

Choosing and Using Technologies in Education and Training

Resources in Computer Mediated Communications

Further Reading

Bates, A. W.

1995, *Technology, Open Learning and Distance Education*, London: Routledge.

A book which provides an eminently useable methodology for making competent and informed decisions on choice and use of technologies in education. Bates sets out criteria for decision-making based on an analysis of common questions each institution must answer for itself, to do with access, costs, teaching and learning, interactivity and user-friendliness, organisational issues, novelty, and speed. Teachers and managers will find the first chapter especially useful. In it, Bates proposes '12 golden rules' for using technology in education and training: good teaching matters; each medium has its own aesthetic; educational technologies are flexible; there is no 'super-technology'; all major media types should be available to teachers and learners; balance variety with economy; interaction is essential; student numbers are critical; new technologies are not necessarily better than old ones; teachers need training to use technologies effectively; teamwork is essential; and technology is not the issue but how and what do we want students to learn is.

Subsequent chapters deal with the educational, technical and cost issues involved in technology selection and implementation of four major types of media: print, television, audio (including telephone), and the computer. He concludes with a thoughtful look at the future of technology and its limitations in education and training.

Burge, Elizabeth

1994, 'Learning in computer conferenced contexts: the learners' perspective', *Journal of Distance Education*, Vol. 9, No. 1, pp. 19-43.

A very readable and realistic account by a leading writer on computer-mediated learning, which examines the pros and cons of computer conferencing, and provides advice for teachers on good practice.

Eastmond, Daniel V.

1994, 'Adult distance study through computer conferencing', *Distance Education*, Vol. 15, No. 1, pp.128-152.

A study of adult students' experience of learning through computer conferencing which analyses the variety of learning styles, the social dynamics of the student group, and effectiveness of the learning experience from students' viewpoints. The article includes a useful survey of literature on study through computer conferencing.

Evans, Peter,

1996, 'Development and delivery of a Graduate Certificate (Open and Distance Learning) via the WWW', paper presented at AusWeb96, Southern Cross University.

<http://www.scu.edu.au/sponsored/ausweb/ausweb96/educn/evans/> Site accessed July 1997.

A report on this course which is offered online by the University of Southern Queensland. Evans covers the rationale for offering the course, the pedagogical principles underpinning its design and delivery, the course structure, materials development and production processes, the designs and software tools used in course construction, site creation and maintenance, and interaction with students.

Hesketh, Beryl, Gosper, Maree, Andrews, John & Sabaz, Mark

1996, *Computer-mediated Communication in University Teaching, Evaluations & Investigations Program*, Department of Employment, Education, Training & Youth Affairs, Canberra, AGPS.

Report of a project to estimate the extent to which computer-mediated communication is likely to penetrate traditional instruction in the next 3-5 years, and to identify barriers to introduction of new technologies in higher education. It shows that, despite public rhetoric, 'there is no groundswell of movement towards the use of technology; only patches of enthusiasm', and proposes ways of resolving this. It will be of particular interest to educational managers developing policy and allocating resources in relation to electronic technologies for teaching/learning.

Hills, Howard

1997, 'Lloyds Bank and multimedia', in *Open and Distance Learning: Case Studies from Industry and Education*, ed. Stephen Brown, London: Routledge.

A report on how a large British bank introduced technology-mediated teaching into its clerical and management training programs, beginning with interactive video systems in 1984 and moving on to computer-based training from the late 1980s. More recently, these approaches have been merged with face to face training, with multimedia providing a consistent training platform throughout the Bank's branch network, in conjunction with local flexible learning coordinators.

James, Richard, & Beattie, Kate

1995, *Expanding Option: Delivery Technologies and Postgraduate Coursework*, Evaluations & Investigations Program, Department of Employment, Education & Training, Canberra, AGPS.

This investigation of the practicalities of using various technologies and 'delivery' methods to create flexible and effective postgraduate learning environments is equally relevant to other areas of education and training. Practitioners will find particularly useful: Chapter 5 on delivery modes and practice - classroom interactions, computer-mediated communications and instructional techniques, audiovisual and print strategies, and other techniques. Managers will also find Chapter 8 on implementation and integration useful - covering administrative structures and support, cost comparisons, and copyright. Chapter 9 deals with changing teaching roles and staff development needs

Laurillard, Diana

1993, *Rethinking University Teaching: a Framework for the Effective Use of Educational Technology*, London, Routledge.

This book, written by a leading UK Open University academic, has greatly influenced approaches to staff development in Australian universities in recent years. Laurillard sets out a framework to help teachers think about the nature and processes of learning and how best to use and combine new and established media in their teaching. Part 1 explores students' learning, and what it is that they need from educational technology. Part 11 looks at individual teaching methods and media, including non-interactive media (lectures, print, audio), hypermedia (CD-Rom and the Web), and interactive media (simulations, modelling programs). Part 111 examines design methodology, designing learning activities, setting up the learning context, and maintaining quality.

Lewis, Justus H. & Romiszowski, Alexander

1996, November, 'Networking and the learning organisation: networking issues and scenarios for the 21st century', *Journal of Instructional Science and Technology*, Vol. 1, No. 4.

<http://www.usq.edu.au/electpub/e-jist/vol1no4/lewis.htm>. Site accessed June 1997.

The concept of the learning organisation which constantly updates the skills of its members and, in the process, is itself transformed, has become an important idea in management and planning theory in recent times. Lewis and Romiszowski apply this concept to distance and other educational institutions in Singapore, Europe and the Americas, which have taken up new technologies, especially those involving networking through computer-mediated communications (CMC). They argue that knowledge of the technology is insufficient in itself for the kinds of organisational transformation desired, while the use of CMC in a learning environment changes the dynamics of the teaching/learning process and thence the decision-making and management processes which underpin it.

Mason, Robin

1994, *Using Communications Media in Open and Flexible Learning*, London, Kogan Page.

An accessible, practical and reliable introduction to three telecommunications technologies: computer conferencing, audiographics and videoconferencing, which demystifies the jargon. In the first three chapters, Mason covers issues for teachers, organisations and students considering courses and training programs based on these media, the educational value of interactivity, the support mechanisms which are necessary, and the broader implications of asynchronous media. Chapters 4-6 are especially useful, being devoted to the types of educational use, advantages and disadvantages, equipment and techniques, and future trends in each medium. She argues that the three components of success in each case (course design, quality of teaching, and support facilities) are not medium-dependent, but that these components in turn depend on a thorough understanding of the strengths and limitations of the medium used.

Mason, Robin & Kaye, Anthony (eds.)

1989. Mindweave: Communication, Computers and Distance Education. Oxford, Pergamon Press.
<http://www-icdl.open.ac.uk/mindweave/mindweave.html>

A classic text, now out of print but available electronically for research/study purposes. The book comprises 20 chapters on a wide range of issues under the broad headings of themes and issues to do with computer-mediated communications (CMC) and distance education; computer conferencing and mass distance education; applications of CMC in education; and reflections on CMC as a medium for education.

Oliver, Ron & Grant, Mike

1994, *Distance Education Technologies: a Review of Instructional Technologies for Distance Education and Open Learning*. Perth: InTech Research, Edith Cowan University.

A highly practical and very useable guide to the various instructional technologies that can be used to support distance teaching and flexible learning. Four groups of technology are outlined – telelearning (including various forms of television and teleconferencing); computer mediated communications; computer mediated instruction; and print and other 'hard copy' materials. Each section briefly describes the technology, its instructional applications and learning opportunities, its relative strengths and weaknesses as a delivery medium, the costs and equipment required to support its use, and information on groups and organisations able to provide services and assistance to providers of education and training.

Ross, John A, Crane, Carole A, & Robertson, Don

1995, 'Equity of access to computer-mediated distance education', *Journal of Distance Education*, Vol. 10, No. 2, pp. 17-32.

A practical survey of problems which off campus students typically face in accessing the institution's computer remotely - e.g. technical difficulties, getting help, and acquiring information literacy skills. The solution chosen was to use a 'CMC coach' as a mentor to novice users. Ross et al outline the coach's strategies and provide a useful discussion of broader equity issues which need to be addressed.

Spennemann, Dirk H. R.

1997, 'Use of electronic mail among Park Management students at Charles Sturt University', *Occasional Papers in Open & Distance Learning*, No. 21, Open Learning Institute, Charles Sturt University, p. 29-40.

An analysis of internal and external students' expectations, attitudes and abilities in relation to email as a core part of a park management unit. It provides a 'warts and all' look at attitudes to email in general and they way they were used in the unit. The paper includes a useful list of other (mainly American) references, and a methodology for surveying students on this subject.

Tkal, Lucy (Series editor)

1997, *Technology Survey Report* (3rd ed.), Open Training and Education Network, NSW

TAFE.

A deservedly popular and eminently useable introduction to the communications technologies available for flexible learning, the Report is a handy reference to keep at one's elbow. Technologies covered include the range of teleconferencing, computer mediated communications, computer managed learning, broadcasting, and online technologies. Each section describes the technology, its applications, equipment and service requirements, its advantages and disadvantages, and cost factors.