

ODL PEDAGOGY, ORGANISATION AND TECHNOLOGY: A REVIEW

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This paper was part of a larger state-of-the-art review of both the pedagogy of Open and Distance Learning (ODL) and current practice in the field, with particular reference to the use of communications technologies. It concentrates more on the practice and how other practitioners of ODL are using the technology and reports the findings of a questionnaire distributed in Europe, USA and Australia.

Technology has proven in the past that it can revolutionise the way people learn. With the increased adoption of the Internet and the World Wide Web there is some indication that fundamental changes in how teaching, training and self-directed learning will change. One of the purposes of the report was to illustrate the bridging of the gap between multimedia communication technologies and their application for educational and community purposes. Technologies have become more readily available, costs have decreased, ease of use has improved, and a rich variety of examples have been generated by the Internet's rapid growing user base. At the same time, societal factors such as high unemployment, need for retraining and multi-skilling, shortages of tertiary education places and funds, and demand for the delivery of information at lower costs, create opportunities for innovative applications directed towards educational and community purposes. Nevertheless, there is a gap between availability and the readiness of technologies, and the deployment of applications that meet end-user needs. Data was collected by means of a web-based questionnaire.

SURVEY

The aim of the questionnaire was to investigate the development of open and distance learning (ODL) delivered via communications technology. The methodology was to survey a sample of individuals engaged in delivering ODL about the various approaches, experiences and attitudes towards ODL in relation to three main areas: a) Pedagogy, b) Organisation, and c) Technical. The questionnaire was split into three sections. Section One covered general details about the respondents whilst section two covered the details of the system used to deliver the ODL course as well as information about the course itself. Section Three, was for comments and a brief outline of the course. A search of various distance learning Web sites generated the first batch of individual practitioners. The remaining practitioners in the sample were obtained via electronic distribution lists in England, Germany, Sweden, Finland, USA and Australia. In total, 141 questionnaires were returned and were analysed.

RESULTS

The large majority (83%) of participants in this survey came from higher education (HE) institutions. They came from a variety of backgrounds within the

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higher education community. There were a small number of commercial interests also represented (15%). The remaining 2% are a joint venture between commerce and HE. This second section of the questionnaire was sub-divided into a further four sections:

Pedagogy

The majority (80%) of the courses were newly developed for the medium. Exactly what types of learning the courses were designed to provide for the students was the subject of Q1f, and the majority provided "domain content" (hardly surprising considering the number of postgraduate and undergraduate courses).

The most frequent methods used to deliver course materials was the Web, with email coming next. Other methods employed were course handouts, while course books and face-to-face were used in 15 courses. Some less frequently used methods were video conferencing (6), videotapes (6), phone tutorials (6), fax (4) and audio tape (3). Amongst the others, CD-ROM was the most popular with 13 courses employing this technology. Lastly, in this section, we asked about how assessment was performed. The question asked for the percentage split between assignments, continuous assessment, examination and on-line contributions. (Other was also allowed for). The average for assignments was 34%, continuous assessment 24%, examinations 22% and on-line contributions 19%. Some courses had yet to decide, some had no assessment and some had optional assessment.

Organisation

The second section within part two was concerned with the organisation of the online courses. The majority of the courses were a series of modules, 70% and the majority of students studied at home (93%) with significant numbers also studying at their place of work, a learning centre or satellite campus. Here we see one of benefits of utilising communications technology that is widely supported in that the location of study can be very flexible. Next we looked at the split of time spent under several headings: self-study; reading; assignments; on-line contributions; examinations; on-line tasks and other. It was noted that the figures reflected the sort of balance that might be expected on a normal ODL course (i.e. lots of time spent in self-study and reading) with smaller but significant amounts of activity being organised around the computer technology. The means of communication used showed email as the most popular and video-conferencing as the least. We asked whether students were expected to make regular contributions to the courses. Only two required daily contributions! The remainder wanted contributions at pre-planned times within the course.

Technology

Of the courses sampled, on average, teachers spent about six hours and students about two hours undergoing training in the use of the systems. There were no surprises in technological developments but rather confirmation that the Internet (in particular the growth of the Web) had made the most significant impact on teaching and learning. This coupled with the ever-decreasing cost of very powerful computers makes an attractive combination. Add to this picture, authoring systems that make building multimedia content considerably easier and we can understand why these technologies have been taken-up by many deliverers.

By using the information provided in the course title, course objectives, and short description we were able to classify the different types of courses offered. There were a wide range of subjects offered in the courses, modules and units that we have sampled. This demonstrates how computer technology can usefully be employed delivering material in a wide range of subjects. This is not surprising as the Web, the most popular technology used in the courses sampled, is primarily a broadcast technology and thus well suited to the delivery of information to the student at a distance. The general conclusion to be drawn is that much ODL activity is very much centred around collaboration between the students. Indeed, this can be the only extra dimension that the technology brings but this is an important extra dimension for the on-line learner as they are no longer isolated. They can engage with other learners and their tutors in ways that would simply not be possible without the presence of the technology.

CONCLUSIONS

Collaboration between students and tutors is one feature that emerged strongly from our survey with the widespread use of email and CMC within the courses. The central idea that SCHEMA subscribes to is that by engaging in dialogue with fellow learners and tutors is the way in which students learn. This process of dialogue is how learner's refine their ideas of the concepts of what they are learning. Ultimately this process of refinement leads, we hope, to an understanding of the concepts and issues involved in the material being "learnt". We believe that ODL can deliver a sufficiently meaningful form of dialogue through email and discussions groups to enable learning to take place. For some ideas and concepts interactive courseware can also facilitate learning. For instance, a simple model of a dynamic system where the students can modify the parameters and see the results is in our opinion a particularly powerful way of getting the learning across. This does not preclude collaboration between the students. They may collaborate on understanding the model as they interact with it or they may collaborate discussing the results they obtained. This is something that most of the current examples of Web based ODL lack. In conclusion, the current "state-of-the-art" in Web based learning is of students accessing web pages for learning materials and then engaging in collaborative activities using either email or one of the many systems that support CMC. The collaborative aspects of this learning process are Project SCHEMA's major area of research and will be the subject of future research work.

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