

Book Reviews

DESMOND KEEGAN (editor), 1994: *Otto Peters on distance education – the industrialisation of teaching and learning*. Routledge, London and New York, NZ\$194.95.

This is a book for the serious student of distance education, a collection of mostly theoretical essays by the German educationalist Otto Peters. Desmond Keegan's edited collection of Peters' work brings to the English speaking world an important figure in the world of distance education who has much to offer in terms of both theory and practice. The essays collected here range from 1965 to 1993 and effectively span the history of distance education and provide the reader with an overview of the important issues in its development. One of the main reasons for reading this book is for the insights it provides into the major issues that have always faced those who teach and learn at a distance. In his introduction to this collection of essays, Desmond Keegan notes that 'For over 20 years Professor Otto Peters' research on distance education has been extensively cited and referred to by writers in English. His work sets out fundamental landmarks in this field of study that require consideration in any scholarly treatment of the subject or in any course on distance education.' This collection of Peters' essays on distance education is in four parts. The first part of the collection is labelled 'data collection' and covers the earliest period of Peters' work covering the notions of distance education by correspondence schools, university-level distance education and, of particular interest to the many universities at the present time considering adding a distance education dimension to their teaching, a chapter on models of university-level distance education. Although written in 1971, the chapter on models of university-level distance education introduces what at the time must have been a new notion - a 'technological model of distance education', a 'model' with which readers today

will be very familiar. This part of the book is of historical interest and provides a snapshot of the way that the field has changed over the last thirty years.

The second part of the book contains three essays under the heading 'Analysis', one of which, 'Distance Education and Industrial Production', appeared in English in an earlier collection (D. Sewart, D. Keegan and B. Holmberg, *Distance Education: international perspectives, 1983*). This is an important essay and one with which some readers will be familiar. It provides a good introduction into the nature of distance education as seen by Otto Peters:

Distance education can be defined as the most industrial form of teaching and learning. This definition points to a general characteristic of the new form of teaching and learning, it illuminates its structural peculiarity, and separates it sharply from all conventional forms of face-to-face instruction. It applies to all forms of distance education as it can be more or less industrialised - just like the production process.

Peters' views of the nature of distance education are summarised in the subtitle of this book, 'The industrialisation of teaching and learning'. In a later essay (1989) called 'The iceberg has not yet melted - further reflections on the concept of industrialisation and distance teaching', Peters notes that there has been a number of misunderstandings about the concept of industrialisation and distance teaching and in responding to these, he has adopted the metaphor of the iceberg for three reasons:

First: Icebergs break away from their original surroundings and often drift into new areas where they do not normally

belong. The use of characteristics relating to the industrial process in explaining the teaching-learning process in distance study was certainly new and unheard of and in the minds of some not even appropriate or desirable. Second: Icebergs are often seen as a danger...people have strong reservations as they feel that something entirely unfamiliar and dangerous has entered education. Third: Icebergs change their appearance and become smaller.

He proceeds to explain a number of 'misunderstandings' of his concept of industrialisation based on the metaphor of icebergs.

The final two essays in this collection, 'Understanding Distance Education' (1990) and 'Distance Education in Post-Industrial Society' (1993), provide the reader with a contemporary analysis of the direction of this aspect of education. The 1990 essay considers the various meanings of distance education at the present time. I find this interesting as for some time now I have had the feeling that the term 'distance education' does not accurately reflect the reality of those who teach and learn at a distance in the late twentieth century. Peters provides a range of ways of considering what it is that distance educators and distance learners are really engaged in the late twentieth century, including open learning, home study, guided self study, study without leaving production and, interestingly, the Russian term 'Zaochny' meaning 'distance' in distance education. According to Peters this term means, in Russian, 'without eye contact' thereby implying 'the decisive criterion according to which distance education can be distinguished from conventional teaching and learning.' So far this term has not yet found its way into discourse in English-language discussion of distance education.

Not all English-speaking readers will be comfortable with the ways in which distance education have been conceptualised in this collection. However, it is a collection of essays

that is of interest on several levels: for insight into the development of distance education itself, for an evaluation of a variety of major issues that still confront those who teach and learn at a distance and for Peters' perspectives of the theory and practice of distance education in industrialised Europe. Of particular interest to me is the insight that Peters provides in this collection into distance education in the former Soviet Union as well as in his native Germany.

In spite of its high price, this is a collection of essays that should have a place in the library of any distance teaching institution. It is a useful collection of largely theoretical essays by an important and, in the context of Europe, an influential figure. *Otto Peters on Distance Education* will have particular value in any consideration of educational policy in which distance education is to play a part. As distance education becomes increasingly mainstreamed in educational institutions, the thesis of this book – the industrialisation of teaching and learning – is likely to be debated in future.

Ken Stevens
Victoria University of Wellington

BORGE HOLMBERG, 1995: *Theory and practice of distance education* (second edition). Routledge (Routledge Studies in Distance Education), London, xi, 246pp, NZ\$95.00.

This second edition of a well known foundation text in distance education which was originally published in 1989 is another addition to the new Routledge Studies in Distance Education series edited by Desmond Keegan. The Routledge series is growing steadily and, with the addition of high quality volumes like this one, seems set to become the premier collection of writings in the field. As increasing numbers of traditional tertiary education institutions consider the possibilities of distance education for the delivery of their courses, comprehensive theoretical and methodological studies on the subject like Holmberg's should find a ready place.

Holmberg takes the reader through distance education in eleven chapters, beginning with a chapter on 'Today's Overall Picture of Distance Education'. Beginning with the concept of distance education itself, Holmberg outlines how the field has evolved, identifies major international distance education institutions and provides a section on 'the presumed potential of distance education.' The development of open learning in Australia is unfortunately only covered in two sentences which does not really convey an adequate picture of the significant changes that are taking place in that country at the present time in terms of the national and the international delivery of education at a distance. This section points out some of the characteristics of distance education students and provides the reader with a broad overview of some of the major considerations of learning at a distance. A brief chapter gives a background to the study of distance education in psychological terms, focusing on issues relating to teaching and learning.

Holmberg is very thorough in covering a wide number of considerations in the process of course planning: presenting distance education materials, conducting tutorials at a distance, preparing materials that are appropriate to a student's learning level, developing study guides, guiding choice of media for distance education courses and presenting material in appropriate ways including considerations of style, matter, layout, language, illustrations and oral and video presentation. Much of the material in the first part of this book on course design should be of interest to the increasing numbers of professionals who are considering developing courses in distance education mode.

The latter part of the book covers such issues as the organisation and administration of distance education, the services required, administering course development, managing student - teacher interaction and the distribution of course materials. I found the chapter on 'theoretical approaches to distance education and their practical consequences' of particular interest. This is a section that I anticipate will generate discussion by other writers on distance

education. To date there has not been a lot of attention by scholars of the calibre of Holmberg to the theoretical aspects of teaching and learning at a distance. Holmberg brings to the theoretical section of this book a considerable range of educational theory for examination from which he has worked toward his own theory of learning and teaching in distance education, followed by a series of hypotheses derived about distance learning and distance teaching. There is perhaps a challenge implicit in these hypotheses to other scholars of distance education to test.

This second edition of a successful distance education text by one of the leading figures in this field will be welcomed by many people. It is a comprehensive and extremely well-organised analysis of an aspect of education that is both complex and changing rapidly. It is, however, essentially a reference book for the distance education professional. I find *Theory and Practice in Distance Education* valuable as a broad overview of the field, something that few people could successfully undertake, but also for the theoretical, methodological, organisational and evaluation aspects of teaching and learning at a distance that it provides. It is a book that is and will remain a cornerstone in any collection of distance education materials. Finally, it must be pointed out that *Theory and Practice in Distance Education* contains a particularly comprehensive list of references, which, in addition to the considerable range of material in this volume, provides a useful guide to scholarly writings in a field that is not yet well endowed with collections such as this one.

Ken Stevens
Victoria University of Wellington

J. TIFFEN and L. RAJASINGHAM, 1995: *In search of the virtual class-education in an information society*. Routledge, London, xviii, 204pp. NZ \$56.00.

The authors acknowledge that this is likely to be a controversial book. Personally, I found

reading it an interesting and informative experience in which many familiar but, for me, imprecise concepts and technologies associated with modern communications were clarified. On another level, this book has considerable value for the insights it provides in terms of how information and communications technologies are likely to develop during the next decade and the implications they will have for education. For these reasons the book should be read by as many people involved in education as possible.

Tiffin and Rajasingham provide the lay reader who has little background in communications theory or technology with simple and well-illustrated explanations of terms and concepts that most of us use in our daily lives without having precise understandings of all of them. Many people today are likely to have some familiarity with such concepts as virtual reality, artificial intelligence, ISDN, computer assisted instruction, teleconferencing, e-mail and hypermedia without being able to explain exactly what they mean. The book explains these and many other modern communication concepts and technologies and, in my case, introduced me to some that until reading *In Search of the Virtual Class* were far from well understood: nanotechnology, televirtuality and cyberspace. While many readers will, like me, improve their understanding of developments in communications through reading *In Search of the Virtual Class*, the book is really a journey in itself about education in an information society. The reader is invited to consider the example of Shirley, clad in a datasuit, being educated in a virtual classroom. The story of Shirley's education is returned to in places throughout the book and for parents and educators, she raises the question of how far from present reality her learning experiences really are.

In Search of the Virtual Class takes the reader from the virtual class as it exists with today's communications technologies to the virtual class of tomorrow. The virtual class of today is largely defined by computer and telecommunications technologies which have been the basis of such applications as audioconferencing and computer-managed instruction. These are forms of virtual classes, the authors argue, in that they

are classes without the reality of the classroom. According to Tiffin and Rajasingham a classroom is:

a communication system that makes it possible for a group of people to come together to talk about something they want to learn, and look at pictures and diagrams and text that help them understand. In a conventional classroom this is made possible by the walls which provide protection from outside noise and interference so that everybody inside the classroom can hear and see one another and can also see, on a whiteboard or blackboard, words, diagrams and pictures about what is being learned. The question is, can information technology provide an alternative communications system for learning that is at least as effective?

Tiffin and Rajasingham point out that the idea of a virtual class is that everyone can talk and be heard and be identified and everyone can see the same words, diagrams and pictures, at the same time. This calls for the use of telecommunications and computers.

In the virtual class of tomorrow, the new technology of virtual reality (VR) is outlined and explained. This technology 'seeks to create the effect of actually being inside a simulated reality.' VR as a computer technology can be linked to telecommunications systems:

One person sits in front of a screen and puts on a pair of glasses and a glove. This makes it possible for them to interact in a virtual room with another person who is sitting in front of a screen in another place who has the same equipment. They are linked by telecommunications. They see each other apparently sitting around a table in a conference room. They are actually looking at computer graphic images of each other, but the image is three-dimensional and their faces move as they speak they can also use their gloved hand to manipulate virtual objects within the virtual room or to change the virtual

scenario. There is no technical reason why this virtual teleconferencing system should not be used for a virtual class.

For most readers, including many who are familiar with recent developments in distance education and open learning, virtual reality may still be a rather vague concept at the present time and its relationship to education is unlikely to be clear. One of the major features of this book is the clarification that it provides of VR and its relationship to education and for the future of teaching and learning. VR is not really difficult to understand:

The telephone can provide televirtual voices. Teleconferencing can provide the effect of a meeting without people actually meeting and is already being adapted for instruction and called a 'virtual class'. However, a new technology is emerging in the 1990s called 'virtual reality' (VR). It seeks to create the effect of actually being inside a simulated reality. We are beginning to conceptualise it as a new medium and come to some appreciation of its possibilities. These are extraordinary... Applications of virtual reality are being developed in such fields as architecture, medicine and arcade games. However, its origins were in the development of flight simulators for training...

Tiffin and Rajasingham outline the stages of development of distance education: correspondence, educational television and computers applied to learning in a chapter they call 'Roads to the virtual class'. The discussion of educational television and computer assisted instruction (CAI) in this chapter are likely to become set pieces for students of communications to read in the immediate future. A number of diagrams in this chapter show how interactive television and CAI are structured. The section of this chapter entitled 'The Road Through Silicon Valley: Computers Applied to Learning' is particularly helpful in making the connection between communication and information technologies.

The following chapter takes us further down the road to the virtual class by examining 'tracks to superhighways' and presents particularly interesting material on 'telelearning in cyberspace'. The reader is taken systematically through the various levels of telelearning: audioconferencing, videoconferencing and audiographic conferencing before the notions of multi-level telelearning, including 'the virtual learning institution', and the notion of cyberspace are explained. We are left in no doubt about the authors' vision of what the school is about to become.

Chapters seven and eight introduce the reader to the notions of virtual reality and the virtual class respectively. This is where the authors display the expertise for which they are well known. I found the chapter on virtual reality particularly illuminating and after reading (and re-reading) it could begin to see further possibilities for this concept in New Zealand schools. The explanation is ingenious, based on examples from Robert Grave's poetry, a painting by Jean-Leon Gerome and by a child playing with a toy. Tiffin and Rajasingham then take the reader from these introductory examples to the notion of computer generated virtual reality.

This is a book that will be of interest to students of both communications and education. Tiffin and Rajasingham are to be congratulated on the way in which they have discussed complex and technical material in a clear and entertaining way. Much of the value of this book for me is in the way that it contextualises the many new and not so new information and communication technologies while demonstrating their place in present and future education delivery systems. While *In Search of the Virtual Class* will challenge educationalists and educational policy makers, it should be required reading for all who are preparing to teach in the information society. Some may find its message controversial. Most, I suspect, will share the authors' vision. The challenge for educationalists now is to align the school as we presently know it with the vision of the virtual class in an information society.

Ken Stevens
Victoria University of Wellington