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The Internet: Is it a viable medium in the further education of legal professionals?

by Michael Lawrence-Slater

Abstract

While commerce and trade become more global in scope, there is a growing trend for organisations to re-engineer themselves to meet the challenges of the future. In some cases the effect of this has been the total deconstruction of the organisation, in others, the creation of 'virtual corporations' as a result of the formation of strategic alliances between numbers of organisations. (Naisbitt, 1994, pp.14, 18).

As organisations reconstruct themselves, it is reasonable to assume that the people within the organisations

will be required to display a similar degree of flexibility in respect of the skills they bring to the workplace. This organisationally driven imperative results in the prediction by some forecasters, including Handy (1989, pp.137-138, 168), that most people will have to adapt to the prospect of continuing their education throughout their lifetime in order that they may continue to participate in the workforce. Similarly, Ortner (1992, pp.151-152) states the need for a '... permanently learning society' to enable economic and technical development. Jones in

Sleepers, Wake, simply states the case for education as enabling social improvement where 'Educational qualifications have become rationing devices for entry into secure and satisfying employment...' (Jones, 1990, p.5); the converse presumably holds true, where a lack of suitable qualification could inhibit progress.

This paper seeks to determine to what extent the Internet may be used as a medium in fulfilling what is clearly developing as an ongoing, and growing educational requirement for the so-called 'knowledge' worker. In particular, it looks at how appropri-

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are the medium may be in the continuing education of Legal Professionals.

Introduction

There is little, or nothing, in the body of conventional literature which specifically describes the use of the Internet as an educational medium by the Legal Profession.

Following brief statements on the scope of the document and the terms used, this article examines the material available on the topic of distance education with particular attention being paid to areas where the Internet may have already been used as an educational medium. Having established the media and technology, there follows an outline description of the Internet and a detailed discussion of the relevant Internet facilities.

Finally, the article reviews the use of information technology by the legal profession and canvasses the Internet for a perspective on the extent to which the medium is already in use.

Scope

For the purposes of this paper, three basic assumptions are made. The first is that the term 'legal profession' is not limited to the fully qualified lawyer, e.g. barrister, solicitor or attorney, but includes all of the 'paralegal' professionals normally found on the staff of law firms. Secondly, it is assumed that the 'core' professional training e.g. University, Law School and, in the case of the paralegals, that the fundamental professional training has been completed. Finally, although there is no reason why the Internet may not be used in direct, face-to-face communication it is most likely that, given the nature of the medium, the most beneficial use

of the technique would be in enabling communication between geographically separated individuals, or groups of individuals.

Definitions

Whilst there are adequate definitions, including Fraase (1994), of the technical terms used, there are a number of terms for which conflicting, or ambiguous, definitions may be found within the literature. In the interests of consistency and to aid comprehensibility, the latter terms are defined as follows.

Knowledge & education

It is not the intention of this paper to enter into any philosophical argument as to the nature of knowledge or, to the intellectual processes involved in education. Rather, the paper will accept the more pragmatic definition of knowledge propounded by the Australian House of Representatives (1991, p.viii) as '... a synonym for "information" but wider, incorporating the subjective concept

of knowing; awareness, experience or consciousness...'.¹

For a definition of education, the paper accepts the proposition presented by Barker (1986) who, in simplifying a model of the functions involved in the transfer of information created by King (1978, pp. 5-6) proposed that 'Scholars' *expand* the 'Universe of Disclosure' which is then *assimilated* by 'Students' who, in turn *become* 'Scholars' (Barker, 1986, p. 32). Thus, for a working definition, it will be assumed that education is the transfer of knowledge which occurs at the Scholar/Student nexus.

Distance Education

Distance Learning and Distance Education are used synonymously in the literature reviewed e.g. Bååth (1980), Bates (1993), Caladine (1993), Keegan (1990) and Ortner et al. (1992). For simplicity, the subject will be referred to as Distance Education and will be specifically focussed on the delivery of distance

Media	Technologies	Distance education applications
Text (including graphics)	Print	Course units Supplementary materials Correspondence tutoring
	Computers	Databases Electronic publishing
Audio	Cassettes, radio, telephone	Programmes Telephone tutoring Audioconferencing
Television	Broadcasting, video- cassettes, videodiscs	Programmes Lectures
	Cable, satellite, fibre-optics, ITFS, microwave	Videoconferencing
Computing	Computers, Telephone, satellite, fibre-optics, ISDN, CD-ROM, vidoedisc	Computer-aided learning (CAL CBT) E-mail, computer- conferencing, audio-graphics Databases, multi-media

Table 1: The Relationship between media, technology and distance education applications of technology

Source: Bates 1993, Table 13.1

education through a telecommunications medium.

Technology & media

Bates draws an interesting comparison between these two terms, which are often used interchangeably, and proposes that ‘media’ is ‘... the generic forms of communication...’ and that ‘technology’ is the means of ‘... deliver[ing] these media...’ (Bates, 1993, p.214). These distinctions will also be used for clarity.

Distance Education

Media & technology

Bates (1993) has analysed the various media and technologies used in distance education, presenting the conclusions in Table 1 reproduced on the previous page. As can be seen, the Table depicts the interrelationships between the media, the technologies used in the delivery of the media and the applications to which they are suited and could well be used as a guide in the selection of appropriate media and technology.

To gain the greatest benefit, Bates (1993) argues the importance of selecting media and technology appropriate to the requirements of the application. In his paper, drawing on the work of Salomon (1979) he describes the information encoded in symbol systems as either digital, analogic or iconic. As examples of the distinctions he draws in this paper, iconic coding systems are defined in the following terms:

Iconic coding systems depend on pictures, colouring and signs for encoding knowledge. Iconic codings systems are able to handle ambiguity and lend themselves to differing interpretations of the meanings they contain. Knowledge can be represented by iconic coding systems in pictures, books and television. (Bates 1993, p.218)

Further, in describing the differences between digital and analogic systems, he defines musical notation as digital, whereas music performance is analogic which is more expressive of feelings and emotion (Bates 1993, pp.217-218).

The relevance of appropriate media is similarly highlighted in an earlier paper by Rekkedal (1992, p.172), who bears this out through reference to the quality and efficiency issues involved in selecting the right medium and the consequences of an incorrect choice.

Electing to use the Internet has, by default, resulted in ‘computing’ as the application medium. Fortuitously, this is an appropriate choice since the law is largely ‘codified’ and because ‘...computers are excellent for presenting and testing rule-based procedures.’ (Bates, 1993, p.220). Having determined ‘computing’ as the preferred medium, the next step may be to decide on whether the requirement is for one-way or two-way communication. Again, Bates assists by providing a summary of a range of available technologies which may be matched to the requirement. Table 2 (Bates, 1992, p.215) reproduced below shows a number of the choices of relevant technology based on the use of various media.

Again, resulting from the choice of the Internet, it is apparent that two-way communication is the logically required technology. Referring to Table 2, the appropriate media appear to be electronic mail (e-mail) and computer conferencing (CMC). It could be argued however, that since the Internet is likely to contain databases appropriate to the information needs of the legal profession, consideration should be given to tools enabling access to the databases contained within the Internet World Wide WEB (www). As an additional consideration, the use of ‘hypertext’ techniques within the Internet allows for the retrieval of linked, related items of information across data boundaries. Johnson (1991, pp.2-3), notes that this is appropriate since many lawyers’ activities, such as browsing and the seeking of relevant case and statutory information, are essentially hypertext techniques since they follow ‘paths’ from one document to another. Johnson (1991) later argues the case that event law books could be based on electronic documents thus enabling the use of hypertext footnoting and the on-line linking of the footnotes to the full text of the referred document (Johnson, 1991, p.13). Indeed, the decisions of the US Supreme Court

Media	One-way technology applications	Two-way technology applications
Text	Course units Supplementary materials	Correspondence tutoring
Audio	Cassette programs Radio programs	Telephone tutoring Audioconferencing
Television	Broadcast programs Cassette programs	Interactive television (TV out; telephone in) Videoconferencing
Computing	CAL, CAI, CBT Databases, multi-media	E-mail Computer-conferencing

Table 2: One-way and two-way technology applications in distance education

Source: Bates 1993, Table 13.1

and the Patents Court since 1990 are already available on the Internet through the Legal Information Institute at Cornell University.

The Internet

The birth of the Internet can be traced back to 1969 when the computers at a number of US research institutes were connected to enable the scientists at these locations to share information. Following the success of the networking technology, other scientific organisations, universities, government facilities and corporations began to build networks (Rowe, 1994, p.421). Eventually, because they shared common standards, these individual networks were able to be connected. This process, *internetworking*, gave the Internet its name (Kantor, 1995, pp.1-3).

Today the Internet is a vast global network of international, national and local computer networks and is accessible to anyone. Since no one organisation actually controls the Internet it is difficult, if not impossible, to gauge accurately its full size. Estimates within the press and computer periodicals, however, assess that the Internet is comprised of some four million computers around the world, which contain more than seven hundred thousand documents on three-and-a-quarter million pages, has twenty-one million registered users and is regularly accessed by as many as ten million of those users. It is, also reputed to be growing at the rate of ten percent per month (Fraase 1994, pp.1-12). Whilst it is not possible to verify most of these figures, there seems little reason to refute them judging by the amount of popular interest in the Internet as a communications medium.

As discussed earlier, the specific Internet technologies of interest in this discussion are Electronic Mail (e-mail), Computer Mediated

Conferencing (CMC) and the use of the World Wide Web (www) to enable access to the information available in databases throughout the Internet.

Electronic mail

Of all the facilities for communication available on the Internet, e-mail is the oldest of all services and acknowledged as being the most extensively used for the interchange of information between people on the Internet (Kantor, 1995, p.20). In its operation, it may be likened to the postal service within a country - the writer, having composed a 'letter' on the keyboard, sends it to the recipient electronically with the Internet performing the role of the postman, sorting office and distribution centre (Santoro, 1995, p.17). The only requirement for communication being that both receiver and sender be registered as users on the Internet and that they know the electronic address of each other's 'mailboxes'.

Computer mediated conferencing

A Computer Mediated Conference (CMC) on the Internet enables defined groups of geographically dispersed individuals to come together, electronically, in a 'conference' for the exchange of ideas. The CMC may be 'synchronous', where the users are in simultaneous contact, or 'asynchronous' where communication is literally 'not at the same time', but is conducted through the intermediary of the user's mailbox.

The most common of these techniques are little more than the addition of a distribution list to the Internet e-mail system where the computer acts as a mail 'router'. There are a number of such 'asynchronous' group conference systems including Listserv, Usenet NEWS and bulletin boards (Santoro, 1995,

p.14). The principal advantages of such systems are that they permit a more immediate means of communication than the traditional methods of paper-based correspondence to a wide audience which enables an interactive transaction of ideas and, in doing so, provides a means of facilitating research amongst geographically dispersed academics (Aungles, 1991, p.234). Another advantage of this technique is that it does not require that all members of the conference group be simultaneously accessing the system. A further, and significant, benefit of this technique is expressed by Little (1991, p.174) who believes that the medium precludes the domination of the group by the most senior member. There are, however, some reservations as to its efficacy. Aungles (1991, p.235) feels that the lack of any 'non-verbal cues' may contribute to communication difficulties. In addition, with a large conference group correspondence can quickly build to a level where it becomes difficult to maintain the 'thread' of a particular commentary (Bacsich, 1987, p.103). This latter point is similarly commented on by Santoro (1995, p.19), who provides examples of 'conference management systems' such as CoSy, Caucus and DEC VAXNotes which help in ameliorating the problem.

In addition to the above 'asynchronous' uses of the medium, where correspondence sent may be read at some later time by the addressee or, in the case of CMC groups, the addressees, the Internet can be used interactively in real-time through 'chat' groups, where users can send keyboard messages to each other in real-time. It is also possible, using a software technology available from Cornell University called CU-SeeMe (Cornell, 1995) and a suitable video camera, to use the Internet for real-time videoconferencing. Using CU-SeeMe users may simultaneously see,

and communicate with, up to eight other conference participants on the computer screen. The Apple Macintosh version of this software also permits the exchange of text material and slides between users. The principal disadvantage of this technique is the very slow frame rate of 7 frames per second (fps), or less, which results in a somewhat jerky image. It is also reputed to be difficult to establish (Eisenstadt, 1994). The obvious advantage of the technique is that it allows users to see each other.

It should be noted that although the term real-time is used in this context, since it is not instantaneous it should technically be called 'real enough time'. Rowe (1995, pp.25-26) provides a definition of each term and a comparison between the two.

SLIP/PPP

The SLIP (Serial Line Interface Protocol) and the later PPP (Point-to-Point Protocol) are software products which, when installed with TCP/IP and a suitable 'net browser' on a remote PC, enable access to the Internet over telephone lines. The important thing about these two packages is that they provide the user with a fully graphical interface using the mouse, rather than requiring the user to enter data, such as the address information (URL) through the keyboard. The user is then able to access the World Wide Web to review, print and to retrieve information from the Internet to the user's own PC for future perusal or reference.

Education on the Internet

The Internet is being used as an educational vehicle. Evidence of the direct use, although sometimes difficult to find, is available. Recognising the difficulty some students experience in attending the 'com-

pulsory' residential schools, the Open University ran an experimental course, *The Cognitive Psychology Virtual Summer School* in August and September 1994 to assess the viability of the technology as an option for the future. There were mixed feelings as to the success of the venture with the students largely believing it a success and leaving the academics uncertain. The lessons learned from the experiment have provided '...active areas for research...' (Eisenstadt, 1994).

If it is accepted that the seeking of retrieval and assimilation of information constitutes a transfer of knowledge, and the transfer of knowledge represents education, then it could be said that the Internet is already in use as an indirect educational medium through the access to such information as the decisions of the US Supreme Court, or the US Patent Court decisions, available through the Legal Information Institute at Cornell University.

Considerations

The following details a number of factors which need to be taken into account in the consideration of any future use of the Internet as an educational technology.

Design

It is highly likely that many people will be 'first-time' users, perhaps even of computers. Whatever combination of media and technology chosen, it is crucial that the end 'product' be comprehensible and that the process of 'technology transfer' be as painless as possible. Blaise Cronin (1990, p.2) points out one reason for inadequate transfer of technology can be '... the failure to conceptualise technology as *embodied information and knowledge*' (author's italics). In an examination of everyday design, Norman (1990,

pp.81-82) is especially conscious of the difficulties people have in coping with novel situations, especially when there is more than one option or the designer has been particularly clever in concealing the functionality and proposes a concept of signals which he calls '...[the] affordances of objects... an empty container affords filling [etc.]'. Later in his book, Norman (1990, pp.181-186) points out the important criteria required in the design of computer systems in particular. The question of usability was echoed by Eisenstadt (1994) who highlighted a number of areas of disappointment with the technology and media used in the experimental Virtual Summer School (vss).

Face-to-face

In practically every item of literature reviewed, the question of face-to-face contact was raised as a significant issue in the delivery of education. Amongst there was a citation by Thorpe (1988, p.85) on a study by Kelly and Swift (1983) who found that 63% of Open University students elected to attend tutorials to '... meet my tutor and discuss course study matters'. In fact throughout Europe, the Open University employs over 7000 part-time tutors, and requires that the students on many courses attend residential summer schools (Eisenstadt, 1994). This need is reinforced by Keegan (1990, p.87) who also quotes (Bååth, 1980, p.121) as believing that tutors '... have important pedagogical functions [and]... play a principal part in linking the learning materials to learning'. Rekkedal (1992, p.172) also stresses the need for a balanced approach which should include 'group activities and local face+to+face teaching' [sic]. In his review of overseas methods of education, Caladine (1993, p.18) discusses the Open University's regional centres where students can meet their

tutors and, presumably other students, in tutorial sessions and the so-called 'Knowledge Centres' being trialled in Europe. These Knowledge Centres will be equipped with the latest in multi-media and digital communications facilities. Their objectives may be summarised as providing facilities for small (3-8 people) to medium sized groups of people (15-20) who may receive lectures and meet in informal group sessions, or tutorials.

Question qualification

As with the computer, the Internet is generally an invaluable tool which can assist in the selection of material matching given criteria from within a huge body of information. Unfortunately, it cannot always be relied upon to yield a satisfactory outcome from within its 'body of knowledge'. This failure may be the result of the user incompletely/incorrectly formulating the questions (Santoro, 1995, p. 16) or through an expectation that the computer may somehow be able to create a solution from the data. This latter point is highlighted by Williams (1986, p.19) who states that the computer '...cannot argue what conclusions should be drawn from the information, [or] where judgements are to be made'. Even where the use of an expert system may have been invoked, it may not have been able to answer the question due to the incompleteness of rules or the flexibility of interpretation. Little (1991, p.174) cites a number of examples of this failure particularly as a cause of the diminution of interest in the use of expert systems within the legal processes of the United States.

A moving feast

Dynamic flexibility, one of the principal benefits of the Internet, could also be considered as one of its weaknesses. Location of information and even Internet 'sites' can change at

an astonishing rate; a 'page' of information found at one site on one day can easily be moved by the 'information provider' in a matter of moments, requiring subsequent time consuming search to relocate the item, assuming it is still there.

The Internet and the Law

Many lawyers including Broderick (1995) and Martin (1994) argue the benefits of adopting technology as a means of adding value to the services offered to clients with Martin, in particular, arguing convincingly the reasons why Lawyers should be on the Internet. The legal profession are already extensive users of the Internet with the libraries of a large number of the significant law schools throughout the world, including Harvard, Yale, Edinburgh, Oxford and Cambridge all being accessible through the Internet. In addition, particularly in the United States, a number of Law Firms have set up 'home pages' on the Internet for information and, presumably, the promotion of their business expertise. Accessing the home page of the Rutgers University School of Law at Newark provides the user with hypertext links to a wide variety of Law Schools, Law Firms and US Government sites. In addition, the user is presented with subject oriented sites such as Constitutional Law, Informatics and Computer Law and LEXIS, an on-line legal information service. Thus, it can be seen that in the United States, at least, the Internet is seen as a useful resource.

Conclusion

There is no doubt that as business becomes more global, the consequent need for continuing education to maintain the necessary skills of the workforce will start to challenge the resources of institutional education. To an extent, this need is clearly recognised by many institu-

tions of higher learning as they move to develop more flexible means of delivering education through distance education and summer schools, for example.

The Internet is one, amongst a number of advancing technologies, which have the potential to assist in this process. Whilst the use of the Internet is technically feasible it is likely that it may take some time to be accepted as a primary education tool due to the perceived need for face-to-face contact in the education process.

To meet the education resource shortfall, it will become necessary for educators (and educatees) to adjust the changing ideas on alternative educational methodologies. One possibility is that the Internet could form a component within a new method of education based around facilities such as the Knowledge Centres, where the Internet could do what it does best, in providing fast global communications and access to an enormous body of information. ☛

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IN OUR NEXT ISSUE...

Our next issue looks at

TELECOMMUNICATIONS

Contributions from members of all Societies are welcomed. Although this is the central theme of the issue, contributions can be on any topic relating to computers and law and can take the form of an article, product review, book review, abstract or press release.

 Please send your contributions to the Editors no later than 30 November, 1995.