieve the learning outcomes for the session if unable to participate (3).

References

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