

## **Title of presentation**

Remote learning in transnational education: Engagement with virtual learning environment and student's perception links to performance in examinations

## **Presenters**

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## **Abstract**

Technology is shaping the landscape of education worldwide with the internationalisation of study and the opening of universities in different geographic locations, such as CQC, which is the off-campus branch of Queen's University Belfast. CQC runs two BSc pharmaceutical programmes in sciences and biotechnology. The university's virtual learning environment (VLE) made it possible for the degrees to be taught remotely. This new area opens a wide range of potentials in terms of a greater access to high standard education and the concept of global studentship. In parallel, remote teaching fosters new challenges in terms of monitoring student engagement, achievement, and motivation throughout a course. The proper understanding and prediction of academic outcomes can enable educators to provide individualised support for every student enrolled in remote learning, which will create a student-centred approach of teaching.

In this study, a multiple regression model was developed using data from the industrial pharmaceuticals module in Level 2 of the BSc pharmaceutical sciences programme at CQC. We were able to create an equation that predicts exam scores based on VLE engagement reports collected throughout the year and coursework performance. Using data from 55 students in the module, an equation was developed, with a high strength of relationship and a statistically significant correlation with  $R^2 = 0.724$  ( $p$ -value  $< 0.005$ ). In addition to that, and in the aim of understanding the remaining contributors to exam

performance, an optimisation routine was established to increase the accuracy of the equation to  $R^2 \approx 1$  by adding a decision variable X for each student.

The X variable can represent other factors (i.e., personal interests and studying hours) and for that reason, student perceptions were collected in order to identify these student related factors through a questionnaire around three broad themes of studying strategy, module design and importance to the degree. The broader purpose of this study is, first of all, creating a model that flags disengaged students so that early interventions can be made by both students themselves and educators. Secondly, comprehensive personal attributes for succeeding in remote learning can be collected so educators' interventions can be aligned with students' needs and perceptions. This work is of great use not only in transnational education but to any scenario where remote learning is used in teaching delivery.