Introduction: As we may learn...

This special edition of the journal concerns web-based teaching and learning initiatives. By any measure of adoption, the world-wide web has been astonishingly successful. More users are using it faster than any other technology in human history. Within the domain of law, the amount of resources present on the web is bewilderingly huge. It is being used to an ever greater extent in teaching and learning within campus-based universities, and internet-based universities are now seen as possible lucrative extensions of the knowledge industry within higher education. Cardean, Unext, University of Phoenix Online, Scottish Knowledge, HEFCE’s recent statements on the eUniversity and many other collaborations are evidence that universities are taking seriously the fiscal potential of both web-based and resource-based learning.1

This is evident, too, in the reports that investigate the distance-learning potential of the web beyond universities. Documents such as Morgan Keegan’s *E-learning: The Engine of the Knowledge Economy*, or Merrill Lynch’s *The Knowledge Web* or the Bank of America’s *The e-Bang Theory* show that corporations are very interested indeed in the use to which the web can be put for education and training.2 These and many other reports describe how we are at a hinge in the adoption of the new technologies. In such situations, it is important to stop and look around at what is being achieved, how it was brought about, and what it signifies for the future.

The felt need to reflect on changes in the technology of reading and writing is not limited to our own times, of course; and it is useful in this regard to take a broad cultural view of the changes within the technologies of communication and learning. In his study of orality and literacy in early German texts Dennis Green points out that in 1471 Guillaume Fichet, reflecting on the technologies of reading and writing, divided them into three periods: that of the *calamus* or reed pen (classical antiquity), that of the *penna* or quill pen (medieval literacy) and that of the *aereae litterae*, the recently-developed ‘movable type’ (Green 1994, 1). He observes that Fichet’s divisions parallel the divisions of Walter J. Ong’s argument, developed more than half a millennia later, regarding the nature of communications shifts, and points out that both Fichet and Ong develop their arguments precisely because they write close to nodal points in the communications shift. We are writing, still, within such a shift. The changeover period in the fifteenth century from manuscript to print, in which print established itself as a major communications channel, extended across two generations. If we date the rise of electronic communications via hypertext not from Vannevar Bush’s prophetic article, ‘As We May Think’, but from the rise of the Internet, the growth of the PC and the development of hypertext applications in the late eighties and early nineties, we can see that we are still at the early years of development in the latest technology of literacy, namely the internet.

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1 For Cardean and Unext, see [http://www.unext.com](http://www.unext.com)
University of Phoenix Online: [http://onl.uophx.edu/info/index.asp?deg=](http://onl.uophx.edu/info/index.asp?deg=)
Scottish Knowledge: [http://www.scottishknowledge.com/home.cfm](http://www.scottishknowledge.com/home.cfm)
EUniversity: [http://www.hefce.ac.uk/Pubs/HEFCE/](http://www.hefce.ac.uk/Pubs/HEFCE/)

The Knowledge Web: [http://www.internettime.com/itimegroup/MOE1.PDF](http://www.internettime.com/itimegroup/MOE1.PDF)
Between the different writing and reading technologies of *volumen*, manuscript codex, printed book and electronic screen, it is axiomatic that we find it difficult to anticipate and cope with the problems and advantages of the new technology. There are two reasons why this is so: first, we tend to cast the future in the mould of the past, often for a variety of overt and hidden motives; and second, it is often difficult for us to understand at a practical level what might be termed the cognitive potential of any new technology. A good example of this is the relationship between manuscripts and books. It is well-known that the earliest books, that is, incunables, imitated the form of manuscripts. Printers copied the overall shape, letterforms (rubrics, incipits, large initials and illustrations), bindings and parchment sizes so that their books were sometimes mistaken for manuscripts. For this reason it was until recently assumed that printers simply imitated manuscripts either because they wanted to preserve the uniqueness of the manuscript (and also its high price), or else they imitated manuscripts simply because it was the only literate form available. But as Margaret Smith and others have pointed out, the concept of imitation does not do justice to the complexity of the relationship between late medieval manuscripts and incunables. By examining the ways in which printed texts appropriated the form and texture of manuscripts she came to the conclusion that printed books did not so much imitate as emulate manuscripts, and principally for economic reasons (Smith 1989, 23-43; 25).

The distinction between emulation and imitation is narrow, but it is important to the way in which printers perceived the legacy of the manuscript, and how they used this in order to articulate the concepts of information linkage and hierarchy within the text. Thus, rubrication was left to scribes to add by hand to printed texts not merely because it was difficult to print red text, and the cost-effectiveness of the process did not justify the attempt; but because red text was an integral part of the reading schemata in late medieval texts. It was used in decoration, and for functions such as the initial strokes in capitals ‘headings, text-, chapter- and sub-division beginnings, lemmata and references to authorities’ (37). If a genre which had hitherto appeared with rubrication as an integral part of its meaning structures suddenly appeared without red, it would have seemed highly odd to its readers. Printers thus were not so much following rubrication *per se* as the conventions by which meaning was created and ordered within the text. It took some time for printed books to develop a similar set of conventions appropriate to its form which would be recognised by a book’s readers: the evolution of the *incipit*, or title-phrase, into the title-page (almost entirely unknown in manuscripts) is a good instance of this.3

Smith’s careful historical scholarship has unearthed the complexities of one small aspect of the change from one technology to another. In the field of legal education we require similar levels of educational and communications scholarship and attentiveness to detail, in order to distinguish how the new technologies of the web and ICT generally are affecting teaching learning and assessment within our discipline. At this early stage, of course, it is impossible to give a definitive statement of how this is happening. What we can do, though, is give snapshots of how the web is changing legal education, and what happens when that change occurs. There are many questions to be answered. Does the organisation of our teaching methods on the web emulate or imitate more traditional media, or seek new goals? What does the web enable? Which approaches does it support? Which aspects of earlier educational practices and technologies (books, lectures,  

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3 Smith, pp.35-6. See, for example, the first page of Alciati’s *De Verborum Significatione*, reproduced at figs 4 & 6, pp.44 & 46 in Maclean 1992, discussed at 1.4.3, pp.37-8
coursework assignments, assessment) does it inhibit or alter? How do successful web discussion forums advance student learning and understanding? How do students structure the learning they take from asynchronous communications, and how does this differ from the ways that they structure their learning in tutorials and lectures? Does ICT facilitate learning in some sub-disciplines in law more than in others, and if so, why?

And of course there is the greater question of whether our students are learning more through the use of web-based technologies – a point that is crucial when bearing in mind the heavy cost of infrastructure, hardware and software. Quantification of learning is notoriously difficult; and there are no straightforward answers. What is clear, though, as the research of Hiltz et al (2000) and many others is asserting, is that the medium of the web can significantly alter the nature of individual learning patterns, as well as teaching resources and teaching practices.

Just how this is happening is the subject of this special issue. The articles and reports collected here are international representatives of a wide range of relevant topics. They are a response to a call that went out in late 2000 for papers that would appear as either full articles or reports. In the initial call potential contributors were asked to consider the following issues relevant to this general topic:

1. using the web in teaching and learning specific subjects in the curriculum
2. teaching and learning legal skills within a web context (either in undergraduate or professional programmes)
3. distance and open learning methods and the web
4. how the new environment changes teaching and learning methods, eg in culture, pedagogical design, forms of collaborative learning
5. the place of legal learning in the new HE partnerships being formed around the web.

The initial deadline for proposals was 31 March 2001. A total of 14 proposals were received, from which eight were accepted, and authors were requested to write full papers for July 1 deadline. Thereafter, the papers were read and commented upon by a referee, and returned to the editor. The referee’s comments regarding suitability of papers were accepted by the editor. The articles and reports within this special edition were all revised by authors to take account of the referee’s recommendations.

We start with a prototype web-based expert system that is representative of much of the significant progress made in such systems of late. The system is designed primarily for practitioners, but as Duguid, Edwards and Kingston point out, it can be used in teaching & learning, too. The possibilities of such a web-based system substantially increase the use of the web as an educational system of instruction.

Goldman and Kaufman present us with a wireless law school where resources are structured to prevent ‘cognitive overload’, and where web-based tutorials are linked to graded assignments and electronic textbooks. A combination of rapid and flexible implementation, allied to careful student-centred pedagogics enabled the developers to improve the electronic environment relatively quickly. They report that within the classroom, computer technology has stimulated the use of other ICT such as document cameras and electronic whiteboards; and this in turn has provided variation in display methods that have served to support different learning styles. Their evaluation points up the difficulties of implementation, and their solutions reveal how important it is to understand ICT from a user-centred perspective, one
that takes account of as many as possible of the complex factors affecting user performance.

How the context of learning affects use of technology is the subject of Schafer's article. Using Watson's concept of legal transplants, his article focuses not only on an application of web-based learning, but also on the different approaches taken to legal education in Germany and in the UK. His paper thus outlines the reasons why web-based learning takes the form that it does in different jurisdictions.

The next three papers, by Bloxham & Jones, Poustie and Maharg, show how the web can be used to simulate aspects of legal transactions. An essential element in these simulations is the construction of identities, and the creation of personae and roles. Poustie's students use the web as an invaluable resource in environmental law negotiations, and Bloxham & Jones employ the web as a highly flexible communicational medium. All three papers focus on web-based negotiations at three different levels in the law school (undergraduate years one and three, and postgraduate professional training). They thus present a comparison of the ways that the web can be used for skills-based legal education at different stages in the law school.

The two project reports present in this special issue give overviews of ongoing work, and personal experiences of using the web for teaching and learning. Both demonstrate the difficulties and rewards involved in web education. Young's report deals with a European-funded project in which the target users were professionals at work. By contrast, Richards takes us through the initial evolutions of a law school and law library website. Her approach is akin to that of ‘agile’ methodologies of development, more adaptive than the methodologies of web site building that are planned and implemented. As a result the method is people-oriented rather than process-oriented (Fowler, 2001). Her description of the ALICE tutorial system is a cautionary tale and proof of the complexities inherent in implementation of e-learning strategies.

In relative terms, the deadlines for this edition were fairly tight, but this reflects the fact that the applications and pedagogic designs implemented here, because they inhabit a milieu that moves at internet speed, have a correspondingly brief existence before they undergo substantial change. I would like to thank the authors for their efforts in meeting the short timelines, and the general editor, Ken Russell, for his patience as the project took shape.

References

