
Reviews

edited by Philip Barker

Authoring-Systems Software for Computer-Based Training, edited by William D. Wilhelm, Educational Technology Publications, Englewood Cliffs, New Jersey, USA, ISBN: 0-87778-274-1, 1994.

Traditionally, the development of computer-based instructional materials has relied on the use of programming languages and computer programmers. This has often made development prohibitively difficult, time-consuming and expensive. It has also meant that it has been difficult for enthusiastic subject experts to develop their own teaching materials. In order to address these problems a wide variety of authoring systems have been produced which allow the rapid development of instructional materials by reducing the amount of low-level coding necessary for their implementation. A problem which arises from this proliferation, however, is that subject experts find it hard to identify the best tool for a particular development task. This book has been written essentially with the aim of providing potential educational software authors with a brief background to instructional design, an overview of some currently available authoring systems, and a means by which an informed choice of authoring system can be made.

The preface (outlining the content and objectives of the book) is followed by the main body which is divided into nine chapters. The first chapter outlines an approach to instruc-

tional design. The method follows a traditional software life-cycle model, though detail has been included to apply the model specifically to the authoring of computer-based learning materials which may employ multimedia techniques.

Chapters 2 through 8 each address a particular authoring environment. The aim here is to provide an overview of some of the more popular authoring environments namely HyperCard, ToolBook, LinkWay, Spinnaker Plus, Authorware Professional, Quest and TenCore. Although each chapter is written by a different author, the topics covered within each are relatively consistent. Notably, each chapter provides specific examples of the authoring process, and some short illustrative code segments are provided where appropriate. In addition, screen-shots of the types of product which may be developed using the various systems are presented. This allows potential authors to visualize the style of their future product even before a prototype has been created.

The final chapter looks at the process of concurrent authoring. This is the idea that an authoring tool can be made which will allow the seamless integration of training materials within any software application. In this way, training facilities can be integrated into existing computer applications so that users can access real-time on-the-job training. Such training can

be used to assist in the completion of tasks currently being undertaken, and can also be used within a pure training context. These just-in-time training techniques have become known as electronic performance support systems and there is a growing need for tools to facilitate their production.

Two useful appendices are provided at the end of the book. The first of these provides a checklist to assist in choosing an appropriate authoring system for a particular task, and although rather simple, the checklist does detail some of the important features to look out for when choosing an authoring environment. The second appendix provides a list of authoring systems and addresses from which to obtain further information, or the software itself.

Although useful for prospective authors of computer-based learning materials, books of this kind tend to date rapidly, the result of constant upgrades being made to software of all kinds. As a result, the authoring environment descriptions which make up the bulk of the book will rapidly cease to describe accurately the current features and facilities offered by the systems treated. It tends to be the advanced features, which may well have a crucial impact on the choice of authoring environment, that become outdated. Indeed, this has already happened in the case of both HyperCard and ToolBook. Nevertheless, the basic strategies adopted by such systems remain the same, and therefore value is retained.

Stephen Richards, University of Teesside

Designing Instructional Text by James Hartley, third edition, Kogan Page, London, ISBN 0-7494-1037-X, 1994.

This book is intended to give general guidelines for the production of instructional materials. Three main areas are covered: the design and layout of instructional materials, the language in which they are written, and how to evaluate the finished products.

The first five chapters cover the traditional typographic conventions which evolved before the advent of the desktop-publishing era. Factors affecting the choice of page size, type size and typeface are discussed in detail;

effective use of white space is also described. Following the basic rules outlined in these chapters would enable readers to produce materials free of the amateurish horrors which have become, sadly, all too familiar. One useful addition to this part of the book might have been a discussion of the advantages and disadvantages of different binding methods.

Chapter 6 goes on to discuss the production of instructional text in terms of clarity and organization. Where possible, recommendations and conclusions are drawn from actual research studies. Hartley is careful to stress the difference between improving the appearance of text, and improving the degree of reader comprehension.

The principles outlined are then illustrated by means of worked examples in chapter 7, while chapters 8 and 9 consider ways of enhancing instructional text by means of diagrams, illustrations, tables and graphs. Displaying numerical data by graphical means frequently results in readers being misled; this may be intentional or unintentional on the part of those presenting the information. Although this book provides guidelines to improve the legibility of graphs, there is, unfortunately, little discussion of the relationship between numerical significance and appearance. This is an important omission, now that computer charting programs enable users to present the same set of data in a variety of ways at the touch of a button.

Chapters 10 to 13 cover specific topics: the design of forms and questionnaires; text for the visually impaired; text for older readers, and electronic text (i.e. screen design). The chapters focusing on the visually impaired and the older reader are particularly useful, as this material is often omitted from mainstream textbooks.

Chapter 14 discusses the evaluation of instructional text in terms of content, presentation and teaching effectiveness. Some examples of checklists for assessing the layout and technical quality of school text books are provided, along with measures to gauge the suitability of a text for its intended readers (readability indices and cloze tests, for example). Hartley rightly emphasizes the limitations of such measures, yet illustrates their usefulness in the decision-making process by means of case studies.

Overall, the book presents a great deal of useful

information and illustrative examples, and there are ample references to primary source material for those requiring more in-depth knowledge. The clarity of the presentation would be improved if the separation of figures from their corresponding reference in the text could be avoided, and the inclusion of section numbers would also be helpful. Yet despite these minor reservations, I would have no hesitation in recommending this book as a useful resource for anyone involved in the design of instructional materials.

Lorraine Warren, University of Humberside

Preparing Materials for Open and Distance Learning: An Action Guide for Teachers and Trainers by Derek Rowntree, Kogan Page, London (in association with the Institute of Educational Technology, Open University), ISBN: 0-7494-1159-7, 1994.

The author of this guide needs no introduction. He has contributed extensively to the field of educational technology, curriculum development, and open and distance learning.

The delivery of learning has changed over the last 25 years with the development of open learning, flexible delivery courses, and the widening of student access to courses and institutions. This change has resulted in the need for materials to be available in a more diverse and flexible form in order to be sympathetic to different learner characteristics and to promote deeper learning.

This guide is aimed at those who are about to design and produce largely print-based materials and/or adapt existing materials for particular students. It is not, in my view, to be read from cover to cover, but to be used as a structured guide for the preparation, production and adaptation of materials, and for the support of learners using such materials. There are many useful checklists that can be adapted for existing courses whether face-to-face or at a distance.

The guide is divided into four main sections: an introduction plus sections (called *stages*) on planning materials, preparing for writing, and writing and re-writing.

The introductory section lists the types of materials that could be used from print-based materials to technology-based materials, and includes a comprehensive section of sample pages from existing flexible learning courses.

Stage 1 deals with planning, and contains some useful suggestions and tactics for finding out about intended recipients, because the belief is that this information will directly dictate presentation and design strategies. The question of framing objectives is considered briefly but concisely, together with how to derive content from these objectives. And advice is given on making the material more learner-centred, on choosing media, and on supporting students, with some useful checklists on where this support might come from.

In Stage 2, there are suggestions and checklists on time management, on scheduling work, and on determining what resources might be available to enable you to develop your own materials. Sequencing of learning is considered, together with suggestions on developing activities for students, and the types of feedback you might use. There are also suggestions on the physical layout of printed text with the aim of allowing students to access information and ideas quickly (Rowntree refers to making the prose 'clearer' and more 'cheering' to the reader). There is stress for the need to include meaningful examples in the text, with a good list of possible sources, although it is somewhat surprising that assessment is not really considered here (or indeed in Stage 1), and is dealt with in the last section on writing and re-writing. Inclusion here would have emphasized the need to consider assessment very early in the development of flexible learning materials (or any other learning materials for that matter).

Stage 3 contains some useful tips and advice on language style and how to get started, how to check for readability, and for completing and editing for first draft. And finally on piloting: Write + Try it out + Improve it.

Although the section on further reading could have been more comprehensive, it is sufficient for the purposes of this guide, and there are references to the texts throughout at appropriate points, though I did find the use of some abbreviations rather irritating.

I certainly think the guide is interesting, and indeed could be invaluable for those considering developing flexible learning materials.

Gareth Jones, University of Teesside

Teach Yourself with Open Learning by Derek Rowntree, Kogan Page, London, ISBN: 0-7494-1153-8, 1993

This is an extremely practical and usable book, again by Rowntree. While generally aimed at readers who are new to open learning, it has much wider applicability, offering much to those already experienced or, indeed, to any educationist interested in preparing open-learning materials.

Interestingly, the book is itself written in the form of an open-learning text. Each chapter is focused, with very clear, boldly titled sections with specific objectives. The nine chapters cover topics such as 'You and your learning', 'What open learning can offer you', 'How does open learning work', 'Choosing your open learning programme', 'Getting organized', 'How to tackle your package', 'Getting help from other people', and 'Getting value for money'. The style of each chapter is interactive, with simple activities where the reader is required to respond to check boxes or make written responses to questions. The objectives of the book are clearly stated at the beginning, and the reader is invited to identify appropriate objectives. This involves the reader immediately. However, although there is no requirement to study all the material in sequence, and dipping into chapters and sections is quite possible, this is a book that demands a certain degree of reflection and commitment.

The style and layout are light and informative, and the book is easy and fun to read. For example, Chapter 4 takes the reader into topics

on course evaluation, what one might hope to gain from an open-learning course, how such material might be presented, the use of different media, and possible learning techniques. Cleverly, the author does this partly by making explicit the very techniques used in writing the book itself, as well as including nine sample pages from a diverse range of open-learning courses.

The book contains a list of useful addresses and a short bibliography, but it is in any case immensely informative without being a fact-book as such. It raises issues and encourages valuable reflection and self-evaluation. It is also a manual for constant support and revision as well as a one-off read. Chapter 5, for example, deals with specific providers of open-learning packages, and has an excellent section on talking to providers. It is suggested that the book itself with checklists and readers' notes might even be taken to an interview with a course provider. Chapter 6 includes clear and useful directives on time planning, and introduces the concept of a learning diary to record both personal reflections and questions to be raised with a tutor or friends. Chapter 7 deals with readers' real fears about coping with materials, and offers some very useful tips on subjects such as making materials on your own by annotation and talking about the course. It also has an excellent section on learning from a workbook through the stages of previewing, reading and reflecting.

This book must be regarded as an excellent resource to be used not only as an introduction to open learning, but also throughout any course for reminders and practical support. It could certainly make the difference between success and failure on an open-learning course, and for this reason is highly recommended.

Terry King, University of Portsmouth