
Reviews

edited by Philip Barker

Alan Clarke, *Designing Computer-Based Learning Materials*, Aldershot: Gower, 2001. ISBN: 0-566-08320-5. Hardback, xviii+196 pages, £45.00.

The utility of computers as learning resources is now well established. They can be used as stand-alone devices to explore various localized phenomena or they can be networked together to facilitate the creation of global learning communities. Between these two extremes, a variety of possibilities exist for using computer and communications technologies for the support of teaching and learning processes. More often than not, some form of courseware material will usually be needed to facilitate these pedagogic applications of computers. The creation of this educational software is no simple task and, if it is to be effective, requires careful design. This book by Alan Clarke discusses some of the important issues that need to be considered when designing computer-based learning (CBL) materials for use in different contexts.

The material in the book is organized into three basic sections. The early chapters in the book (1 to 4) make up the first of these. They cover some of the more fundamental issues of CBL. They deal, for example, with the nature of interaction and learning, communication styles, types of computer-based learning material and assessment methods. The second part of the book, (chapters 5 to 8) deal with the 'primitive' types of resource and techniques that designers might use to create a learning product. The topics covered include the use of text, colour, graphics and

multimedia. Alan Clarke is well known for his extensive work on 'screen design for computer-based learning'. Needless to say, this work figures prominently in this second section of the book – and also in the third part (chapters 9 to 12). The latter chapters of the book are less 'media-orientated' than the previous ones and are devoted to some of the more interesting design issues. The topics covered in these chapters include designing for online learning, screen layout, content, and evaluation. I enjoyed reading them all. However, the chapter on evaluation is the shortest and, in my view, the one that is covered in least depth.

Although this book is well written and easy to read, there are a few minor spelling and/or typographical errors. For example, the section of the 'Periodic Table' given on page 90 includes the metal calcium (Ca) both in the alkali metals (Group I) and in the alkaline earth metals (Group II). This confusion arises because the atomic symbol for cesium is Cs and not Ca! Obviously, a simple typographical error? Similarly, the symbol for the element zirconium is Zr (and not Ze) and the element with atomic number 104 is rutherfordium (Rf). Of course, simple errors of this sort reflect the need (especially within CBL) for sound proof-reading and the use of subject-matter experts (a topic that is not extensively covered in this book – although reference to 'subject expertise' is fleetingly made in a few places in Chapter 11).

The only major shortcoming of the book is the absence of any reference section and any useful

citations to the very large volume of related literature that is now available on designing and producing CBL materials. A 'selected bibliography' would therefore have been a useful addition to this otherwise outstanding book. Unfortunately, within the 12 chapters that make up this volume, there is only one (rather dated – 1987) reference. This appears at the end of chapter 7 (the 'graphics' chapter). As well as the distinct lack of references to conventional literature sources, there are also very few Web references – three in total! One of these (the Gower Web page) appears repeatedly in Chapter 6 (referencing examples of the use of colour) and the other two appear in the chapter on evaluation. I think a few more references of both sorts (conventional and electronic) would have made a useful addition to the book.

Overall, this book provides an excellent introduction to the world of designing materials for the support of computer-based learning. It is written in a clear, lucid style and contains lots and lots of good pictorial illustrations. Of course, unlike electronic books, the use of colour in conventional paper-based books is often a difficult and costly process for many publishers. All the illustrations that appear in this book are therefore in black and white. Naturally, writing a chapter on the use of colour (Chapter 6) without actually being able to use it is not easy. The author overcomes this problem by placing his eight figures for chapter 6 on the Gower Website (<http://www.gowerpub.com>). But now, to get at these figures the reader has to navigate through this site to get to the entry for this book and then download a 'pdf' file. Unfortunately, after I downloaded this file and opened it with Adobe Acrobat, I found that the numbering of the figures used by the publisher (Figures 44 to 51) did not correspond with the numbering used by the author (Figures 6.1 to 6.8)! Of course, this is an error that could easily be rectified – and reflects the tremendous flexibility of electronic (e-book) over paper-based publication.

In my view, this is a book that is aimed at newcomers to the area of CBL design rather than established veterans like myself – although I am sure many (like me) would find it a good read. Undoubtedly, the book clearly identifies what is involved in designing CBL materials and what users of this technique can expect to achieve through its use.

Philip Barker
University of Teesside

Helen Edwards, Brenda Smith and Graham Webb (eds), *Lecturing – Case Studies, Experience and Practice*, London: Kogan Page, 2001. ISBN 0-7494-3519-4. Softback, 168 pages, £19.99.

As the title suggests, this book is about lecturing, with a specific focus on higher education. It is one of the most useful and usable books on lecturing around. The target audience is anyone who has to prepare and deliver a single lecture or coordinate entire lecture courses.

The main part of the book is a collection of seventeen real-life cases from universities in the UK, Australia and the USA, illustrating the range of challenges facing university educators today. Each case (of six to ten pages in length) follows the same format. It begins with two short sections: one providing an overview of the issue under discussion and the other giving an account of the context of the case. The contexts cover a range of types of higher education (theoretical, practitioner, professional) and disciplines including politics, physiotherapy, telecommunications engineering and contemporary poetry. The cases also deal with educators with very different levels of teaching experience, from the new teacher preparing to lecture for the first time through to experienced lecturers looking at ways of improving their current practice.

Each case account is divided into two or three parts. The first part expands on the issues being discussed, explaining what happened, how the teacher was feeling, how colleagues or students were responding to the emerging challenge. This is then followed by a small number of questions that lead the reader to think about the case, such as how they might have responded in the same situation and what they might do in order to get the class working effectively again. The questions depend on the nature of the case, but in each instance they provide a starting point for addressing the emerging problem. It is easy to envisage how this book could be used as part of a short course on university teaching or to help guide the discussions in teaching seminars.

The second part continues the case account, developing it further by outlining the course of action the teacher followed in order to improve the situation. This is then followed by a more extensive series of questions and maybe a further development of the case. The case account ends with a discussion section and in some instances includes further questions for reflection and action. Each case includes references to relevant education literature.

The seventeen cases are divided into four sections. Part 1 deals with key competencies in lecturing. It includes four cases that address topics such as dealing with disruptive students, taking over a course from a more experienced colleague, and – that all too common situation these days – being asked to teach a subject in which you have little expertise. Whilst the emphasis in this section is primarily on new or inexperienced teachers, the case content will provide useful insights or points for discussion to educators of all experience levels. In Part 2 ('Orchestrating learning in lectures') there are four cases focusing on the learning that takes place during lectures, in particular large lecture settings. There is also an emphasis on individual learning in these cases, drawing the student out from the crowd and encouraging them to engage in discovery and interaction. There is also a useful case entitled 'Just give us the right answer'. It deals with the situation facing many teachers where students prefer to be told the answer than spend time working on reasoning and constructing the answer for themselves.

Part 3 deals with feedback. This section includes cases that explore dealing with hostile feedback and responding to feedback in order to improve course content and the learning environment. The final section of the book (Part 4: Authenticity: living your values in lectures) covers cases that deal with carrying through our beliefs about learning and embraces various aspects of learning such as deep learning and the teaching of culturally sensitive material. There is a strong theme of experiential learning and valuing the students' lived experiences.

I have already lent this book to a couple of colleagues and the feedback from them has been extremely positive. They had two main responses: firstly, they expressed a feeling of relief that other educators faced the same problems as they did and secondly, that the format of the cases provided a framework for thinking about ways of addressing the issues arising in each situation.

This collection of cases is readable and thought-provoking. It addresses practical problems and challenges, and provides insights into possible solutions without being prescriptive or resorting to a 'tips and tricks' format. The inclusion of references provides further support for those not familiar with the literature. These cases will serve as an excellent resource for group discussions about teaching and learning – it should be a part

of the library of every Teaching and Learning Support Unit.

Sue Fowell
University of New South Wales

P. Schwartz, S. Mennin and G. Webb (eds), *Problem-Based Learning: Case Studies, Experience and Practice*, London: Kogan Page, 2001. ISBN: 0-7494-3492-9. Softback, 182 pages, £19.99.

In the dynamic world of educational practice, Problem-Based Learning (PBL) is a hot topic. With its international origins and high profile application in a number of areas of professional education, PBL offers the tantalizing opportunity to support active, learner-centred, collaborative, interdisciplinary learning. However, in operation this opportunity is somewhat more challenging to grasp. For example, a review of the literature suggests a lack of consistency about what constitutes PBL, and questions whether its focus on the 'problem' as the stimulus for learning is in any real sense different from any other approach to learning (or indeed life itself!). There are definitional and terminological concerns and differences of emphasis and focus. And whilst the 'problem' is the common starting point for learning, the degree to which this needs to be situated into the everyday experience of the learner is contested. Acknowledging this context, 'Problem-Based Learning: Case Studies, Experience and Practice' is designed to help the reader steer a course through these issues and explore and exploit the potential of PBL.

The book is intended to be a practical guide for both experienced PBL practitioners and those who 'do not yet understand it' (page 1). The book offers twenty-two short case studies designed to share experience and practice from a range of perspectives so that by

... learning from the compelling accounts of their experiences you can develop helpful strategies for when you use (or suggest using) PBL in your own curriculum. (page 1)

Each case has a descriptive element written in the first person and a 'case reporter's discussion'. Each description is split into two or more parts, each part concluding with a set of questions for the reader to prompt reflection and engagement with the text. Readers will either love or hate this uncommon approach. Certainly, prompts and questions of this kind can encourage the active engagement the editors seek. However, it can

also reinforce the perhaps inevitable lack of detail and substance in each of the short case studies, and highlight the questions not asked at least as strongly as those that are. Whatever one's personal preferences the editors have, through this device, made a useful attempt at simulating a problem-based approach to the underlying strengths and pitfalls of PBL.

The case studies are grouped. The first set of eight case studies explores political, administrative and resourcing issues. All these are located in medical or dentistry contexts, which may limit the extent to which the points raised in the discussion sections can be generalized to other educational and training contexts.

The second set of six case studies explores issues relating to teachers. Here medical school examples are enhanced by one located in an Architectural Department of an Australian university and another located in an Instructional Innovation Institute in the USA. The latter case study illustrates many of the strengths and issues of the collection as a whole. Whilst it is an honest 'warts and all' account of a staff development workshop held in 1996 which raises some important issues about assessment in PBL, the format of the case study means that many of the issues are left hanging without a set of practical 'solutions' that might be transferred to other practice. This would be less of a concern had the promotion of the book not explicitly indicated that it had been designed to provide

... an invaluable resource from which to draw exemplary lessons for those approaching teaching with PBL for the first time, this collection provides an inspiring and valuable guide to understanding its methods and developing successful strategies for using it in their own curriculum and teaching. (back cover)

The third and final set of seven case studies addresses issues from a student perspective. Again all but one are taken from a medical or dentistry context. However, the learner-focused nature of these contributions and the significance of assessment in many of them, helps to make this section the most rewarding of the three, particularly in terms of the transferability of the insights and 'lessons learned'.

The final conclusion picks up on, and summarizes, the key 'lessons learned' from the case studies. The list of key points will not be a surprise to experienced practitioners and educational managers:

- Leadership is crucial to the successful introduction of PBL.
- Teaching staff need to 'buy in' and 'own' PBL as a legitimate approach to teaching, learning and assessment.
- Teaching staff need to be developed to deploy PBL successfully.
- PBL requires effective communication and collaboration between key stakeholders.
- Conflict and uncertainty about power and control in teaching and learning will arise in the introduction and use of PBL.
- Assessment has to be consistent with the overall aims and intentions of PBL.
- Not all learners will 'play' the PBL 'game' (although whether this makes the individual or group 'dysfunctional' as suggested on page 175 is open to debate).

Those familiar with PBL will enjoy and empathize with many of the situations described in the case studies. However, I am less convinced that they will learn a great deal that is new from the book. Rather, it offers a very accessible, thought-provoking and occasionally moving induction into the issues associated with PBL and indeed significant curriculum change more generally. As such it is a useful introduction to the topic which would have benefited from a wider range of case study contexts, and in particular case studies located in cross-disciplinary contexts or where so-called mixed or hybrid approaches to PBL were employed.

Peter Funnell
Suffolk College

John Field, *Lifelong Learning and the New Educational Order*, Stoke-on-Trent, UK: Trentham Books, 2000. ISBN: 1-8585-6199-X. Softback, 200 pages, £13.95.

John Field's *Lifelong Learning and the New Educational Order* is an interesting, useful and scholarly view of the contemporary Lifelong Learning debate. Written from what is largely a social science, rather than pedagogical, perspective, he draws together a range of social, political and economic perspectives on the issue of lifelong learning in the emergent 'knowledge economy'. Although he doesn't especially engage with issues surrounding the application of learning technologies to lifelong learning, the

book will nevertheless provide *ALT-J* readers with a valuable perspective from which to view those technological and pedagogical issues that are perhaps their more immediate concern. Of particular interest in this context is his success in distinguishing the reality from the rhetoric of lifelong learning.

The book is relatively short. In the author's words, it is an 'extended essay'; but it is extremely thoroughly researched. The essay itself is about 150 pages and the bibliography almost 20 pages long. This care serves to situate his argument convincingly in a contemporary and international view of the issues he addresses in the book's five chapters. In brief, Field argues that, like it or not, we currently inhabit both a knowledge economy and lifelong learning society. However, he goes on to argue that many of the commonplaces surrounding those ideas have little real foundation and that we need to be more reflective about what the implications of this emergent social order are and what we need to do in the face of this change.

The first chapter spells out the case for recognizing that, at least in the developed world, lifelong learning is a genuine and significant phenomenon. However, rather than point at the institutional evidence for this, he reflects on the importance of what he calls 'informal learning' (p. xi). In this he includes such things as all the learning implicit in the pursuit of alternative medicines and leisure activities. In these he sees both evidence of a greater individualization of interest within society, but also of growing insecurity.

In the second chapter he extends this view into the area of work-related learning and addresses many of those commonly expressed views about the ways in which changing patterns of employment both encourage and demand a more continuous approach to the acquisition of knowledge and skills. However, while acknowledging that essential truth, he is also careful to point out that this is less universally true than one might expect from the rhetoric. Significant elements of the world's population as yet remain largely unaffected by these changes.

Still further in the third chapter, 'The Learning Economy', he argues that the knowledge economy is also not necessarily what policy and rhetoric might suggest. Notably the realities of corporate economics do not necessarily support the often promoted view that well-organized and regular training is necessary to success. He offers several interesting case studies of major organiza-

tions that adopted worker-centred management and training strategies that, far from leading to corporate success, led to the sale of companies and the abolition of the training systems.

In the fourth chapter, 'Who is being left behind?', he examines the human cost of the changing environment. He observes that while humankind's capacity for learning throughout a lifetime empowers at least some people to cope with our rapidly changing contemporary world, others may be being positively excluded by the very mechanisms that are created to support the successful lifelong learners.

In the final chapter he explores what he calls 'four key elements of a future strategy' (p. 134). These are:

- rethinking the role of schooling in a learning society;
- widening participation in adult learning;
- building active citizenship in social capital;
- pursuing the search for meaning.

I have only one small reservation about what is, overall, a sound and scholarly perspective on the lifelong learning debate; and that is with the author's occasional 'pot-shots' at post-modernism. I describe his comments on the post-modern as 'pot-shots' because, while he dismisses post-modernism as 'a dead end' (p. 133), he never actually engages with it intellectually or presents any arguments to indicate why he views it as intellectually impoverished. Reading between the lines it is clear that his problem with the post-modern is that it embraces uncertainty as a fundamental aspect of understanding. As indicated above, the last of his four elements of a future strategy is 'pursuing the search for meaning'. His quest throughout the book is an essentially positivist one which sees lifelong learning as a route to a more certain understanding of one's role and place in an uncertain world. However, this is by no means incompatible with post-modernism. Understanding that knowing is contingent, rather than certain, in no way undermines its ability to provide intellectually robust coping strategies. However, even if the author's pursuit of the philosophical underpinnings of his argument are a little less rigorous than might be ideal, it really takes away very little from this otherwise insightful essay.

Bruce Ingraham
University of Teesside

D. Squires, G. Conole and G. Jacobs (eds), *The Changing Face of Learning Technology*, Cardiff: University of Wales Press, 2000. ISBN: 0-7083-1681-6. Softback, 182 pages, £7.99.

Selecting the papers to be included in this collection must have been an interesting task. The concept of illustrating the evolution of learning technology since 1993 when *ALT-J* was first published, by synthesizing papers previously published in that journal, was well conceived, and this book provides a stimulating anthology. Inevitably, the academic style and variety of authors means that this is not a book to read casually in a single sitting. It merits time, several return visits, and dipping in and out of sections as ideas emerge and re-emerge in different areas.

There are thirteen papers in the collection. The earliest were first published in 1995, and the most recent in 2000. Their authors are spread world-wide – Australia, New Zealand, Canada and USA as well as the UK, although the overall focus is very much on experiences from Australia and the UK. The papers are presented under four headings: 'Design and Evaluation of Learning Technology'; 'Institutional Change'; 'Learning Technology in a Networked Infrastructure' and 'The Future'. Each paper is reproduced in full in its original form, but with an addendum to provide the author(s) with an opportunity to update their work, or comment on subsequent developments and experiences.

The book begins with an introduction and overview of each of the sections, and could serve well in place of this review because it attempts to précis each paper and illustrate why they have been grouped into the sections chosen. In the first section, headed 'Design and Evaluation of Learning Technology', the emphasis seems to be on the need for, and the importance of, effective communication and interaction. Two frameworks are presented, one to support the design of student-centred constructivist learning experiences (REALs from Grabinger and Dunlap), and one to support evaluation by considering the whole context within which technology may be situated (SECAL from Gunn). These are supported by Fowler and Mayes' discussion of learning relationships from a psychological and anthropological context. Mitchell's wonderful paper on the outrageous abuse of statistical methods, and his challenge to the appropriateness of parametric approaches delighted me, but I did wonder whether it really fitted into the context both of this collection and this section. The

section on 'Institutional Change' presents two papers from Australia and two from the UK. Reading the papers in close succession highlights a difference in scale and resource which is alarming, although there are still many common issues identified. Unfortunately in the paper from McNaught and Kennedy, describing the 'substantial' (their word – I think I might say breathtaking!) investment strategy at RMIT, some of the tables have not printed with sufficient contrast, so much valuable information is lost to the reader.

The three papers under the heading of 'Learning Technology in a Networked Infrastructure' return to the idea of learning communities, lifelong experiential learning, and the importance of supporting communication. They are generally ethnological and illustrated with specific examples, in contrast to the more theoretical papers in the opening section, but many ideas presented there can be seen echoed in this section. The final section is entitled 'The Future' but acknowledges that the rate at which technology is evolving poses great challenges for anyone who wishes to speculate about or to forecast the future. It contains two papers, and again the ideas from the opening section are revisited here. One paper describes BT's Real Time Interactive Social Environment (RISE), which aims to present a user-centric portal to tools or modules, but via a sufficiently generic structure that it can be readily adapted and transported to different contexts. The other considers the notion of a Peripatetic Electronic Teacher (PET) working in a virtual university, and the implications and requirements to make such a model effective.

Overall, I have enjoyed reading this book. Because someone else has gone to the trouble of selecting the papers, I have read things I missed previously, as well as revisiting some well-thumbed pieces. Perhaps I was a little disappointed to see so many familiar names amongst the authors, and I felt that the selection tended to present the views of staff in senior educational development or educational technology roles. The historical overview is good in terms of presenting frameworks and discussion of strategy, but I felt that perhaps it did not reflect the process which so many of us have been through – where were the reflections on the mistakes and frustrations that we have all experienced? The editors express the hope that the publication will 'provide an interpretative framework for an understanding of the design and use

of learning technology, and stimulate an appreciation of the underlying issues and their significance for supporting learning and teaching'. This a grand aim which I will not attempt to appraise, but in providing a single volume to draw together diverse papers representing a historical perspective on learning technology, the editors have succeeded in creating a readily accessible and thought-provoking collection of ideas and experiences. Yes, we would all have made our own different selections of papers to represent the last eight years, but that does not make this particular collection less valuable.

Nora Moge
University of Edinburgh

Pat Maier and Adam Warren, *Integrating Technology in Learning and Teaching: A Practical Guide For Educators*, London: Kogan Page, London, 2000. ISBN: 0-7494-3180-6. Softback, vii + 162 pages, £19.99.

To quote its authors, this book is first and foremost 'a resource book for academics engaging in C&IT learning and teaching innovations'. The academics that the authors have in mind are mainly teachers in higher education within the UK and this narrows significantly the scope indicated by the title. It aims to bring together, and integrate within an educational framework, the dispersed and wide-ranging literature dealing with C&IT implementation. This framework consists of three main elements:

- the political agendas driving C&IT implementation in the UK, together with support mechanisms;
- the pedagogy of open and independent learning;
- the technical issues involved in producing and delivering digital learning materials.

The intended readership for this book is not just academics who use (or wish to use) C&IT in their teaching but also educational developers who are 'devising staff development programmes'.

In terms of coverage, there are five chapters:

- Agendas for change in higher education;
- Developing new teaching skills;
- Designing learning environments;
- Using communication technologies to facilitate learning;

- Assessing student learning.

Each chapter follows the same format: exposition of a theme, with integrated references to relevant Websites, followed by a set of activities, followed by exposition of another theme and so on. At the end of each chapter is a set of references for further reading. There is also a very useful, and well-designed, Website at <http://www.clt.soton.ac.uk/activeguide>. This provides further Web references and some useful learning materials relating to issues mentioned in the text.

This formula works particularly well in those chapters which are strong on the practicalities of C&IT implementation; the chapter on using communication technologies to facilitate learning is a case in point. Almost two-thirds of the chapter deal with the broad educational issues of discussion, communication and collaboration within an online context, enabling readers to make informed choices about the methods they might employ in a given technical environment. Referring to the available literature published to date on the Web, it covers the possible structures for online group work and compares these with face-to-face group work, allowing the reader to make a balanced judgement. It also includes a section on the assessment of participation in online communication. The activities provide a clear and helpful framework, which should enable newcomers to this form of tutoring to make a confident start in managing online seminars, avoiding most of the well-known pitfalls. The last third of the chapter provides comprehensive coverage of the various technical options open to the teacher, evaluating their various strengths and weaknesses. Given the importance of online communication in today's educational setting, this chapter alone is worth the price of the book.

The chapter on developing new teaching skills is a useful starting point for any lecturer considering developing digital materials. It not only shows how easy it is to begin this type of development but also provides a great deal of realistic advice on the difficulties inherent in mastering some of the more complex technologies. It points out that a great deal of time and effort can be saved by exploiting materials that have already been created and are sitting on the Web waiting to be discovered. The Web references are especially valuable and the Active Guide provides further support materials. One of the most pleasing features is the authors'

concern to highlight the disadvantages as well as the advantages of digital materials.

A resource book of only 160 pages is hardly likely to be able to address in any depth the complexities of the political agendas discussed in the first chapter or the pedagogy of instructional design which is dealt with at the beginning of the chapter on designing learning environments. In the case of chapter one, for instance, two paragraphs on the knowledge economy and just over a page on the globalization of higher education are clearly insufficient to provide a meaningful overview of the concepts involved. More worryingly, perhaps, the authors present teachers in HE as being required to 'comply with the economic agenda of providing the right kind of work-force for the next century' and appear to believe that this new obligation is contemporaneous with 'changes in educational theory' that are focusing on 'the learning process as well as the content'. In reality, of course, the nature of the learning process has been at the centre of educationalists' concerns for at least the last twenty years or so. This kind of superficial overview leads, perhaps inevitably, to activities which are far weaker than those of a more focused, practical nature to be found embedded in the other chapters. For example, in order to introduce the distinction between deep and

surface approaches to learning, teachers in HE are asked whether, when they are learning, they 'really want to understand what it is all about' or, alternatively, whether they 'prefer to collect facts, details and examples and then memorize them'. And with that the issue of approaches to learning disappears from view, never to resurface.

Despite these weaknesses, the authors were probably right to make the attempt to introduce some of the political and educational issues which inform C&IT implementation, as all too often technological issues are discussed in a vacuum and educational priorities are pushed into the background. One could only wish that they had been more selective, however, and covered one or two of the more central issues in greater depth (approaches to learning and instructional design for example) rather than risk undermining their endeavour by surveying too wide an area. This said, the book does perform a valuable service not only to teachers in HE and FE but also to teachers in primary and secondary schools, who, as the authors point out, are already grappling with C&IT implementation within the context of the National Grid for Learning.

Terry Goodison and John O'Donoghue
University of Wolverhampton