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Collaborative, problem-based learning on-line: a multimedia case study approach

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This paper will report on a learning and teaching development project, funded by the University of Sheffield, that is being carried out to enhance the learning experience of professional development participants on a Masters programme in Health Informatics through the use of problem-based learning.

The MSc in Health Informatics is a new programme designed to enable healthcare professionals and managers to develop knowledge and skills in health information management and technology. It is multidisciplinary in nature, recruits participants from a wide range of healthcare professions, and is delivered principally via distance learning, using WebCT and paper-based materials plus attendance at a number of day schools. Practitioners undertake the programme on a part-time basis alongside work, and the programme aims to maximise opportunities for critical reflection on experiences of professional practice, integrating existing knowledge and experience with new perspectives, and practical workplace applications of learning. The curriculum development project, which was instigated during the programme's first year (2000-2001), is introducing a new emphasis on collaborative learning in the programme's second year and has already had a significant impact on both the overall pedagogic approach of the programme, and on participants' learning experiences. A key aim is to enhance the dialogic and social dimensions of the distance learning experience, which are recognised as being critical to effective learning (e.g., Goodyear, 2000).

The project is developing an extended, multimedia case study scenario that is integrated into, and explicitly links, four core modules on the programme. The case study is grounded in the current context of the management of change in healthcare, and focuses on the implementation of a project within a fictional General Practice to 'go paperless'. The design and implementation of the case study has been guided by a broadly constructivist perspective on

support for learning (e.g., Grabinger and Dunlap, 1995; Grabinger, Dunlap and Duffield, 1997) and requires participants to engage collaboratively in a series of linked problem-solving tasks that relate to the evolving storyline of the case narrative. The tasks require multidisciplinary, critical analysis of authentic organisational problems, and participants are asked to negotiate their perspectives through on-line discussion and produce a series of portfolio assignments within the four modules.

At the time of writing, the case narrative and learning tasks are being piloted in a 'skeleton' text-based format within the programme's WebCT environment. This provides an opportunity to evaluate the pedagogic framework before progressing to the second stage of the project when multimedia elements will be added to enhance the narrative richness of the case. Video, graphics, sound and animation elements, as well as further text-based material, will be accessed on CD-ROM via the WebCT environment.

The project's evaluation strategy focuses on issues related to: a) educational content and design; b) technical design and usability; c) impact on experiences of learning and teaching. The paper will present the rationale and nature of the pedagogic model that has been adopted, and report early evaluation findings based on participant feedback, and on (participant)-observation and analysis of on-line discussions, from the first implementation phase of the new approach.

References

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