

# Reviews

edited by Philip Barker

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**Judith George and John Cowan, *A Handbook of Techniques for Formative Evaluation: Mapping the Student's Learning Experience*, London: Kogan Page, 1999, ISBN: 0-7494-3063-X. Paperback, 136 pages, £16.99.**

I must admit to a sense of anxiety when I see a title that contains the words 'formative evaluation'. I think: 'not another book telling me how teachers should be aware of the glaring difference between summative and formative assessment'. Of course, it could be worse – it might just be a 'look I have just discovered evaluation and we REALLY should ask students what they think about our teaching book'. There are two possible types of book. The first, a 'Janet and John' cookbook for educational developers who have never read anything before 1990;<sup>1</sup> the second, a sort of New Education Project Manifesto. It was the subtitle – 'mapping students' learning experience' – that caught my attention. Students have experiences – good, bad, planned, unintentional – lots of them. We somehow seem to forget the individual nature of being a learner and of what it is like to 'come to know' – also known as 'to learn'. In learning technology, whatever IT (*sic*) is or should be, the interaction between teaching and learning is crucial.<sup>2</sup> Learning is a cusp between stable states; it is a bit like falling off a bike, only it does not leave cut knees. It leaves a trail of experiences that merit further reflection. The process of coming to know is as important as the state of knowing. Of course, if this book also tells me about 'mapping', I am hooked. As it

turns out, George and Cowan do not tell me about 'mapping', but they successfully start to unpack the complex relationship between teaching, facilitating learning and curriculum design. How?

This book is about how teachers and learners share experiences and how both come to know more as a result of the interaction. The book is rooted in the innovative action research programme developed by Judith George and John Cowan. For readers who are familiar with Professor Cowan's work, there will be few surprises. For those who have not encountered this reflective and challenging set of ideas that developed from an association between George and Cowan while they were, respectively, Deputy Director and Director of the Open University in Scotland, there are some pleasant surprises in store. But, beware, the ideas are understated and seem so simple that they are obvious. Obvious things are easy until one tries them, for example, 'Ask students what they think'. The difficult bit is to decide what to do with all the answers. George and Cowan take the reader into dangerous territory. Reader – do not be under any illusion – this is deliberate. The authors want to destabilize your curriculum development. Remember, this is *the* John Cowan, the 'pioneer of (open) learning in the UK' (as the publisher tells the reader). Professor Cowan has developed a wonderful repository of really useful ideas. He is someone who can make complex issues seem obvious.<sup>3</sup> But these ideas and stories are designed to induce change. He is ably assisted by

Judith George, and together they have produced a really useful book. Why?

This book is a delight to read. Not only is it a delight, it leaves one reflecting ON, reflecting IN and reflecting FOR teaching – as Cowan would say. A quick summary of the contents will suffice before I draw out some issues that I was ‘helped’ (*sic*) to reflect on.

There are nine chapters, with a short bibliography and selective bibliography. Chapters 3 to 6 are the core. They are about obtaining information about teaching and learning from formative assessment ‘methods’. For example: Method 3.5 (p. 44) is ‘Talk-Aloud Protocols’. Triplets of students using a CBL package take turns to talk aloud about what they are doing, planning, experiencing. Lists of points are recorded and summarized to draw out significant points. Method 5.1 (p. 65): is ‘Concept Mapping’. Students off-load their thinking about what they know in a visual format. Students can share such maps with each other and the teacher in order to identify concepts they are unfamiliar with or need clarification on.<sup>4</sup> Method 6.4 (p. 84) is ‘A Letter to Next Year’s Students’. Students are asked to write a letter of advice to next year’s students. The letter should tell them about the good and less good parts of a course. As George and Cowan note about this technique (p. 86): ‘it provides indirect and relatively authentic insight, mainly about the nature of learning difficulties with both course and tuition, as perceived by students.’ In the methods the authors provide, which are all intended to unpack the learning experience in terms that an alert teacher can understand, there is a range of techniques: some technical and almost psychometric (e.g. the Q-Methodology on p. 94); some just useful with no theoretical underpinning (e.g. Method 3.7, Self Review on p. 53). My favourite technique is Method 6.9 (p. 90) Stop/Start/Continue. Students provide immediate feedback on events/tasks that they feel the teacher should *stop* doing; *continue* doing or *start* doing! Such a simple idea. It is both useful and challenging. It must be a classic of formative feedback for teachers who are aware or able to reflect. In this activity the locus is with the student; however it is the teacher and his or her interaction with the learners that is open to change. Imagine students being given the accelerator and brake while we, as teachers, only have the steering wheel!<sup>5</sup>

Chapters 1 and 2 set the scene and get the reader

asking ‘What do I want to know about formative assessment?’ The authors take an explicit action research approach to assessment. They state clearly that *action research* is ‘conducting of investigations of a research nature which produce *useful findings* relevant only to *the particular situation* and people studied, from which the findings were obtained’ (reviewer’s emphasis).<sup>6</sup> Now, I take issue with the lack of generality in this action-researcher approach. George and Cowan are researchers. They see teaching as a research-led activity. As teachers, they are inquisitive and they want to generalize from events where it is appropriate to do so. I do not feel they should be quite so cautious. Action research – an excellent metaphor for formative assessment – is a state of mind. Let’s not worry about applying what is discovered to different situations – as long as the researcher is *aware* of the general and iterative nature of curriculum development. One of my few criticisms of this book is that the authors *underplay* the significance of general changes to teaching and learning from the formative assessment of unique events. Have no doubt about it: these methods are powerful and have general and long-term implications for learners.

Chapters 8 and 9 are a bit of an afterthought but merit close scrutiny, as assessment as a general concept reappears and one asks why we need two terms to talk about mapping the student experience – ‘evaluation’ and ‘assessment’. Like a sandwich, the best bit of the book is in the middle. Now, as a reviewer, I am not impartial. The authors refer anonymously to work Cowan and I do at Heriot-Watt University. Nevertheless, reading this book, *in review mode*, I was made to scratch – and to think.<sup>7</sup>

Here are the issues that I was aware of as I read the book. My comments follow each individual bullet point.

- What is the difference between assessment as judgement and assessment as development?

I really like this distinction. I am aware that as a teacher that I am paid to make judgements but when I think about it, I do not value development in the same way I value judgement. Scholars and journeymen make judgements – apprentices develop. Yes? On reflection, ‘assessment as development’ reminds me of a tension I feel in an oral where I want to help a student think about some issue in a way he/she had not thought about it before. I feel there is a role for the examiner to activate a learner and to

help the student discover the new – while fulfilling the judgement role.

- When is it OK to fail? Or, why is iteration a good watchword for innovation?

I do agree with the authors that the relationship between learning and teaching is an iterative process. Failure is OK. Mind you, when I tell students it is OK to fail, they look at me quizzically! Learners have to cycle through a series of steps that Kolb would suggest result from a tension between perceiving experiences and engaging with experiences. John Cowan's 'loopy' curriculum development model (shown in Figure 1.2 (p. 7) reminds me of Cowan's 'loopy' experiential learning framework.<sup>8</sup> If teaching and learning are iterative processes – cybernetic (?) – then there needs to be some dynamic to move the process on. This dynamic appears to be formative evaluation.

- How can we get students to take ownership of their own development?

Now this *is* something I worry about. When students have graduated and have secured their first job, will learning stop? What about the hype that we all engage in about lifelong learning? I really had not appreciated that the process of formative evaluation is a first step to self-assessment. If students are able to self-assess or appraise or personally develop – then they have the ownership of the self-regulatory techniques for lifelong learning. We, as teachers, disappear like the Cheshire Cat – only the grin is left in the student's ability to get on with learning without us! It is only if we begin to model this iterative-reflexive process that lifelong learning will take place.

- How can we tap the latent or tacit knowledge that learners have in order to help them know what they may not know they know?

I really do not know why I started thinking about this. I suppose it is (again) the *iterative* nature of learning. Students sometimes appear to know things they did not know they knew. Latent or tacit knowledge may be experiences and concepts long forgotten. Causing learners to turn an inquisitive eye inwards seems to facilitate meta-cognition. However, I sometimes think it is me, as teacher, who should be detecting (judging?) what students do not know. I know that is what some summative assessments do. Yes . . . ? Umm . . . This book is getting me to think more about the tasks/activities that I can share

with my students, that cause me to develop my teaching and things the students can do to become aware of what they did not know they knew. As a facilitator of learning ('teacher'), should I get students to tap into their experiences and reflect FOR learning?

So where does that leave this book? The book irritates me – but then I am often irritated by a problem, until I can solve it. It stimulates me – I suppose I should say it actualizes me – but stimulated is more how I feel it. The book is informative and suggests ideas that work – or seem to work. I am left with the desire to be a better custodian of educational development. I begin to think of stories I could use if I were making a fast track application to the UK's Institute for Learning and Teaching's (ILT) Accreditation Scheme! I find myself thinking about teaching from the point of view of a learner – now that is a jolly good thing to do! If learning technologists could only experience what it is like to be a learner then we could rid our institutions of a lot of poorly designed teaching materials. Few of us could learn from some of the CBL courseware I have seen demonstrated over the years. It does not matter if learning comes about as a result of an e-university interaction with some distant guru or a stop/start/continue task in a lecture. What matters is that as teachers we facilitate learning. To do so, we really need to make use of formative evaluation. Finally, I firmly believe that as learning technologists we should be prepared to advise our colleagues and senior managers (*sic*) to make more use of the formative assessment methods described in this book. What have we to lose? An easy life . . . ?

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#### Notes

<sup>1</sup>For a useful summary of assessment techniques, see A. H. Miller *et al.* (1998), *Student Assessment in Higher Education – A Handbook for Assessing Performance*, London: Kogan Page.

<sup>2</sup>See the oft quoted – but is it read? – D. Laurillard (1993), *Rethinking University Teaching, a Framework for the Effective Use of Educational Technology*, London: Routledge.

<sup>3</sup>See J. Cowan (1998), *On Becoming an Innovative University Teacher*, Milton Keynes: Open University Press – essential reading for any teacher, designer or developer of curriculum materials in higher or further education. Required reading prior to submitting any forms to ILT.

<sup>4</sup>See R. McAleese (1998), 'The knowledge arena as an extension to the concept map: reflection in action', *Interactive Learning Environments*, 6 (3), 251-72.

<sup>5</sup>I like the descriptive nature of the titles for the methods. In general they are most useful. However, Method 3.3, 'Observations - a method which depends on the assistance of a colleague', is almost pure Arthur Ransome. The 'Famous Two' need the assistance of a member of the rival gang to outwit the dreaded enemy. Read on ...!

<sup>6</sup>For those readers who like URLs - an excellent pointer is at <http://users.andara.com/~jnewman/Papers.html> [24/11/2000] - a conference dedicated to the late Donald Schon. Reflective practitioners are action researchers.

<sup>7</sup>For those readers who are mystified by this allusion, it comes from Barbara Falk, the doyenne of Australian staff developers, who told me many years ago: 'staff development is about making people scratch!'

<sup>8</sup>See J. Cowan (1998), *On Becoming an Innovative University Teacher*, SRHE and Open University Press, Buckingham, UK (ISBN: 0-335-9993-3).

**Gilly Salmon, *E-moderating - The Key to Teaching and Learning Online*, London: Kogan Page, 2000. ISBN: 0-7494-3110-5. Paperback, x +180 pages, £18.99.**

Increasingly, networked computer systems are being used as vehicles for delivering teaching and learning resources to groups of students who are located in many different geographical areas. These students might have widely different backgrounds, different interests and a significant range of learning styles, abilities and preferences. It is likely that the students and teachers involved in this type of educational delivery rarely, if ever, meet in a face-to-face context; they meet each other only in cyberspace. Naturally, the teaching tasks and skills needed to support online learners of this sort are very different from those needed in face-to-face situations. This book identifies many of the skills that an online tutor/teacher is likely to need to draw upon. It also discusses how these skills can be developed using online networked environments to provide appropriate training, resources and support. Within this book, the author uses the term 'e-moderating' to refer, collectively, to the various tasks and processes that online teachers and tutors need to use during the execution of their duties.

The material that makes up this book is

organized into two separate sections. The first of these (entitled 'Concepts and cases') is subdivided into six basic chapters. Collectively, these describe and discuss various issues and trends relating to online teaching activity using computer-mediated conferencing (CMC). The second part of the book presents a compendium of 'Resources for practitioners'. Together, the twenty-two items in this latter section of the book present a wide range of ancillary support material that would be a valuable asset for anyone who is going to become seriously involved in e-moderating activities. The material that is presented in this second part of the book is also carefully cross-linked with relevant sections in the first part - so that readers can find out more about, and expand upon, the various topics, issues and ideas presented by the author.

The first of the six chapters in Part 1 of the book performs a number of 'introductory' functions. For example, it starts off by explaining the background to, and meaning of, the term 'e-moderating'. This is done by means of a number of case studies taken both from the UK's Open University (OU) and from institutions that lie further afield, such as Monash University in Australia. The chapter then goes on to describe the basic nature of CMC software (with examples and illustrations of its educational applications) and the problems of attempting to 'cost out' its use. In my view, the author offers a very compelling example (taken from her own experience of OU training) of the potential cost benefits that can be obtained using this type of software within instructional settings.

In Chapter 2 the author introduces a basic model for the use of CMC in education and training. This is called the 'five-step' model. The theory upon which the model is based is grounded in research that was undertaken at the Open University Business School (OUBS). This involved analysing 3,000 CMC messages over a two-year period. These messages were sent by the students and staff involved in an OUBS MBA course. The five stages involved in the model are: access and motivation; online socialization; information exchange; knowledge construction; and development (based upon a constructivist approach to learning). At each stage of the model both technical support and e-moderating need to be provided in varying degrees; in addition, the level of interactivity (in terms of message exchanges) also varies from one stage to another. Techniques for using the

five-stage model of CMC are further explored in the second section of the book 'Resources for practitioners' (Section 7).

The third chapter of the book is called 'E-moderating qualities and roles'. It considers the basic knowledge and skills that are needed in order to become an e-moderator and uses various examples to explore and illustrate the roles that these online teachers play. The chapter starts off with a discussion of the nature of the core competencies that a successful e-moderator should possess. Some of the key issues that need to be considered are then briefly outlined. According to the author, the major goal of an e-moderator is 'meaning making' rather than content transmission. Indeed, she postulates that the main role of a CMC online tutor is to engage participants in an online conference so that the knowledge they construct is usable in new and different situations. Some useful examples of achieving this aim are then presented in the closing part of the chapter by means of three case studies. Two of these are taken from commercial settings (Quantas Airlines' Online College and Abacus Virtual College), while the third originates from the OU's Centre for Modern Languages.

Naturally, if teaching staff are to take on new roles as online e-moderators there is a need for them to be trained in the various techniques that are involved. This topic forms the substance of Chapter 4. Essentially, this chapter describes the steps involved in designing and developing a large-scale online training programme for e-moderators within the Open University's Business School. Like many of the other examples in the book, this case study is based on the use of SoftArc's FirstClass system. The training programme itself is mapped onto a set of six FirstClass sub-conferences called: 1. Welcome; 2. Induction; 3. Teaching; 4. Planning; 5. Horizons; and 6. Lifebelt. The first five of these levels of the online training programme are based upon the five-stage model of CMC that was described previously in Chapter 2. In essence, each of these sub-conferences represents a 'microworld' in which trainees can interact with each other and with the convenors of the training conference – as well as gaining experience with the conferencing software itself. The 'Lifebelt' sub-conference is used to provide a range of online help facilities (FAQs, help desk telephone numbers, and so on) for those who need additional help and assistance during the training conference. Some further ideas and

suggestions for the training of e-moderators are presented in the 'Resources for practitioners' part of the book (Section 9).

Chapter 5 is given to descriptions of various studies that are intended to understand participants' experiences with CMC. It uses case studies and examples to explore the needs of special groups of users – such as novices to computing and people with disabilities. A range of disabilities are covered including visual impairment, restricted mobility, blindness and deafness; although they are not mentioned in this chapter, dyslexic users are considered in Part 2 of the book (Section 4). Some of the other interesting topics that are covered in this chapter include: learning styles (based on Honey and Mumford's taxonomy) and how these can be accommodated in CMC; corporate training and development; gender considerations; and how to deal with 'lurkers'. An extremely important principle that comes across from this chapter is the need for participant induction. Indeed, the author recommends that 'induction for all is important, at least for the foreseeable future'.

In the final chapter of the book the author attempts to highlight and discuss a few key areas of future development that are likely to have an impact on the work of e-moderators. Some of the important topics that are discussed include: the changing education environment; the nature of learners and their requirements; assessment processes in CMC; technological driving forces and the implications of these developments for CMC software developments. In her conclusion to this chapter, the author suggests that 'e-moderating will become a key competitive advantage'. She goes on to suggest that 'the most successful teaching and learning organisations and associations will be those that understand, recruit, train, support and give free creative rein to their e-moderators while addressing the natural fears of loss of power and quality from traditional university faculty members'. I guess only time will tell if there is really any truth in this prediction!

As was mentioned previously, the second part of the book contains a collection of short prescriptive sections. Each one of these identifies and describes a topic or resource that most practitioners would find useful in one context or another. Examples of these resources include: how to choose a system for CMC; keeping e-moderating costs down; online participant induction; supporting and developing CMC

novices; using the five-stage model; training e-moderators; conferencing structures and housekeeping; and so on. Essentially, the material in this section provides a pool of resources that is often referenced by the various chapters in the first part of the book. Indeed, at the end of each chapter in Part 1, there is a list of cross-references to sections in Part 2 where useful extra supportive material can be found. The author acknowledges the fact that some of the Web references given in this second part of the book may be out of date by the time it actually gets to readers (p. 165, Section 21). She has therefore made available a Web site which she suggests readers should consult in order to check for changes (<http://loubs.open.ac.uk/e-moderating>). I tried this site but, sadly, could not find any trace of the URLs cited in the book – maybe none of them have changed?

Overall, I found this book very stimulating and one that I feel will be of value to anyone who wants to get involved in this forward-looking and exciting area of electronic teaching. Naturally, the nature of the skills involved in being an e-moderator are likely to change as new CMC tools become available. Bearing this in mind, this book does give some valuable insights into the types of development that are likely to take place. Because online teaching through computer networks is now becoming such an important technique (for use both with distance learners and with conventional campus-based students), the book should be applicable to a very broad audience.

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**Michelle Selinger and John Pearson (eds.),  
*Telematics in Education: Trends and Issues*,  
Amsterdam: Pergamon, 1999. ISBN: 0-08-042788-X. Hardback, 220 pages, 178.00 NLG.**

This book is a collection of twelve chapters, loosely grouped into two categories, 'Issues' and 'Trends' (also described as 'the implementation of telematics in different educational settings'). While the chapters are well written and reflective, I have reservations about the book for several reasons. These include the age of many of the chapters, the coherency of the chapters as a book, and the tendency to see telematics as synonymous with text-based computer-mediated communication.

In terms of the age of the chapters, the editors note that the book was to be a follow-up to a

previous book (Veen, Collis, Vries, and Vogelzang, 1994) that had been started up with one of these authors (Veen) as the co-editor. However, when it became clear that Veen no longer had time to devote to the book, the current editors, 'left with a few chapters' (p. xi), decided to pick and finish the project. It seems from looking at the chapters that in fact several of them may have been from around 1995 and 1996, and others from the intervening years. (This can be seen in the references in many of the chapters; predominately prior to 1996 with maybe one or two new references.) While wise insights from 1995 are not necessarily out of date in 1999 (the publication year of the book), the rapid change in experience base and in possibilities of technology as well as the extensive literature that has accumulated in the last five years, makes it less than satisfying to read 'old' material. If the authors had updated the old material to indicate what they and the field had learned in the intervening period, that would be another story. But that is not done. And the unsuspecting reader who assumes that this is a new book and therefore up to date, is not alerted to the variations in time of a number of the chapters.

Perhaps this timeliness aspect comes out most clearly in the definition of telematics used by the editors in their preface. They say that 'telematics means all forms of computer-mediated communications' in the way they use the term in the book, yet such a definition is limited in terms of what is now relatively commonplace in terms of integrated Web-based tools, resources and systems. Telematics is the combination of information technologies with communication technologies. Telematics in education today is just as much about information handling and management, about support for collaborative tasks (which involves more than communication about those tasks), about access to distributed databases, and about interactivity and multimedia as it is about text-based person-to-person communication. Yet, it is only the latter which is the focus of many of the chapters of the book. This would be all right in itself, but then the title of the book should be more focused, and the chapters should be chosen to be more in relationship with each other. In summary, I feel rather as if I have read a somewhat random assortment of papers from the years between 1995 and 1998; this does not give me the feeling of a book.

Given these comments, what about the chapters? The first chapter, 'Problematics in telematics' is a

particularly weak choice to start the book in terms of its experience base – small groups of students using early CMC facilities (bulletin-board type services) in the period of (it seems from the text) 1991–5. The author makes reasonable and familiar points about success factors in CMC, but bases the chapter on the assumption that ‘there is a dearth of educational research to guide practice’. I would not have said in 1995 that this was the case, and I certainly would not say it now. How familiar this author is with literature beyond 1992 cannot be told from either her text or the reference list.

The second chapter, ‘Linking different types of knowledge in professional education and training: the potential of electronic communication’, is more conceptual than the first and thus less affected by the timeliness problem, and has a wider range of references in both time and scope. However, what I feel is constraining about the chapter is the apparent assumption that it is only or primarily by CMC that the linkage named in the title of the chapter occurs. The much more complex interactions among professionals that involve sharing and reuse of resources and collaboration on authentic tasks that are now the most powerful aspect of linking professional education with training are not represented in the chapter. Again, the feeling is that ‘telematics’ (according to these authors) means people writing text messages to each other. And again, this is a limited view of what is now common practice.

In contrast, although the references in Chapter 3, ‘Pedagogic roles and dynamics in telematics environments’, are generally before 1998, the material itself is conceptually timely (and is not based only on CMC). The chapter is structured around questions such as ‘Do computers change classroom dynamics?’ and ‘What would it take to create classrooms where active learning is valued?’ But the relationship of this chapter, focused on teachers in the school setting, to the other chapters in the book is only at a very general level. The feeling of lack of cohesion of the book begins here.

Chapter 4 would have been better placed following Chapter 2, because it also is a conceptual article, probably written in about 1995, that goes no further than ‘online discussions’ in terms of telematics. The chapter is abstract (with perspectives such as ‘Technology is, in other words, inherently ideological, and all technological decisions in educational settings are, thus,

inherently political’ (Selfe, 1992; quoted on p. 51). While the tone and style of the chapter are most like Chapter 2, the fit of the chapter with the rest of the book is another example of the lack of coherency between the chapters. It just seems to be there.

Chapter 5 (‘Pedagogical foundations of open learning environments’) is more like Chapter 3 – a good conceptual overview that brings more to focus than only text-based messaging. However, the chapter deals more with the concept of open learning than it does with the topic of ‘telematics in education’ (the two are not necessarily overlapping). The reader choosing this book for an up-to-date overview of telematics in education will not really find it in this chapter either.

Chapter 6 (‘Techniques for analysing online interaction’) is another of the apparently ‘old’ CMC articles, conceptually focused on topics such as Speech Act Theory and ‘other applications of linguistic theory to CMC analysis’. The chapter is narrow in its focus, highly academic in its tone, and it does not seem to me to represent either trends or issues (or the general topic of telematics in education).

Chapters 7 and 8 are more satisfying in terms of applicability and being up-to-date. Chapter 7 (‘Firmer links between telematics, multiculturalism and foreign language learning methodology’) would be more satisfying, however, if there were another chapter in the book about a specific learning domain. Otherwise, why only one chapter about an application area? Why foreign language learning instead of mathematics, or history, or physics, for example? Again the feeling is of a collection of chapters with no real cohesiveness. Chapter 8 is specifically about the Web (‘Different roles the Web can play’). It is a nice overview based on some early experiences with Web use in the author’s university-level courses. However, it too gives the feeling of being written in about 1997; not a problem in itself if the author or editors would make an explicit comment on what they have learned since then, also from the experiences of others.

The next chapter is perhaps the most jarringly out of place in the book – in terms of its fit with the rest of the chapters. Its title is ‘Implementing the Internet in schools: a case study of Northern Ireland’. Suddenly, we are at a very different level and type of perspective than what has come before in the book. While it is interesting to read about the Northern Ireland experience, I wonder if the readers who will respond to the theoretical

CMC materials in Chapters 2, 4 and 6, for example, will feel that this chapter belongs in the same book? In this chapter, it is interesting that CMC is not the dominant focus as it is in the chapters that were probably written in an earlier period. This is logical, in that CMC is no longer the dominant focus of telematics use in education.

Chapter 10 is also strange in this collection. It is titled 'Urban cyberspace initiatives: applying social constructivism theory to design, pedagogy, technology and sustainability in urban centers'. It is rather hard to summarize this chapter. Is it describing a project? A conceptual framework? A theoretical vision? All of these? The authors are apparently describing the conceptual framework that they have used in a number of projects relating to technology-based programmes in urban settings. Subheadings include 'Epistemologic inclusionism as a service modality' and 'Diversity, demographics and university service in the inner city'. While the latter, particularly, is a worthy topic, the relationship to telematics in education is not so easy to find. The sub-projects described involve many technologies, only some of which are telematics. Some of the sub-projects were in early periods, such as 1992-4. The trends and emerging issues sections at the end of the chapter are timely and valuable; it is just that the relationship of this chapter to the book, its title, and the other chapters is not so clear.

I am glad of the last two chapters, 'Desktop video-conferencing: telematic learning' and 'The future of learning in virtual reality environments', in that they at least bring in more of the possibilities of 1999 telematics in education. The desktop video conferencing chapter also appears to be several years old, however, and says nothing about linking video conferencing with other functionality in a Web environment, or the educational possibilities of the reuse of video conferencing materials as video on demand. The last chapter, about virtual reality, is the sort of chapter I expected to find throughout the book: up to date, with new insights, and fitting the title *Telematics in Education: Trends and Issues*.

Thus, in summary, perhaps my view is biased because I expect a book with a certain title to present up-to-date and cohesively organized material relating to that title. While most of the individual chapters, as chapters read in isolation, have interesting points, the lack of direct acknowledgement of the time and experience

upon which each is based forces the reader to wonder with each chapter why the chapter is here and if there could have been others, more up to date, which would better represent the promise made by the title of the book. The editors' interest is clearly in text-based computer-mediated communication. It would have been better to keep the chapters and title focused on that theme rather than the mixture of topics and old and new technologies that are now represented.

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**Sally Brown, Phil Race and Joanna Bull,**  
*Computer-assisted Assessment in Higher Education*, London: Kogan Page, 1999. ISBN: 0-7494-3035-4. Paperback, xii+205 pages, £19.99.

The potential of Computer-Assisted Assessment (CAA) is increasingly attracting the attention of staff in higher education and this latest addition to SEDA's Staff and Educational Development Series provides a useful overview to most, but perhaps not all, of the major issues surrounding CAA. The focus of the book is very much on the theme of how the computer-assisted delivery of multiple-choice questions (MCQs) can be exploited in the learning process. To be fair to the authors, it is probably true to say that most contemporary CAA is concerned with the delivery of MCQs. However, it is a little disappointing that in a collection such as this the issue of using simulations in CAA is really only touched upon in one essay and that there is little or no consideration of the role of multimedia or of the role that computers might play in providing integrated feedback for essay-style assessments. Nonetheless, readers will find much that is of interest and value.

The book is a collection of nineteen papers on various aspects of CAA and these are grouped together into three sections: 'Pragmatics and practicalities of CAA', 'Using CAA for formative assessment', and 'Learning from experience'. In the words of the editors 'this book . . . starts with lecturers' words about *why it can't be done* and ends with students' words about *what happened when it was done*' (p. 5). In between it reports on practical experiments in CAA, on examples of good practice, on problematic issues surrounding CAA and on the experiences of those who have encountered CAA whether as students or as tutors. The book also has a very useful introduction and potential readers would

be well advised to read it with some care. In less than four pages it briefly summarizes and introduces all the contributions to the book and so provides a valuable guide to what is available within its pages.

The first, and largest, section of the book presents a range of practical considerations that arise as one approaches CAA. Indeed, the first chapter by Jen Harvey and Nora Mogey is essentially a set of frequently asked and often negative questions. Their responses to these FAQs are rather more encouraging and point the way to many of the fuller discussions later in this section and elsewhere in the book. These include issues such as effective question design (Norma Pritchett), and questions of security (Dave Whittington) and fairness (Mark Brosnan *inter alia*). Also, of particular interest is the automatic generation of tests (M. Thelwall) from, for example, a database, even a national database, of questions (J. H. Sims Williams *et al.*).

Security emerges as a major issue throughout the first section and not simply as a question of how to insure data integrity or protect against dishonesty. It also touches upon the question of what it means to undertake CAA in exam conditions. This is a question of both security and fairness; the more especially if the CAA is undertaken at a distance.

Interestingly, the second section's emphasis on formative assessment might almost be seen as a response to some of the security questions. Certainly many users of CAA steer clear of using it for summative assessment precisely because of security problems. However, the authors in this section are more concerned with the use of CAA to enhance the formative experience. Implicit, and sometimes explicit, in this discussion is the view that too often assessment is seen by staff and students alike in a purely summative way. It is seen as demonstrating what has been learned rather than as contributing to the learning process. The argument here is that CAA can be exploited to provide a highly personalized opportunity to practice and, as such, more usefully integrates assessment into the whole learning process.

As its title, 'Learning from experience', suggests the third section is largely devoted to reporting on specific implementations of QAA and how they were received by both staff and students. The contribution by Roy Seden considers the role of computer simulations in CAA and another, by Myles Danson, reminds us that

CAA does not actually have to be delivered by computers. Optical Mark Reading (OMR) has been around for many years and a number of institutions have achieved very considerable efficiency gains by exploiting this technology.

Finally, Joanna Bull's brief conclusion looks forward and identifies 'four main issues that need to be considered and integrated, with each other and with existing structures and systems, in order to effectively utilise CAA' (p. 193). They are: the evolution of an appropriate pedagogy for CAA; suitable management of the whole process of assessment of which CAA is a part; appropriate quality assurance and staff development; and organizational and strategic integration. In short, she recognizes that developing the full potential of CAA is likely to contribute significantly to a sea change in the way in which higher education is conducted.

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**Ray McAleese (ed.), *Hypertext: Theory into Practice*, 2nd edn, Exeter, UK: Intellect Books, 1999. ISBN: 1-871516-28-5. Paperback, xvi+144 pages, £14.95.**

McAleese points out that during the Second World War a poster read 'Is your journey really necessary?' Many of us in the UK have had to consider just this question recently. As I write, the pickets have stopped blockading the oil refineries and we are looking forward to the return of normality to our lives. There is still the threat of further action which could bring the country to a halt.

But at the dawn of a new millennium, do we think about the 'journeys' we take on the Web? And do we know how to design our systems to help users make effective and efficient journeys? This book starts to ask questions of this sort.

This is the second edition of a book which introduced us to the notion of 'lost in hyperspace' and probably provided many people with an introduction to hypertext. It was first published in 1988 as an outcome of the first UK Hypertext Conference. As such, you may think that it is only of interest as a historical document. But what immediately struck me is that many of the questions being asked in the papers are still valid today.

Ray McAleese has written an extended preface and his style and prose drew me into the story of the book and the history of hypertext. He

describes hypertext as the 'grin of the Cheshire Cat. The cat is long dead and transmogrified. However, its simple and tantalising grin permeates almost every aspect of computing – from home shopping to computer-supported distance learning, or support groups for the bereaved to interactive multi-player games'. He revisits all the chapters and provides informative and honest reflections on their current status.

The first chapter is McAleese's original overview of the book in which he describes some common themes and some questions for the reader. In the second chapter, he discusses the difference between navigation and browsing and describes a study of the strategies users use when working with different types of interface. In Chapter 3, Trigg and Suchman describe their experiences of using NoteCards for collaborative writing. Allinson and Hammond, in Chapter 4, describe the design, implementation and evaluation of a learning support environment and their use of a travel holiday metaphor to help the user. Chapter 5 by Baird and Percival describes the difficulties in designing Glasgow Online, a community information system aimed at a wide range of users. Cooke and Williams, in Chapter 6, describe the difficulties associated with designing large, screen-based documentation systems and how these can be integrated with paper-based systems. Chapter 7 by Edwards and Hardman describes a study into how readers of hypertext represent its structure. They discuss the implications of this for the design of hypertext and appropriate navigation tools. In Chapter 8, Harland describes his use of GuideTM to prototype a display design. Chapter 9 by McKnight, Richardson and Dillon presents hypertext from the perspective of the authors of a hypertext document and highlights the problems that they encounter in trying to define and label the links. Storrs, in Chapter 10, describes KANT, a knowledge analysis tool designed for civil servants to help them translate paper-based documents into hypertext. In Chapter 11, Duncan discusses how research on facet analysis can be used to design NoteCards systems which are effective for users. Kirby and Mayes conclude the book in Chapter 12 with a description of the routing system which was the basis of the design of StrathTutor in which the knowledge domain is separate from the instructional frames.

One issue which is visited repeatedly in the book is the use of metaphors for the ways in which people move through hypertext systems. We are

of course now all very familiar with the term surfing, but in the early 1980s, terms such as navigating, wandering, browsing and the metaphor of a journey were key. In Chapter 7, Edwards and Hardman discuss how users create cognitive representations of hypertext structures in the form of survey-type maps. How has the user changed over the past twelve years? Have we developed a better ability to make these sorts of maps? Or have we developed different skills?

So what are the questions that we are still asking today? I was struck by Trigg and Suchman in Chapter 3 who discuss how they adopt practice in the use of NoteCards for collaboration. They point out that their collaboration involves two kinds of conventions: those that already exist in their community, and those that they create within the particular environment. They conclude their chapter with: 'Perhaps the main lesson to be learned from our experience is the importance of supporting users' adaptation of the technology.' I think this is still the case.

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**John P. Wilson (ed.), *Human Resource Development: Learning and Training for Individuals and Organisations*, London: Kogan Page, 1999. ISBN: 0-7494-3050-8. Paperback, xxviii+531 pages, £24.95.**

This book contains an edited collection of twenty-four perspectives on learning, training and development (LTD) co-ordinated by John Wilson of Sheffield University. The book is arranged in six sections: the first explores the meaning of the terms and considers the strategic role of human resource development (HRD) in organizational development and how education and training can be used at a national level to encourage economic development. The next four sections are built around the traditional training cycle: identification of LTD needs; planning and design of LTD; delivering LTD; assessment and evaluation of LTD. The book concludes with a section exploring the broader issues of managing the HRD function.

This definitive handbook on HRD sets out 'to integrate both theory and practice within a virtuous circle'. The application of theory to practice is emphasized by the extensive use of case studies, a total of forty-five throughout the book. The case studies give an international flavour to the book. The strong academic input is balanced by many practitioners' perspectives on

adult education and training. These are provided by Richard Firth, Cheryl Hunt, Dominic Irvine, Richard Palmer, David Sawdon, John Shipton and Chris Wiltsher. Practitioner perspectives derive from a number of industrial sectors, including health care, management development, food, aerospace and engineering as well as from freelance consultants. The large number of contributions from staff at the University of Sheffield (Ian Andrews, Ron Chapman, Geoff Chivers, A. Ibarz, Jennifer Joy Matthews, Maggie McPherson, Janet Parr and John P. Wilson) reflects the book's growth out of the M.Ed. in Training and Development at the University of Sheffield. Additional contributions come from the Universities of: Sheffield Hallam (Colin Beard and Joan E. Keogh); De Montfort (Sue Balderson); Bradford (Alan Cattell and Pete Sayers); Warwick (Cathie Edwards); Bath (Rita Johnston); UMIST (Bland Tomkinson); and Nijmegen, The Netherlands (Rob Poell).

Section 1 includes six contributions and offers an introduction to LTD and its role in organization development. The first chapter, HRD (John P. Wilson), explores terms including training, education and development. The second, 'Strategy and training and development' (Sue Balderson), considers the strategic role of HRD. The third chapter discusses human resource management (John Shipton). Chapters 4 and 5, 'Organisational change' (Bland Tomkinson) and 'The learning organisation: a critical evaluation' (Rob Poell) investigate the role of HRD in organizational development. The final chapter, 'National economic development and human resource development' (John P. Wilson), discusses the integration of education and training and how they are used at a national level to encourage economic development.

Section 2 consists of three chapters. Chapter 7 (by Richard Palmer) explores the provision of information for learning interventions through the identification of organizational and individual training and development needs. Chapter 8 (Alan Cattell) looks at the use of performance management as a mechanism for specifying developmental requirements. Chapter 9 (by David Sawdon) considers the role of internal and external consultancy in the identification of training and development needs.

Section 3 includes four contributions: the first two of these, 'Fundamentals of adult learning' (Chris Wiltsher) and 'The adult learning: theory into practice' (by Janet Parr), consider how

adults learn and how the environment influences the learning process. Cheryl Hunt provides a chapter on how to develop the skills to become a reflective practitioner as one aspect of professional development. 'Workplace diversity and training – more than fine words' (Joan E. Keogh) investigates the issue of diversity.

Section 4 is made up of five sections. The first of these, by Geoff Chivers, deals with 'Open, distance and flexible learning'. Colin Beard and Maggie McPherson then go on to consider the design and use of group-based training methods in Chapter 15 and (in reverse author order) individualized training methods in Chapter 16. In the next section, A. Ibarz explores the issues of language and culture in HRD and Dominic Irvine and Colin Beard complete Section 4 with a contribution about problems, paradoxes and perspectives on management training and development.

Section 5 has three contributions covering: different contemporary approaches to the evaluation and assessment of training (Cathie Edwards); total quality training and HRD (Ron Chapman and John P. Wilson) and how to benchmark the quality of training; and accounting for the HRD function through balancing cost and value (Chris Wiltsher).

Section 6 also has three contributions. The first of these, 'Managing the HRD functions' (Pete Sayers), looks at the broader issues of managing HRD. The second part, 'Marketing HRD' (Jennifer Joy-Matthews, Ian Andrews and Richard Firth), explores internal and external marketing issues. Finally, 'Supporting learning in the third millennium' (Rita Johnson) speculates on the future of HRD.

Each of the chapters in this book has an extensive bibliography. These are collated at the end of the book into an extensive resource, which while current will be extremely useful for HRD professionals. This is a comprehensive collection of theory and practice issues relating to HRD which can be read in its entirety, in sections or, using the index, can be dipped into according to specific needs. This book makes interesting reading and will be an extremely useful addition to the bookshelf of any HRD professional. Throughout the book the political issue of recognizing humans as resources and exploiting them through HRD makes an interesting tension.

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**Jennifer Moon, *Learning Journal: A Handbook for Academics, Students and Professional Development*, London: Kogan Page, 1999. ISBN 0-7494-3045-1. Paperback, vii+145 pages, £15.99.**

The reader might think it is curious that a book which appears to be rooted in the 'soft' social sciences is worthy of review in this learning technology journal. Not so; learning technology is a 'broad kirk'. Learning technology is only superficially about the artefacts of communications and information technology (CIT). At the heart of learning technology is a rationale for the design of learning experiences using one or more frameworks that explain learning. Emerging in the growth of the discipline is the issue of the 'experience of learning'. Too little is really known about what it is like to be a learner. The design of innovative CIT environments is all too often seen from the perspective of the teacher/technologist or worse still, what CIT will permit. Further, very little account is taken of what comprises the experiences or events of learning programmes. It is fashionable for course designers to make claims that a module is 'intended to encourage exchange of experience, exchange of ideas, critical reflection and evaluation of current experience and practice, and to lay the groundwork for continuing learning and reflection'.<sup>1</sup> It appears that the approach adopted by many learning technologists is to expect and require learners to apply what they learn across different situations and to bring to their study a raft of experiences that produce an instantiation of taught principles. This book by Jenny Moon (and its companion volume<sup>2</sup>) are timely as they provide the philosophy and countless examples for the recording of experience in learning journals. So what is a 'learning journal'? Learning journals, reflection journals, personal portfolios and learning logbooks are a form of recording the experience or experiences of learning. Such journals are common in the professions with many accrediting bodies requiring graduates to maintain a record of professional development as part of their accreditation process. Learning journals record personal stories written by learners who find it useful to record their thinking, but why?

The journal is a key part of the Experiential Learning Framework popularized by David Kolb<sup>3</sup> and more often referred to than understood by countless learning technologists and instructional designers. Their uses, as Moon

points out, are extensive: for example, to record experience, to facilitate learning, to support understanding and the representation of understanding, and probably most important, amongst a list of eighteen uses, to encourage meta-cognition. Recording of thinking about learning and the experiences of learning create a deeper sense of being a learner. Quite a claim - but reflection is a ubiquitous concept. One can trace the importance of reflection and experiences in learning back to Aristotle. In the seventeenth century Hobbes wrote 'all knowledge is gained through experiences'.<sup>4</sup> Reflection on experiences is important in problem-based learning. For example, the importance of reflection in response to puzzling situations is crucial to Dewey.<sup>5</sup>

So, the learning journal is a vehicle for reflection. But, what is reflection? While almost every one thinks, the act of reflection *in action*, *on action* and *for action*<sup>6</sup> is a meta-cognitive skill that bridges the gap between learning experiences and conceptualization or theory-building. Reflection in a journal is a written record of private conversation that makes sense of events as they occur. Reflection and journalling are well described in a number of recent books and the reader is advised to consult the second Moon book or one of the others in the Endnote to this review.<sup>7</sup>

What then is the place for such a book in a learning technologist's bookshelf? The book is more than a cookbook; rather it is a self-instructional manual for the designer. However, I am not sure if this book is essential or desirable reading for the *average* learner. It is worth dwelling on this point for a moment before saying why the book has a place on the designer's desktop not bookshelf! The most immediate metaphor that comes to mind is that of the centipede who, having discovered it had 100 legs immediately fell over. It is not so important for the learner to know why they might reflect - rather it is more important to be able to reflect. Reflection is a competence. Of course, it is clear that the actualized learner will want to know what learning is and how to make the most of it. I feel that this book and certainly its companion may be too much of a mirror to the unsteady learner to serve any real value. Others may disagree. This book is for the designer who should use it to inform their instructional strategies. It is a manual for the learning technologist.

To begin with, the book offers six useful chapters that introduce the art of journal writing and its subsequent effect on learning and an extensive treatment of the uses and possibilities for journalling. The book suggests that learning experiences can be captured using whatever design paradigm is chosen. There is an important chapter (Chapter 7) that explains how to start a journal. Writer's block is a common problem for journalists. In presenting the task of journalling to the learner, the designer needs to offer opportunities and exemplars. Good design needs to allow learners the opportunity to draw on experience as well as generalizing from experiences. Exemplars suggest the boundaries for journalling. The most difficult job the designer encounters is to provide sufficient examples of how to journal. Chapters 8 and 9 offer a good range of possibilities. The last chapter raises the issue that the journal is not an end in itself, rather it is another opportunity to facilitate learning. Reflection, like so much else in study skills, can be acquired at a variety of different levels of competence. The reflective journalist is on a learning curve with regard to learning as well as domain-specific skills. So far I have not mentioned Chapter 7. Moon jumps where others fear to tread. There is a considerable literature on the ethics and 'practicks' of assessing journals. Some argue that it is both unethical and impractical to make judgements of what are private journal entries. Both formative and summative assessment of reflection journals have been implemented. It is too complex an issue to deal with here – rather, the reader is recommended to think of self-assessment for learners as another design strategy.<sup>8</sup> Read Chapter 7 with care as it may change your attitude to assessment.

The book is easy to read. It is well referenced. There is a short index. With only 133 pages of text, the book is not cheap at £15.99. So, is it a book for the bookshelf in the library or, worse still, for the bookshelf in the bookshop – or, is it for the desktop? I use this book myself. I have

used it to source ideas on how to introduce journalling. I have used it to stimulate my thinking about assessment. I have used it to comfort me when I have decided to implement journalling in a course. It is certainly a text that learning technologists should use. It is for the desktop; not only does it offer comfort and reassurance when reflecting for accreditation by ILT, it offers practical examples of how to make instructional design more effective in order to precipitate learning in students.

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#### Notes

<sup>1</sup>Taken from a descriptor from a masters degree module taught by a university.

<sup>2</sup>J. Moon (1999), *Reflection in Learning and Professional Development: Theory and Practice*, London: Kogan Page.

<sup>3</sup>D. A. Kolb (1984), *Experiential Learning: Experience as the Source of Learning and Development*, New Jersey: Prentice Hall.

<sup>4</sup>T. Hobbes (1651), *Leviathan, or, The Matter, Forme and Power of a Common-Wealth – Ecclesiasticall and Civill*, London: Andrew Crooke (reproduced in C. B. Macpherson (ed.) (1969), *Hobbes – Leviathan*, London: Penguin Books).

<sup>5</sup>F. Dewey (1933), *How We Think*, Boston: Heath & Co.

<sup>6</sup>J. Cowan (1998), *On Becoming an Innovative University Teacher*, SRHE/ Open University Press.

<sup>7</sup>For example, D. Boud, R. Keogh and D. Walker (1985), *Reflection: Turning Experience into Learning*, London: Kogan Page; M. Eraut (1994), *Developing Professional Knowledge and Competence*, Brighton: Falmer Press; D. Schon (1983), *The Reflective Practitioner*, San Francisco: Jossey-Bass.

<sup>8</sup>D. Boud (1992), 'The use of self-assessment schedules in negotiated learning', *Studies in Higher Education*, 17 (2), 185–200.