Students as Partners: Co – Development of a Flipped Classroom Strategy for the BVM&S Curriculum. Final Report. Sally Argyle, Caroline Hahn, Jessie Paterson, Eoghan Clarkson and Susan Rhind

Aims of the project

At R(D)SVS we have been trialing the use of the flipped classroom approach over a number of years with a number of lecturers providing online resources for students. This has proved popular with students, and the perceived advantages of this approach are in line with similar studies. To develop the idea of the flipped classroom we wanted to evaluate an alternate approach whereby the resources provided are both determined and developed by the students themselves; and in addition encourage students to develop resources relating to challenging topics and threshold concepts. We wished to investigate the experience of both the student resource developers and the student resource users. Our hypothesis being that there would be additional value added in students hearing the authentic student voice in explaining and developing difficult concepts.

Specific aims:

1. To work with students to identify, based on a threshold concepts model, appropriate areas of the curriculum to focus flipped classroom developments on.

2. To specifically engage students in co-development and evaluation of resources to facilitate learning in these challenging areas from the student perspective

Key steps and project outputs

- Selection of 4 student partners following completion of Year 3 of the BVM&S. Involvement in the project formed the basis for the Student Research Component for two of the students (Tannaz Hasnat and Justin Kalish). Applied Pharmacology and Veterinary Pathology were the curriculum topics identified for resource development based on applicants' main subject areas (SA and SMR).
- 2. Questionnaire to third year students to identify "tricky topics and or concepts"
- 3. Provision of time, support, software and hardware to allow student developers to create a range of resources.
- 4. Hosting of the student resources on a WordPress intranet site which

allowed students to access and comment on the resources. Web analytics also allowed monitoring of activity on the site

http://www.cal.vet.ed.ac.uk/repository/ Home **Dick Vet Student CALs** Student-created eLearning Resources Clinical Mindmaps Pathology Pharmacology * Anatomy Physiology You are here: Home Introduction Catego Recent Comments THE ROYAL (DICK) SCHOOL OF **VETERINARY STUDIES** Cardiac Pathology Liver Overview This site has been developed through funding from the Principals Teaching Award Scheme and provides a Liver Pathology home for some excellent revision resources that have been developed by our students, for our students. We Autonomic nervous system – anatomy hope you enjoy these resources and please do leave any comments and rate the usefulness of the resources (5.00 out of 5) Mindmapping ***** (5.00 out of 5) that you have used to help us understand what students find most helpful. Choline esters (5.00 out of 5) This project has initially focused on resources in support of pharmacology and pathology for the 3rd year Plant alkaloids ****** (5.00 out of 5) Anthelmintics: Spectrum of Activity BVM&S curriculum. (5.00 out of 5) Antimicrobials In addition, if you have developed any resources that you would like to share with other students on this site, Neurotransmission within the auton then please get in touch directly with Susan.Rhind@ed.ac.uk or Sally.Argyle@ed.ac.uk. nervous system ****** (4.00 out of 5) Search

- 5. Reminders were sent to students during the academic year when relevant topics for which there were student resources, were being covered in core course material
- 6. Students were surveyed and web analytics used to evaluate student thoughts on and use of the resources provided.
- 7. Findings and observations during this study were presented at:
 - a. PTAS forum June 4th 2015 (presentation attached)
 - b. IAD case study Sharing practice
 - c. VetEd Symposium Cambridge July 2015 short communication and poster presentation (poster and abstract attached)

Summary of key findings

Student developers chose a variety of resource types including: Articulate Storyline® to create narrated presentations Explain Everything[™] to create short narrated presentations and animations Mindmapping software to generate mindmaps

There was a 33% response rate to the class survey and of the responders, 77% used the resources, 23% did not.

Students who had used the resources found the narrated presentations most helpful, liked the student perspective and liked being able to go at their own pace. Students found the mindmaps less helpful, as they felt that the benefit of these was from creating them rather than using someone else's mindmap. Student developers also felt that they gained significantly through the creation of the resources in terms of gaining a better understanding of the material and also gaining a degree of academic literacy through the challenge of trying to explain complex concepts.

The main reason given by students who did not use the resources was that they felt they had more than enough material to cover and did not have the time or felt overwhelmed already. A few also commented that they preferred to generate their own resources.

Conclusions

Student generated resources are valued by the developers and other students. Students like narration and being able to move through material at their own pace. They also like the flexibility of having different types of learning materials.

The main challenge is that some students do not use these resources due to time and workload challenges. It may be that these students are the ones who would benefit most from this additional support and perhaps only the best students have the time.

In the future we aim to continue supporting the development of student resources (time and incentives are required). We also would like to further explore the profile of students who do and do not use these resources to determine if there is any association with academic performance and ability.

We are encouraged by the outputs and findings from this study, which has informed our ongoing development and research in this area. We are extremely grateful to the PTAS for supporting this work.

Sally Anne Argyle November 2015