Research Informed Teaching Award 2008

Name: (Left to right)
M Ioannou, Dr S Oldroyd, Dr R Furmonaviciene, VC, Dr G Basten, Dr V Rolfe
E-mail: vrolfe@dmu.ac.uk
Telephone: 0116 257 7578

Title of project:

VAL! School of Allied Health Sciences, De Montfort University

Virtual Analytical Laboratory

About   VAL! Resources   Designing   Feedback   Contact

What did you set out to do?

- Approximately one third of students enter bioscience programmes at De Montfort University with no prior laboratory experience from school or college. Feedback indicated that many students were not confident in their lab skills and quiet students were not asking for help. Our aims were as follows:
- To develop a multimedia laboratory skills resource (video, animation, audio files, screen capture files) to support student transition to science at university.
- Pilot and evaluate the resource in 2008 as part of Biomedical Science and Medical Science BSc Honours programmes.

How have you achieved it?

- Team of 5 staff members developed content; resources were developed by VR.
- VAL was used in BIOM1004 & BIOM1904 in two 3 hour CAL sessions prior to students entering the lab for practicals in week 5.
- Students completed a questionnaire in week 6, which used a 5-point Likert Scale (1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree).

How did VAL evaluate?

- VAL now includes 6 videos, 22 animations with voice over and 11 screen-capture resources, (more in the pipeline and collaborators welcome!)

Usability

- Questionnaire results (n=82 respondents; 75% of first years) gave a positive usability score (ease of navigation, good web design, ease of use); 84% of students (agreed or strongly agreed) they were satisfied with VAL, and found it useful before going into the laboratory for the first time.

" VAL is very useful for someone who has not been in the lab before. "

" VAL has been very useful in easing my nerves before lab sessions. "

Laboratory knowledge: perception and performance

- Students completed a short laboratory test as part of the questionnaire. Those with no lab experience who had only used VAL to gain knowledge (n=28) performed *AS WELL* in the test as those with lab experience (n=54) ($p>0.05$). Both groups claimed to be equally confident in their laboratory skills ($p>0.05$).

What next?

- VAL is available on the web under a **Creative Commons Licence Agreement**. Usage data is gathered by **Google Analytics** and feedback will be invited via **Survey Monkey**.
- VAL will be developed and evaluated further to fully embed it into bioscience programmes.

Benefits for students

- Students within the Faculty of Health and Life Science have an innovative, multimedia resource to support their transition to science at university.
- The pilot resource has proved usable and effective in teaching lab skills.

Benefits for staff

- Faculty staff have an on-line laboratory skills resource to support their teaching.
- The resource will better equip students to work in the laboratory, possibly saving time repeating basic instructions and demonstrating essential equipment.

Benefits for the University

- We have an exciting unique resource demonstrating the creativity of staff and innovative use of eLearning.
- An abstract has been submitted to the Science Learning and Teaching Conference, (Edinburgh, June 09); a case study has been submitted to HEA Centre for Bioscience.

SOFTWARE USED

Adobe Flash CS3 Professional
•Adobe Fireworks CS3 Professional
•Adobe Dreamweaver CS3 Professional
•Pinnacle Studio (video editing)
•Sound Forge Audio Studio (audio editing)
•Adobe Captivate CS2 (screen capture software)
•Survey Monkey
•Google Analytics
•Blogger

FACTS

•VR is self-taught.
•Screen capture resource takes ~ 2 hrs.
•Animation sequence ~ 1 day.
•Video ~ 1 hour to film. 1 hour to edit.

WANT MORE INFORMATION?

http://hlsweb.dmu.ac.uk/ahs/elearning/RITA/Index.html