BOOK REVIEW

Diana Laurillard

Rethinking University Teaching: A Framework for the Effective Use of Educational Technology

Routledge, London, *1993*

284 pages. $29.95

Available from The Law Book Company

Diana Laurillard's *Rethinking University Teaching: A Framework for the Effective Use of Educational Technology* is an important book. At a time when questions of quality are coming to the fore in higher education, this book directly addresses how technology can be used to enhance the quality of teaching and learning. As in most fields of university teaching, legal educators are making increasing use of technology not only to overcome logistical problems, but to actually teach more students better. In my own country of Australia, workshops for law teachers now invariably include a component on the use of technology, and in this year alone two national legal education conferences have been held to consider educational technology and computer assisted legal education. This experience is no doubt echoed worldwide. Since much technology is applied in a theoretical vacuum, any work which promises a coherent educational framework for the use of technology is likely to represent a valuable contribution.

Rethinking University Teaching consists of three distinct but tightly integrated parts in which Laurillard first establishes the underlying elements of student learning and hence of teaching, analyses a range of media according to these elements, and then, again on the basis of these elements, presents a systematic approach to media design.

Part I: What students need from educational technology creates the theoretical structure on which the whole work depends. Each chapter in Part I is a concentrated discussion of a key theme, from which Laurillard systematically builds to a thoroughly argued conclusion. This part begins with an acceptance of the now widely acknowledged conception of teaching as "making learning possible", and proceeds, through an overview and critique of the notion of "situated learning", to a conception of academic learning as having a "second-order" character. That is, academic learning is only partly about a student's direct experience of the world, and largely about the student's interaction with the reflections of others on their experience. Thus learning is about "percepts" (direct perception of the world) as well as "precepts" (the conclusions drawn by others, such as teachers and textbook authors, which are then presented to students). This is a useful distinction to make in the context of teaching law, though the terminology is awkward and the teaching of "precepts" has been vehemently and articulately rejected by such critics of orthodox education as Paulo Friere.

Following in the phenomenographic footsteps of Marton, Säljö, Dahlgren, Ramsden and others, Laurillard sees the essence of student learning as coming to an accepted understanding of a subject's underlying conceptions. Teaching therefore involves finding out what misconceptions are held by students, challenging these, and helping students develop the required conceptions. This process is related to both the student's stage of intellectual and ethical development (as defined by Perry), and their conceptions of learning (which Laurillard terms their "epistemology"). This view of learning as a change in conceptions leads to an understanding of learning based on five interrelated steps or activities in which students must engage for learning to occur. To use Laurillard's own terminology, these steps require students to:

1   "apprehend the structure of the discourse" — this includes relating evidence to argument and

structuring content into a coherent whole;

2   "integrate the sign with the signified — this involves learning to express underlying meanings in accepted language;

3   "act on the world and on descriptions of the world" — applying theory to practice;

4   use feedback; and

5   reflect on the cycle of goal-action-feedback.

By now it should be possible to see the richness, value, limitations and even frustrations associated with this book. The richness and value arise because, from within a phenomenographic framework, Laurillard has generated an accurate, appealing, and apparently practical guide to teaching that can be readily applied to a range of media. The limitations arise from the fact that the framework is exclusively phenomenographic — no attempt is made to acknowledge or include any other perspectives with which readers may be familiar, and in fact Laurillard is unfortunately dismissive of widely respected theorists from the well established fields of instructional design and instructional psychology. The frustrations arise from the complexity of ideas and the plethora of jargon which the reader is required to master in order to follow Laurillard's argument and appreciate her conclusions. As well as the terms mentioned above, in Part I the reader must negotiate "non-dualistic epistemology", "deep approach", "object-level activities", and "outcome spaces" — all terms which are full of meaning but, being left undefined by Laurillard, are likely to intimidate or even thwart the average law teacher.

For the reader who successfully negotiates Part I, **Part II Analysing teaching media** is an excellent analysis of the uses and limitations of specific media, helpfully categorised as audio-visual (including lectures, print, video); hypermedia (hypertext and non-interactive multi-media); interactive media (simulations, microworlds, modelling); adaptive media (tutorial programs, tutorial simulations, tutoring systems) and discursive media (audio-, video-, and computer-conferencing). Laurillard's analysis of each medium in terms of a twelve-stage framework (elaborated from the five steps listed above) allows the reader to readily see how extremely useful some media can be and how particular media need to be integrated with other teaching methods. This framework identifies the following sequence of activities which Laurillard sees as necessary to complete the learning process:

1   Teacher describes conception

2   Student describes conception

3   Teacher redescribes in light of student's conception or action

4   Student redescribes in light of teacher's redescription or student's action

5   Teacher can adapt task goal in light of student's description or action

6   Teacher sets task goal

7   Student acts to achieve task goal

8   Teacher sets up world to give intrinsic feedback on actions

9   Student modifies action in light of feedback on action

10   Student adapts actions in light of teacher's description or student's redescription

11   Student reflects on interaction to modify redescription

12   Teacher reflects on student's action to modify redescription.

It is particularly reassuring to note that the "adaptive media" of tutoring systems and tutoring simulations are able to facilitate all twelve steps. These particular media, with their ability to "adapt" to the individual responses of students, and now increasingly incorporating video, sound and other effects (ie, becoming truly "interactive multi-media"), are coming to dominate new programs in computer-based legal education. Laurillard's analysis strongly supports this trend.

Part III The design methodology uses the twelve-step framework as the basis of a template for the design of teaching, presents a number of applied examples, deduces practical implications for interface design, and provides extensive advice on creating an optimum teaching and learning environment in which students will use and benefit from programs. This part presents a blueprint for the organisational infrastructure required to ensure a high quality of teaching and learning based on technology. This constitutes an extensive and excellent checklist for teachers, administrators and policy makers alike and should be read and used by all three.

Laurillard states her overall purpose as being "to offer a way of thinking about teaching and the

introduction of media that is informed by a more elaborated understanding of what students do when they learn" (8). This is a timely and commendable undertaking, the importance of which cannot be overestimated and she has achieved her goal in a very thorough, coherent and integrated way that demonstrates the highest commitment to educational scholarship. However, no review could ignore some of the significant difficulties contained in this book. The most serious of these lies in its conceptual complexity. Laurillard makes no concessions to the reader unfamiliar with educational literature in general or the literature of phenomenographic studies in particular. Consequently, the book not merely defies superficial reading (which is not a bad thing), but demands a knowledge of terms and issues which few legal (or other) academics are likely to have, and a determination to come to terms with a complex and sustained argument that the casual, or even the quite interested, reader may not have. As a result, the readership of this important work is likely to be limited.

A lesser but still notable difficultly lies in the use of examples, with which the book is replete. In a work such as this, examples are an essential concretisation of abstract concepts; they can often make clear what would otherwise be only half-perceived. Laurillard's examples are, of necessity, discipline-specific and therefore concerned with concepts and terminology which will be foreign to those outside the disciplines dealt with in each example. As a result, some important illustrations of principles are quite difficult to follow. Interestingly for a book on "the effective use of educational technology", many of the examples used are not drawn from technological applications.

Finally, the book would have benefited from a firmer use of the editorial pencil. As well as the unexplained jargon noted above, the book has several unclear internal references and critical ideas are introduced without any indication of their importance to the author's argument.

These difficulties notwithstanding, *Rethinking University Teaching* is an important and undoubtedly successful book which seems likely to remain for some time an essential point of reference for both theorists and practitioners working in the fields of higher education and educational technology. Legal educators who are currently making significant use of educational technology, or those who are planning to do so, would be well advised to read it.

Gordon Joughin
Faculty of Law
Queensland University of Technology