

Choosing and Using Technologies in Education and Training

Resources in Audiographics

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.

Chute, Alan G.

1991, 'Strategies for implementing a teletraining system', Paper presented at International Teleconferencing Association Convention.

<http://www.lucent.com/cedl/strategy.html>. Site accessed July 1997.

A useful paper for teachers and managers which defines 'teletraining' as an integrated system for planning and delivering interactive training in several sites using audio, video and audiographics. The technologies themselves have moved on since the article was published, but the principles for design and implementation are still current.

Chute, Alan G., Balthazar, Lee B., & Poston, Carol O.

1988, 'Learning from Teletraining', article originally published in *American Journal of Distance Education*.

<http://www.lucent.com/cedl/learnt.html>. Site accessed July 1997.

A summary of five years' learning from teletraining, identifying what students and teachers have each learned about design and management of teletraining systems - defined as 'a complete system that integrates the planning, delivery and management of training by using a combination of information technology and teleconferencing

services'. Media used are audio, audiographics and video. The article covers instructional effectiveness, cost benefit analyses, course and curriculum development, instructor competencies, and media attributes.

Gilbertson, Denny & Poindexter, Jamie

1997, Distance education classroom design.

<http://www.uwex.edu/disted/rooms/county.htm>. Site accessed July 1997.

Excellent tips for designing teleconferencing meeting rooms and flexible learning classrooms using audio and videoconferencing, satellite, computers or desktop collaboration. While the details are specific to the University of Wisconsin, the issues and the advice on how to maximise effective utilisation of the technologies are pertinent to Australian conditions.

International Teleconferencing Association (ITCA)

<http://www.itca.org/>

The International Teleconferencing Association (ITCA) is an American professional association linking users, providers, strategists, educators, learners, managers and workers who use teleconferencing, tele-collaborative and distance education technologies. The site provides membership information, a calendar of events, and links to other resources including information about inter-operability standards, teleconferencing, tele-collaboration and distance education. Its list of resources is constantly updated.

Jegede, Olugbemiro J., Gooley, Anne & Towers, Stephen

1996, November, 'An evaluation of the Queensland Open Learning Network audiographic conferencing professional development programs', *Journal of Instructional Science and Technology*, Vol. 1, No. 4.

<http://www.usq.edu.au/electpub/e-jist/vol1no4/abstrac4.htm#AbstractJegede>. Site accessed June 1997.

An evaluation of the QOLN audiographics professional development program which found that the majority of participants found the workshop beneficial; it was easier than they had expected, and their prior computing skills were irrelevant to their mastery of the use of audiographic conferencing equipment. They enjoyed the interactivity and learning environment characteristics of the audiographic equipment. The study comments on policy on training and professional development opportunities for teachers using audiographics conferencing.

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.

McGreal, Rory

1995, Pedagogical screen design principles for graphics in teleconferencing, ED, *Education at a Distance*, Vol. 9, No. 1, January.
<http://tenb.mta.ca/articles2/screen0.html>. Site accessed July 1997.

A highly practical presentation, downloadable as text and pictures, on effective ways of using graphics for teleconferencing. McGreal covers issues such as animation on stills, the computer screen, balance and harmony, functions of visuals, formatting, colour, text design, lists, graphic images, charts, print, photographs, templates, and lists.

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.

Stacey, Elizabeth

1995, 'Teaching and learning with audiographics: developing positive attitudes and effective pedagogy', *DEOS News* Vol. 5, No. 10.
<http://www.cde.psu.edu/ACSDE/DEOS.html>

Article describes the processes of acceptance and implementation of audiographic technology (or telematics) in several Victorian schools and in tertiary teacher education at Deakin University. Stacey outlines the factors required for effective use of the technology based on extensive experience and research. It is a well written paper which integrates theory and practice.

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.