Helping geoscience students improve their numeracy using online quizzes

Anne-Marie Nuttall (1), Tim Stott (2), and Shaun Sparke (1)
(1) School of Natural Sciences & Psychology, Liverpool John Moores University, Liverpool, United Kingdom
(a.nuttall@ljmu.ac.uk), (2) Faculty of Education, Community & Leisure, Liverpool John Moores University, Liverpool, United Kingdom

This project aims to help geoscience undergraduates improve their competence and confidence in numeracy using online quizzes delivered via the Blackboard virtual learning environment. Numeracy materials are being developed based on actual examples used in a range of modules in the geoscience degree programmes taught at Liverpool John Moores University. This is to ensure the subject relevance which is considered vital to maintaining student interest & motivation.

These materials are delivered as a collection of Blackboard quizzes on specific numeracy topics which students can access at any point in their studies, either on or off campus. Feedback and guidance is provided immediately so that a student gains a confidence boost if they get it right or else they can learn where they have gone wrong. It is intended that positive feedback and repetition/reinforcement will help build the confidence in numeracy which so many students seem to lack. The anonymous nature of the delivery means that students avoid the common fear of ‘asking a stupid question’ in class, which can hamper their progress. The fact that students can access the quizzes anytime and from anywhere means that they can use the materials flexibly to suit their individual learning needs.

In preliminary research, 70% of the students asked felt that they were expected to have greater numeracy skills than they possessed and 65% said that they would use numeracy support materials on Blackboard.

Once fully developed and evaluated, the Blackboard quizzes can be opened up to other departments who may wish to use them with their own students.