

Choosing and Using Technologies in Education and Training

Resources in Computer Managed Learning

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.

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.

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.

Lee, Victor, Murphy, David, Chan, C.C. & Chung, Linda

1997, 'Computer-aided distance learning: a case study', *Open Learning*, Vol. 12, No. 1, February, pp. 58-62.

A short but useful summary of the steps required to design, implement and evaluate a CAL package to teach elements of a computer and network architectures course which students had found difficult when taught more conventionally.

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.

Race, Phil

1993 (2nd ed), *The Open Learning Handbook*, London: Kogan Page.

A down-to-earth handbook for teachers and specialist staff involved in resource-based learning delivered on campus, at home and at work. The approach and style exemplify Race's views about good practice in designing and presenting material and the book is very easy and practical to use. Regardless of the mode of delivery, practitioners will find helpful the chapters on designing for flexible learning, the preparation of 'study guides', learning outcomes, assessment, tutor-marked assignments, tone and style, tutoring and mentoring. Chapter 7 covers computer marked assignments (design, scoring, feedback, etc), while Chapter 10 deals with flexible learning in traditional classroom settings.

Tinkler, Don, Smith, Tony, Ellyard, Peter, & Cohen, David

1994, *Effectiveness and Potential of State-of-the-Art Technologies in the Delivery of Higher Education*, Occasional Paper Series, Department of Employment, Education and Training, Canberra, AGPS.

The technical 'state-of-the-art' has moved on since this report was published, but it continues to provide a valuable set of examples of good practice across a wide range of subjects and technology types, mainly from Australian universities. The report also canvasses at some depth the effectiveness and potential of computer-based technologies, and desirable frameworks for policy and budgetary initiatives.

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.

Willis, Barry

[Distance Education at a Glance.](#)

<http://www.uidaho.edu/evo/distglan.html>. Site accessed July 1997.

A set of 14 concise, well-presented guides on distance learning, covering an overview, teaching strategies, instructional development, evaluation, instructional television, instructional audio, computers in distance education, print in distance education, learning strategies, distance education research, interactive videoconferencing, the worldwide web, copyright, and a glossary of terms. The guides can be downloaded free.