

CATERING FOR THE MASSES

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BACKGROUND

According to Fleming (2012) there are four different learning styles: Visual, Aural, Read/write and Kinaesthetic. We co-teach first year foundation sciences (anatomy and physiology) to approximately 320 allied health students studying four different professional programs (Occupational Therapy, Physiotherapy, Speech Pathology, and Sport and Exercise Science). This group has a diverse background with just over half first-in-family, and one third regional based students. The entry scores of the group are also very broad, ranging from Overall Position (OP) 1 to 22 (equivalent to ATAR 99.95-35). Thus, we have a large number of students with diverse backgrounds, and the potential for great diversity in learning styles. Catering for this diversity in learning styles is one of our challenges.

In the past, the subject materials have been delivered as three didactic lectures per week followed by a two hour practical session. The result has been a high level of student under-performance and attrition. In order to address these issues we decided to deliver the physiology component of the subject using a 'flipped classroom' technique. The learning plans were structured using the 5Es framework with the Elaborate phase structured as workshops comprising active teaching strategies such as role plays, simulations and case studies. The intention was to present materials in various formats to engage different learning styles, cater for the student diversity, and enhance student performance and retention

AIMS

We were interested to know whether the students in different programs would show specific learning preferences. For example, could we predict that students enrolled in Sport Science would prefer kinaesthetic styles as they are the students who enjoy 'doing' things; or that the Physiotherapy students are more likely to prefer read/write styles as they are in general higher academic performers?

DESCRIPTION OF INTERVENTION

As part of the 5Es model the traditional practical classes were changed to workshops and active teaching strategies associated with the Elaborate phase were employed.

DESIGN AND METHODS

Students were asked to complete an anonymous questionnaire two weeks after the conclusion of the delivery of the final physiology component. Students were asked about their attitude to both the traditional and flipped delivery, their perceptions of preparedness for assessment and their engagement with both traditional and flipped materials on the learning management system. Students registered their responses to questions using a four point Likert scale. Data from the questionnaires was analysed for differences in the frequency responses of the different cohorts taking the subject.

RESULTS

Students studying in the Sport and Exercise Science program were most likely to agree that the role plays helped with developing concepts, while students studying Physiotherapy did not agree that the role plays were helpful. Students studying in the Sport and Exercise Science, and Occupational Therapy programs were equally most likely to agree that both the simulations and case studies helped with developing concepts, while students studying Physiotherapy and Speech Pathology were less likely to agree that the simulations were helpful.

CONCLUSIONS

These findings show a high level of engagement of students with the learning activities in the flipped classroom workshops. The Sport and Exercise Science students found the activities most helpful for learning concepts, which is not surprising given that these students are those most likely to have a preference for kinaesthetic learning styles. This cohort of students has the broadest and lowest entry score range (from OP2-22, or ATAR 99-35). The Physiotherapy students were least likely to find the activities helpful, and given that this cohort has the highest and narrowest range of entry scores (from OP1-8, or ATAR 99.95-87), could be expected as more academically able students favour the read/write learning style (Fleming, 2012).

REFERENCES

Fleming, N. D., (2012) *Teaching and Learning Styles, VARK Strategies*. Christchurch NZ: N Fleming

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