

VIRTUAL COURSE DESIGN for EDUCATORS & TRAINERS



Prepared for
The Office of Learning Technologies



by
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EXECUTIVE SUMMARY

This Report is the result of two years of evaluative study of the state of technology-enhanced learning in general , and in particular of three courses in Retail Management developed by the Continuing Education Division of Ryerson Polytechnic University, using new information technologies.

The evaluation model was grounded in basic educational theory and explored how educational aims can be best served using leading edge information technology.

The findings from the evaluation point to the need for two main elements in any attempt to provide “virtual learnware”:

- *the need for detailed market research* into the conditions that continuing learners face and their specific needs in the educational marketplace, which is now becoming international in scope;

- *the need for detailed and meticulous planning* for delivery to the continuing education market, which is where the growth is now to be found.

The reasons underlying these two imperatives are that:

- educational delivery is in the throes of a considerable paradigm shift

- lifelong learning involves very different conditions and requirements to the traditional “front-end loaded” model of educational delivery

- changes in technology as well as in global economic conditions require the ability to respond to their effects on the educational marketplace.

As an aid to those who want to design and deliver high quality educational products to the continuing education market (including in-service courses to employees, or to use the new technologies to improve services to campus-based students, the final section of this report provides a “toolkit” or Guide to Virtual Course Design.

INTRODUCTION

This report is concerned with two distinct but complementary strands: the first essentially conceptual and the second pragmatic.

The conceptual strand investigates and develops the underlying ideas, processes and structures of 'virtual education', which is defined here as any education or training that occurs when the teacher and taught are separated from each other in physical space. We use this term in preference to a host of others partly because it does not contain the word 'technology' and helps to de-emphasize the importance of technology as a determinant of success.

One reason for the inclusion of a conceptual discussion is to confront head-on the concern of many educationalists who feel that technological determinism is having deleterious effects on the quality of education, with pedagogical concerns being forced to take a back seat to cost-saving or other 'market' goals that technology is employed to attain. We have therefore revisited educational theories to see how they relate to the use of new technologies in order to address this concern.

Another reason is the fact that education and training do not take place in a vacuum but are affected by a myriad of social factors that also need attention. While some of these, like the time available for study, have purely practical origins, others, such as the whole question of motivation, which is so important in any teaching-learning environment, are more theoretical in nature. As these factors affect the use of technology and vice versa, we must look at the social context in which virtual education takes place. This ranges from a macro view of organizational issues to a micro view of personal constraints.

The second strand looks at virtual education in practice and focusses on the pragmatic issues that face its designers, deliverers and consumers. This strand includes the evaluation of a series of courses at a specific university that were experimental in nature and designed to evolve classroom-based courses into the realm of the virtual. It also looks at technology both in terms of the features that are intrinsic to specific technologies and the extrinsic factors that affect their use in an educational context.

This strand culminates in the development of a practical guide for educational decision makers wishing to use the new forms of communications technology to move into the realm of virtual education or training.

The information on which this report is based comes from a variety of sources.

First is the experience of the authors, who have between them over sixty years of educational practice in a variety of educational settings in Europe and North America, as well as a working knowledge of new information technologies and their use in distance education.

Second, an extensive literature review, illustrated by the bibliography provided in the appendix.

Third, the attendance at relevant seminars and conferences, and personal correspondence with experts in the fields of education and technology, including visits to institutions in Europe and North America to gather data for this study and to test our ideas.

Fourth, the input from students, professors, technologists and administrators of the courses at Ryerson Polytechnic University that were the subject of the evaluative case study detailed in Section 2.

This chance to observe a new paradigm emerging, the evolution of nascent virtual education, provided an invaluable opportunity to test concepts, theories, and expectations against reality - generally an informative and sobering experience that can yield important insight into the pitfalls and possibilities of putting theory into practice.

The practical result of this information flow is the Guide to Virtual Education Design and Delivery that has been prepared as a free standing document and details, at each stage of the development process, the questions that must be asked and answered in order to design and deliver an effective virtual education course. This document is being published separately as an aid to intending on-line trainers and educators.

The Report itself is intended for professional educators and trainers and therefore assumes a basic knowledge of educational theory. However, to ensure its accessibility to a less academic readership, technical language has been avoided wherever possible and academic referencing kept to a minimum.

For those who are interested in further study, a bibliography is included in the Appendix and references in the text can be sourced there. However, it is not intended to supply information on basic educational theory, but rather to provide useful information sources relevant to virtual education and training, and it does not therefore include any publications dated before 1990.

Most of these information sources are available on the Internet and URLs are included. It should be noted, however, that these URLs are subject to change over time.

A final word on the choice of 'Virtual Education' as a term to describe the use of technology to free education from space and time restraints.

There are many terms for this type of learning and the routes associated with it: distance education, telelearning, technology-enhanced learning, technology mediated learning and distributed learning are but a few, and nearly all put emphasis on the word 'technology'.

We have chosen the term 'virtual education' to shift the focus from technology to the *nature* of the paradigm shift, which is essentially the *addition* of virtual space to physical space as an arena for teaching and learning. Technology is but a tool to aid learning, which is a human endeavour prone to human failures and successes, and highly dependent on social conditions, whether delivered in real or virtual space.