Book Reviews

Mary Kennedy, Editor

The New Communications Technologies by M. Mirabito and B. Morgenstern. Boston: Focal Press, 1990. ISBN O-240-80012-5 (CDN $34.00)

Reviewed by D. Hlynka

What might the technological classroom of the year 2000 look like? Educators need to ponder the look and feel of the classroom in light of information technologies. After all, the year 2000 is only nine years away Do we perceive any significant change in what we do in the classroom? Will chalkboards and textbooks still be the primary medium of communication? Will the new technologies liberate the classroom at last? Or, contrarily, might the technologies destroy the last vestiges of a classical curriculum? There have been many predictions, delphi studies, scenarios, and warnings. But only one thing is certain. As educators we need to know what new information technologies are going to be available to us. As educational technologists, we need even more explicitly to know the potential tools of our profession.

It is at this juncture that ***The New Communications Technologies*** becomes important. It is not a book for educational technologists, but educational technologists can benefit. It is not a book for educators, but it is essential that educators grasp the essentials of the new educational technologists which might impact on education.

The New Communications Technologies is intended as a beginner's guide to introduce readers to contemporary developments in communication technology. "In essence, this book serves as a guide to the communication revolution. It introduces the new technologies that have had an impact upon the communications field in addition to those technologies that promise to influence it in the not so distant future."

Overview

The book is divided into eleven chapters. The first three are introductory and intended to provide preliminary information. Chapter 1, "Communication in the ModernAge" introduces the key concepts of information, communication systems, and the information society. A final section of Chapter 1 is curiously devoted to the concept of EMP, the electromagnetic pulse. This by-product of a nuclear explosion would disrupt and destroy integrated circuits and therefore, modern communication as we know it. Nevertheless, while one understands the authors' desire to point out the vulnerability and fragility of our communications infrastructure, one is nevertheless inclined to feel that there are even more significant intended and unintended consequences of the information society The section on EMP appears curiously out of place in this opening chapter. Chapter 2, sets out the technical foundations for modern communications, and deals with concepts such as the transducer, analog and digital signals, multiplexing and standards. Chapter 3 titled "Computer Technology Primer" provides an overview of important concepts dealing with hardware and software, printers and local area networks, the microcomputer, and concludes with a section on artificial intelligence.

Desktop publishing is the focus of Chapter 4. A section within this deals technically with the democratization of information and ethics. These two sections are straight forward, but however, totally devoid of any philosophic analysis which would seem appropriate at this juncture. Chapter 5 deals with the new technology in television and radio. Chapter 6 focuses on teletext, covering European teletext, American teletext as well as the WST and NABTS services. Videotex is covered in the seventh chapter. Chapters 8, 9, and 10 deal with teleconferencing, satellite communication, and optical discs respectively The final chapter, titled "Future Visions" focuses on four futuristic technologies: high definition television, solid state sensors, high speed videography, and holography

Strengths:

The strengths of the book are: 1) a conversational, not overly technical writing style; 2) an excellent glossary of key terms accompanying each chapter, (3) a brief "Additional Reading" section accompanying each chapter; and 4) visuals are appropriate and relevant to the text.

Weaknesses:

While it has just been noted above that visuals are "appropriate and relevant", a stylistic objection must nevertheless be voiced, namely that the authors do not integrate the visuals into the flow of the text. There seems to be in vogue a rather sloppy policy in which authors throw in apparently relevant graphics wherever they fit, and allow the reader to find a way to integrate them into the content of the narrative. This reviewer, however, prefers the more formal model of explicit reference to figures and tables within the body of the text. In other words, a reference to "See figure 10-3" would direct the reader to exactly the right visual at exactly the right time.

Another understandable omission is the lack of any philosophic view of the communication technologies. Some sections seem to promise such an analysis: "Ethics", "The Paperless Society", "Implications of the Communication Revolution", "The Democratization of Information" are some of the titles which provide such a promise, but fall short. Thus, no reference whatsoever is made to Bowers' concept of the non-neutrality of technology, of Lyotard's postmodern society caused by the mercantilization of knowledge, or of Beaudrillard's precession of the simulacrum. Of course, one can simply argue that such was not the focus of the book, nevertheless, some brief indication that there is more than a technical view of communication technology would have been appropriate.

Since this review is aimed at ***educutional*** technologists, it is appropriate to note some of the explicit references to the field of education. The lack of such focus is not really a criticism of the text, since no such "educational technology" focus was planned nor intended. Still, educators will want to know how their field is handled. In general, the text omits any focus on education. Only two sections receive any such concentration. The chapter on teleconferencing notes a slow scan system for telecourses developed and used by the University of Wisconsin extension. The chapter on teletext explains how "a teletext service can be a powerful and active educational force in the school system and the community at large." A project at KCET-TV, Los Angeles is noted briefly in reference to teletext use. Chapter 10, dealing with videodisc also notes educational applications "create a sophisticated interactive environment." Finally, a brief mention is made of educational applications within HDTV It must be stressed that the text is not expected to focus on educational issues, so cannot be criticized for missing them. But, educators interested in the book need to know that their field is only minimally included.

Again, since this review appears in a Canadian journal, it is appropriate to note how Canada fares in this discussion of new communication technologies. Canada prides itself in being a leader in this field, so Canadian readers might be disappointed in the only passing references. 'Iblidon is noted but misplaced within a section dealing with teletext in Europe. A CBC series "Chasing Rainbows" is identified as an experiment in HDTV programming. Two pages are devoted to 'Iblidon in the videotext chapter. In short, this is essentially an American book, dealing with an American focus on the new communications technologies.

Finally, it needs to be re-iterated that what we have identified as weaknesses are not weaknesses at all. On the one hand, the text does not deal with philosophic issues, is not aimed at educators, and is not a Canadian text. On the other hand, it is important to be aware of those omissions.

In summary, educational technologists can benefit from this book which will provide them with a useful introduction to the new communications technologies. To that end, this book is recommended.

REVIEWER

Dr. Denis Hlynka is in the Department of Curriculum: Mathematics and Natural Sciences at the University of Manitoba. He is co-author of ***The Videotex*** and ***Teletext Handbook*** (1985) and the just published ***Paradigms Regained.***

The Design of Computer-Based Instruction by Eleanor L. Criswell, New York, NY: Macmillan Publishing Company, 1989. ISBN o-02-325603-6 (CDN $35.95)

Reviewed by John O. Mitterer

The first-time reader of a book like The ***Design of Computer-Based Instruction*** by Eleanor L. Criswell might be tempted to believe that it will constitute a general overview of the applications of computers in education. Indeed, Criswell herself contributes to this impression when she opens Chapter 1 with this definition: "The term computer-based instruction (CBI) refers to any use of a computer to present instructional material, provide for active participation of the student, and respond to student action." Another suggestion that this book might be very general derives from the liberal sprinkling throughout of references to cognitive psychology, human-computer interface design, cognitive science, artificial intelligence, knowledge engineering, and even cognitive development.

A closer examination will reveal, however, that this book has a much narrower focus. The term "CBI" (and "CBT", a synonymous term meaning "Computer-Based Training") turns out to be a code acronym for software derived from a behaviorist, or Skinnerian, perspective on learning. The producers of CBI software tend to work for the military or for large companies and to place emphasis on the precise definition and efficient mastery of objectives and on a comparison of costs with other methods. It is because of this narrow focus that this book is weak and yet is still worthwhile.

The major weakness is that there is so much that is left out. For example, although more cognitive approaches to designing instruction, including older approaches such as that of Gagne, are mentioned throughout the text, and while the second chapter does discuss a "structural" perspective in ways which make it sound like a cognitive approach, in the end the book does not make much use of the cognitive psychology perspective on the design of computer applications in education. The same can be said for developmental psychology, artificial intelligence, human-computer interface design, and expert systems. All are mentioned but are, in the end, not really discussed; at best they can be said to be given a behaviorist interpretation.

Another, perhaps related, weakness is the peculiarly dated feel of the