

Evaluations of course design principles for multimedia learning materials

Abstract:

This paper reports on evaluation studies of principles of course design for interactive multimedia learning materials. The evaluation studies included interviews, observation studies and the use of online questionnaires. At the Defence Academy, Shrivenham, UK, Cranfield University has worked with military colleague to produce multimedia learning materials for courses on 'Military Knowledge'. The courses are part of Officer Career Development (OCD) training for junior officers in the army. The courses constitute more than 200 hours of stand-alone learning materials. The courses were developed following clearly defined course design principles and a pedagogic model believed to best suited for the delivery of resource based learning materials.

Key features of the model include: clearly stated aims and learning outcomes, knowledge maps to support flexible navigation and a wealth of activities to support effective learning. The lead author was responsible for formulating the course design principles and for specifying the pedagogic model. The principles draw on several sources in the literature for what is considered as good practice. The paper reports in-depth evaluation studies concerned with validating the pedagogic model and associated course design principles. The authors believe this is the first time that such a large scale set of studies has been carried out. The overall findings suggest that, in general, the course design principles are indeed regarded by students as useful for effective learning. However, there are also interesting individual differences in the learning strategies adopted, with some students making more use of some of the course design features than other students. Some conclusions are drawn about what does indeed constitute good course design, together with suggestions for further research.

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