[P4] Multimedia tools and their accessibility

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Keywords: accessibility, multimedia, user testing, audio, e-learning resources

A wide range of tools that enable instructors to add a variety of different digital media to their presentations such as audio and animation to produce multimedia resources are now available. Given the dangers of simply 'putting notes on the web' (Evans *et al*. 2004) and the shallow use of virtual learning environments by many academics (Badge *et al*. 2005), promotion of tools to provide a fast introduction to creating multimedia resources is to be welcomed. Multimedia can itself become an assistive technology simply by providing alternative formats such as audio, diagrams and images to long sections of unbroken text that can be inaccessible to users with learning disabilities or other disadvantaged groups such as those with English as a second language (Sloan *et al*. 2006). Successful teaching of biological sciences encompasses the use of good illustrations, three dimensional representations, research images and other visual media which lends itself to a multimedia presentation. The University of Leicester recently offered the use of two tools, which transform PowerPoint presentations into online resources, Adobe Presenter (formerly Macromedia Breeze **http://www.adobe.com/products/presenter/**) and Impatica (**http://www. impatica.com/imp4ppt/**). A third widely used tool for presentation of rich media online, is Adobe Macromedia Flash (**http://www.adobe.com/products/flash/flashpro/**).

This pilot project aimed to evaluate and compare these three products in terms of the possible benefits for a small test group of biological sciences students with registered accessibility issues by employing usability testing. The subjects tested comprised two groups of ten students. The first group of volunteers were students with disabilities including dyslexia, hearing and visual impairments and the second group was a matched set of volunteers by gender, course and year of study. PowerPoint materials were transformed into Macromedia Flash, Adobe Presenter and Impatica resources with animation and audio narrative. Our findings show that there were statistically significant differences between the two groups tested in their use control of and interaction with the resources.

Acknowledgements

References

Badge, J. L., Cann, A. and Scott, J., 2005. e-Learning versus e-Teaching: Seeing the Pedagogic Wood for the Technological Trees. *Bioscience Education E-Journal*, **5**,. 6

Evans, C., Gibbons, N. J., Shah, K. and Griffin, D. K., 2004. Virtual learning in the biological sciences: pitfalls of simply 'putting notes on the web'. *Computers and Education*, **43** (1-2), 49-61

Sloan, D., Stratford, J. and Gregor, P, 2006. Using multimedia to enhance the accessibility of the learning environment for disabled students: reflections from the Skills for Access project. *ALT-J*, **14** (1), 39-54