

BILETA

14th BILETA Conference: “CYBERSPACE 1999: Crime, Criminal Justice and the Internet”.

Monday, March 29th & Tuesday, March 30th, 1999.
College of Ripon & York St. John, York, England.

COMPUTERISING LEGAL EDUCATION: WHAT NEXT?

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ABSTRACT

This paper explores current and future trends in the development of two areas of legal education technology - computer assisted learning and computer mediated activities. It explores these two converging areas by examining them from three main points - the present, the short term future and the medium term future. The conclusion takes the form of a brief speculation about how legal education in general and law schools in particular may look in the long term.

INTRODUCTION

If we are lucky enough to avoid destruction at the hands of the millennium bug, global warming, and any of the other predicted millennial Armageddons, what does the future hold in store for legal education? Where is the computerisation of law schools taking us over the next fifteen to twenty years? Legal futurology of this sort is, of course, pure guesswork. However, it can at least be informed guesswork. Detailed predictions must always be suspect. The identification and exploration of the broader forces that are propelling us into the future, however, may well prove fruitful.

What are these broader forces? We can now see that we have progressed from the first period of the information society - the age of the computer - to the second period - the age of the Internet. The expression: 'the network is the computer' can be understood for what it is - prophetic wisdom rather than abject nonsense. Today, Gibson's concept of 'Cyberspace' is more than simply science fiction. It describes a digital dimension existing in parallel with our physical world that we have begun to build. Indeed, we are already colonising Cyberspace with our aspirations and our dreams (Rheingold, 1993). Bits now demand equal status with atoms. These two types of basic building blocks are beginning to interact, to converge and even to merge.

We know all this. But, where is it leading us? And, in particular, how will academic law be effected and changed over the next two decades? In this paper, I plan to undertake two tasks. Firstly, I want to examine how computer assisted learning might evolve. Secondly, I would like to explore where our early experiments with computer mediated communications as a forum for teaching could take us. I propose to undertake these two tasks by looking at the coming changes from three standpoints - the present, the short term future and the medium term future. I will conclude with a brief speculation about how legal education may look in the long term.

THE PRESENT: SEPARATE DEVELOPMENT

Computer Assisted Learning

After some modest early efforts in the area of computer assisted learning, a large injection of central government money helped produce Iolis. What is Iolis? It consists of two main components. Firstly, it comprises a collection of workbooks. Secondly, it comprises one large resource book. The workbooks can best be thought of as interactive open learning materials. They cover a wide range of academic topics which are, at present, grouped together into traditional subject areas. Such areas include both 'core' subjects such as contract, crime, European law, property, public law, tort, and trusts as well as a growing number of optional subjects such as consumer law, family law, and international law. These workbooks may well prove useful for genuine open learning. Primarily, however, they have been designed to slot into campus based law courses as a cost effective addition to the traditional regime of lectures, private study and small group teaching (Scott and Widdison, 1994) (Paliwala, 1998).

The resource book is simply a large searchable database of legal source materials - predominantly primary sources at present. It contains, for example, well over two thousand full text case reports. The workbooks and the resource book are linked together. Generally, cases and other authorities cited to in the workbooks are connected directly to the source text of that authority in the resource book. In addition, though, the resource book can be used on its own as a stand-alone supplement to existing hard copy library materials.

Computer Mediated Communications

To date, there have been a variety of different experiments in the use of computer mediated communications as a forum for small group teaching such as tutorials and seminars. Experiments of this type of work have been conducted at Durham, LSE, New Mexico and Warwick. I have reviewed and discussed these experiments in detail elsewhere (Widdison and Schulte, 1998). In addition to the above experiments, there have even been attempts to develop more innovative activities for students using the medium of information technology. For example, Hardy (1994) describes an experiment that he designed and conducted. A group of fourteen students was required to collaborate in the drafting of an ideal constitution for a fictitious country called Dalmatia. The group had to accomplish this task via a single medium only - that of email discussion. The experiment took place over the period of one whole semester. More recently, Lancaster University Law Department has used computer mediated communication as the primary medium for an extensive negotiation exercise with first year students (Armitage and Steeples, 1998) (Bloxham, 1998).

Email and electronic conferencing - the technologies used for the above experiments - can technically be used for simultaneous communication. Internet Relay Chat is an example of email used in this way. However, all the above exercises in fact involved the use of the technology for non-simultaneous communication. Thus, all the 'electronic tutorials' look place over a period of days rather than in the typical one hour slot that is allocated for traditional small group teaching. Equally, this choice of technology meant that there was little or no verbal, face-to-face contact between the law tutors and students who were involved in the experiments. Interaction was generally written and remote. These two aspects of the existing experiments inevitably effected the nature of the exercises considerably. This resulted in both advantages and disadvantages over equivalent traditional methods (Widdison and Schulte, 1998). Amongst the advantages were:

- Computer mediated communication (CMC) freed users from geographical, temporal and logistical constraints.
- CMC provided each student with greatly improved access both to the law tutor and to other

students.

- CMC was less intimidating than face-to-face discussion.
- Use of current CMC technology entailed practice of written communication skills.
- CMC provided an instant record of communications that could then be stored, processed and reused.
- The use of CMC made for ready monitoring of performance.
- Use of CMC provided an important element of added value - acquisition and practice of computing skills.

However, amongst the disadvantages of using computer mediated communication to enable written, remote activities where:

- Exchanges of email made interaction slow and inflexible.
- Whilst email was been used with some success for group discussion, face-to-face presence stimulated such discussion much better.
- Exercises developed for use with email teaching needed to be highly structured.
- The use of CMC seemed to demand more self-discipline and self-motivation from the students than traditional educational techniques.
- CMC used in this way reduced the opportunity for students to practice oral communication skills.
- CMC teaching appeared to contribute somewhat to the development of a 'cut and paste' mentality.
- Today's law students (not to mention staff!) have a cultural and technological threshold to be overcome in the use of email and electronic conferencing. However, this problem may simply not exist for future generations, though (Tapscott, 1997).

A particular point to note about the work that has been done in this area until now is that all the electronic tutorials, seminars and innovative activities were conceived and put together as stand-alone exercises - independent of any computer assisted learning packages. The fact that such packages may have been used by students in preparation for the various computer mediated communication activities was purely incidental.

THE SHORT TERM: A TIME OF CONVERGENCE

Computer Assisted Learning

During the next three to five years, I anticipate that two things will happen. Firstly, we will see continued development and enhancement of our existing set of interactive open learning materials - Iolis. Secondly, I think that we will see the beginnings of a cottage industry in computer based simulation games for law teaching. As for Iolis, I think that its popularity with academics will increase just as it has already done with students. Lecturers and tutors will have grown comfortable with the technology, realising that it does have an important role to play in campus based legal education. By then, they will have integrated it into their courses as readily as they integrate textbooks, casebooks and other hard copy materials today. The way by which Iolis becomes part of the familiar furniture of legal education is not a one way process though. I hope and expect that there will be considerable improvements in both the quantity and quality of Iolis materials over the period in question.

As to quantity, the number of substantive subjects covered by Iolis has expanded considerably in the last half decade. I anticipate that this process will continue at a similar rate until all but the most esoteric courses are supported. Quantitative expansion will also occur beyond the range of traditional substantive law areas. The era of academic skills teaching is now upon us. A new draft statement on qualifying law degrees (Law Society et al, 1998) places a great deal of weight on this type of educational approach. So, work is already underway on a set of workbooks aimed at providing

support for this rising area of study. It is planned that the new skills section of Iolis will contain workbooks covering research, legal reasoning, communication and numeracy. But, why confine Iolis to academic law teaching? Law publishers' catalogues bear witness to a massive growth in hard copy materials covering all aspects of vocational education. It is also clear that continuing education has opened up a huge new market for teaching and learning materials. I suggest that it is now time to start giving serious consideration to the economics and politics of developing computer aided learning materials for these markets too.

Increased quantity will be very welcome. So too, though, will improved quality. Of the existing workbooks some are excellent, most are good, a few are below standard and one or two are bad. Keeping existing materials up-to-date is not enough. Over the next few years, I hope that a rolling programme will be adopted aimed at raising the educational quality of workbooks that are below standard and at replacing those that are bad. The Law Courseware Consortium has already, wisely, adopted a policy of looking to appoint editors whose role will be to maintain and update workbooks within a subject area. However, editing is not always enough. I think that this approach needs to be supplemented by one that identifies unsatisfactory workbooks and earmarks them either for radical improvement or for replacement as seems appropriate.

Turning from existing workbooks to new ones, I think that ensuring the quality of the content right from the outset is crucial. Perhaps at the start, each workbook author should be assigned an academic consultant to work with as a matter of course. The consultant would then advise on approaches and drafts throughout the authoring process. It might be useful to choose a consultant who, whilst having respect and sympathy for the author's views, none-the-less has a rather different academic and/or educational approach to the subject area in question. Then, the interaction between author and consultant might be stimulating and productive rather than cosy.

Quality of content should, I feel, be supplemented by functional enhancements designed both to further deepen and enrich the learning experience (Ramsden, 1992) and to loosen the shackles of formalism further (Collins, 1994). With this in mind, several page types have been proposed and are under active consideration at present. These new page types include:

- A jigsaw page for exercises involving the assembly of fragments into a whole graphical image such as a graph, a chart, a table or picture;
- A word insertion/replacement page for exercises involving filling blanks with appropriate words or phrases or replacing an incorrect or unsatisfactory word or phrase with a correct or better one;
- A table page for exercises that involve manipulating data within a two dimensional grid;
- A calculator/spreadsheet page for exercises involving numerical calculations: e.g. damages calculations; maintenance related calculations and calculations connected with theoretical models such as economic-based theories or game theory.
- An 'obiter' page to introduce important but tangential concepts, quotes and tips via 'the side door' into the minds of students.

At least two other functional enhancements are being considered for Iolis at present. One is an integral monitoring system that will produce detailed feedback on each student's performance on a workbook, highlighting areas of weakness so that recommendations can be made on how to improve. The second is better support for authors either in the form of an on-screen demonstration or an interactive workbook on authoring. Such support would, hopefully stimulate authors into making greater creative use of the page types and the other facilities that Iolis offers, It would also encourage them to think about how best to design for and achieve educational objectives. Finally, such support would seek to guide authors on such issues as presentation and style of learning materials.

Lets us turn now from Iolis to consider the next generation of computer assisted learning packages - simulation games. I have also mentioned that I think we will see the emergence of a cottage industry

in such games in the short term. During the next three to five years, individuals and small teams will begin experimenting with the development of simulation games as a useful additional tool for academic law teaching. What is the difference between Iolis and such games? I have characterised Iolis as a collection of interactive open learning materials. A simulation game, by contrast, is better understood as a type of interactive film within which a student can play an key role in a drama. What sort of drama? Here are some suggested legal scenarios:

- Interviewing and advising a client
- Negotiating on behalf of a client
- Drafting a contract or other instrument
- Preparing and presenting a case at trial
- Arguing points of law before an appeal court
- Researching and briefing a law commissioner on some crucial law change
- Drafting a new piece of legislation at the behest of a law maker.

I have discussed the potential benefits of such simulation software at length elsewhere (Widdison et al, 1997). Suffice it to say here that I believe that, ultimately, such games are ultimately capable of providing a significantly richer learning experience than Iolis - at once more challenging, stimulating and absorbing (Ramsden, 1992) (Jones and Scully, 1998). So, am I predicting that simulation games will eventually replace Iolis? Certainly not. They will compliment Iolis. In the future, I see a continuing role for Iolis-type workbooks to provide basic legal education for most law students. Simulation games will be the contribution made by computer assisted learning to the more advanced legal education of those same students. For the foreseeable future, we will be using both types of packages.

Computer Mediated Communications

One of the most significant technological changes that we can expect to see over the next three to five years is the general availability of cheap, PC based video conferencing technology. This means that simultaneous communication will become as easy to establish as non-simultaneous communication is today. The proliferation of such technology will add a key dimension to computer mediated interaction that is currently missing. Video conferencing will enable face-to-face, verbal interaction to take place just as readily as remote and written interaction. However, the technology will by no means replace email and electronic conferencing. It will simply add greatly to the possibilities. What we will see shortly is communications technology that is flexible enough to be moulded not only into many of traditional forms of communication, but also into a wide variety of new, versatile, 'multimedia' forms of interaction. At this point, 'virtual presence' will easier to achieve - and in some circumstances almost as enriching - as actual presence. The benefits for legal education are obvious and do not need to be set out in detail here.

What else in the near future? I agree that we will see moves towards a convergence of computer assisted learning and computer mediated communications (Moodie, 1997). Early experimental work of this type is already being undertaken (Grantham, 1999). Rather than these technologies operating independently of each other, we will increasingly be exploring ways of using them in tandem, thus profiting from the advantages of both - and hopefully without ending up suffering from the disadvantages of both! I think that initially we will use the two technologies consecutively - alternating between computer assisted learning and computer mediated communication. Concurrent integration - tantamount to full integration of the two technologies - will come later.

Here is a scenario in which the technologies are used consecutively for the most part. A group of students are offered an initial session on a legal topic that they wish to study. This session serves to introduce those students to the topic and to highlight the interesting and problematic areas. The initial session may take the form either of a pre-recorded lecture or a computer mediated pre-tutorial. Perhaps both might be offered, enabling each student to choose his/her preferred introduction. Some

students might, of course, choose both!

After the introductory session, students then undertake private study by means of Iolis-style interactive open learning materials coupled with a database of full text sources. As each student works through these materials, any areas of difficulty he or she encounters can be referred directly to the law tutor via simultaneous video-conferencing or non-simultaneous email whilst the issue is still fresh in the student's mind. At an appropriate stage in the educational process, the law tutor will schedule a computer mediated tutorial. At this point, he or she can gauge how well each student has advanced and advise on suitable remedial work for those who have not progressed sufficiently. More advanced students can then be assigned further reading and encouraged to place their growing understanding of the topic in question both within the framework of the subject as a whole and then within a wider context.

THE MEDIUM TERM: TOWARDS FULL INTEGRATION

Computer Assisted Learning

Five years from now, we may hope to see a new pump priming exercise - an injection of central government funds similar to that which brought about Iolis. This time, though, the focus will be on the development of more advanced academic learning tools. For law, I anticipate, this will mean, for the most part, the computer based simulation games that I mentioned earlier. So, just as an injection of cash moved the development of interactive open learning materials up from a cottage industry to full scale mass production, this change will be mirrored in the production of simulation games. Their time will have come. The preceding cottage industry will help identify the starting point for the large scale development of this new generation of teaching tools.

As computer based simulation games will move from the wings to centre stage, so too, I anticipate, a new, even more advanced generation of legal education software will move into the vacant wings. What will be the nature of this new species of legal software. My guess is that it will take the form of what I shall call 'virtual law tutors' (Widdison, 1996). The virtual law tutor will not be computer assisted learning software in the sense that we now understand. Rather, it will be designed to function as managers of the learning process. Each student will be given his/her own tailor-made tutor. It will be an intelligent agent which will be personalisable - and will then further personalise itself - so as to mould itself exactly to the intellectual ability, psychological learning type, and academic progress of the individual student which it is assigned to serve (Beard and Hartley, 1984 pp 70-85). At first, interaction with such tutors may be of the 'point and click' variety. Eventually, though, I anticipate that virtual law tutors will be capable of conversing with students by means of natural language whether in spoken or written form.

The first service that the virtual law tutor will perform will be to devise and recommend a suitable learning strategy and timetable for the student to whom it is assigned. It will then guide its client along a customised route through all available computer assisted learning activities, computer mediated interactions and other educational resources - both digital and traditional. It will be sufficiently flexible to be able to slow down or return to difficult areas, to speed up or skip easy or inappropriate areas and to modify the strategy it has selected at any time in order to optimise the learning experience of its client. Whilst managing an education, the virtual law tutor will simultaneously be 'informating' - i.e. constantly monitoring, assessing and reassessing the student's progress and needs (Zuboff, 1988). We can imagine a time when such informating might take over from the much despised memory tests that are examinations and the over-rated alternative that we call continuous assessment. Imagine just how much more accurate and useful a report based on genuinely continuous feedback from the virtual law tutor would be by comparison with the existing means of assessment.

Of course, there is no reason why the student and his/her own, personalised tutor need part at the end

of academic study. In an era of lifelong learning, it may come to seem perfectly appropriate for the virtual tutor to be a lifelong guide and friend. It will accompany its client through the vocational phase of legal education - if that continues to remain separate from the academic phase - and on to the now everlasting third phase of continuing education. Perhaps it will merge into a greater whole capable not only of handling the on-going learning process, but also assisting in the management of the law office of the future.

Computer Mediated Communications

When discussing the short term, I predicted that computer assisted learning and computer mediated communications would converge, leading at first to consecutive use. In the medium term, I envisage full integration giving rise to concurrent use. Let me illustrate this by inserting a new stage to the scenario I discussed earlier.

After private study and before the computer mediated tutorial, the students would be encouraged to take part in an appropriate legal simulation game. Perhaps the simulation game would work rather like computerised card games of today such as Bridge or Poker (Blackie and Maharg, 1998). It might begin by suggesting to one student that he/she contact other students in order to invite them to take part. The relevant software could then act like a casting director. It would allocate roles to all the students who expressed an interest in taking part and itself fill the roles of any remaining characters in its dramatis personae. An alternative, less technology-intensive type of simulation game might also be chosen. This alternative game would be rather like the Multi User Simulation Environments that have already existed on the Internet for some years (Rheingold, 1993 at p 155). In the latter case, the computer would do no more than provide the scenery and the props, leaving the students to their own casting, distribute all the roles between them and determine the course of the drama.

In the medium term, I anticipate law modules being designed 'from scratch' to make full use of computer mediated communications integrated with computer assisted learning packages. A typical module designer (whether human or software!) will have a wide range of educational tools to draw on in addition to the 'up-front' methods of learning such as traditional lectures, seminars and tutorials. This will make effective module design much more complex and challenging than it is at present. After all, the number of tools from which the designer will be able to select will have more than doubled! No doubt it will take experiment and experience to select from the available techniques and to combine and mould them together effectively. However, this type of problem is already common enough even in today's manifestation of the information society.

What types of education tools will the module designer be choosing from? In addition to the traditional approaches, all the following will be on offer.

- Simultaneous video conferencing
- Non-simultaneous email and electronic conferencing
- Interactive open learning workbooks
- A database of full-text source materials
- Simulation games
- Virtual law tutors

Over time, I imagine that more use will be made of the newer approaches and less of the traditional. In particular, virtual presence will slowly come to replace actual presence. This does not mean that actual presence will be regarded as an inferior commodity, though. Rather, the opposite will be true. Actual presence will, by then, be valued as an especially precious and expensive resource - something to be offered to all students, albeit rather more sparingly than is typically the case now. I anticipate actual presence will be made available to students with the same sort of frequency that it is offered to today's Open University students.

CONCLUSION: IN SEARCH OF A LONG TERM PERSPECTIVE

If we project some of the developments that we have been discussing forward, what sort of vision might we have of legal education fifteen or twenty years from now? As information technology releases law students from geographical, temporal and logistical constraints, it seems likely that distinctions between campus based and distance learning, between full time and part time study, and between day time and evening classes - all striking features of today's educational landscape - will disappear over time. As a result, we will move into an era of 'open study' (Twining, 1997 p 287). Law school doors will be opened to those who have never had the opportunity to study law before. I anticipate that a far higher proportion of future cohorts of students will be mature students having spent time away from education after leaving school. Some law academics would argue that this is no bad thing! It will, perhaps become much more common to study law in one's twenties, thirties or even in middle age. It follows that many more students will be employed or caring for children at the same time that they are undertaking their studies.

What will the job of a legal academic be like in the longer term? Writing about legal practice, Susskind (1996 p 286) predicts that the role of legal practitioners will change dramatically. He claims:

While most of the work of a lawyer in today's paradigm is advisory and consultative in nature, the emphasis will shift radically in the information society as many lawyers assume the role of legal information engineer and devote much of their professional lives to the design and development of legal information services and products.

In my opinion, this prediction may well hold true for academic lawyers too - at least in part. No doubt traditional academic activities such as research, participation in conferences and the writing of books and journal articles will still be important, albeit these activities will generally be performed on the Internet and via computer mediated interaction. As for law teaching, though, I can readily foresee much less emphasis on traditional 'up-front' activities such as lecturing and tutoring and much more emphasis on the design and development of computer based 'education services and products'.

And finally, what of law schools? Will we end up with, on the one hand, a single, enormous Open University-style of law school or, on the other hand, a thousand miniature law schools all clamouring to be noticed? My guess is that neither extreme will occur. I anticipate that there will still be around a hundred law schools in the United Kingdom twenty years from now. However, I do foresee three key changes. Firstly, such law schools will be thought of as Internet phenomena as much, or even more, than physical places. Secondly, law schools will greatly accentuate their different philosophies and approaches both to law and to legal education. This will result in a great deal more diversity and give prospective law students a more meaningful choice of route to becoming a lawyer. Thirdly, I think that some law schools will specialise in particular areas of the law - private law, public law, European law, international law etc. Diversity will then be increased still further as many law students detect an advantage in beginning their studies at one academic law school and then moving on to others for a different phase of their education. Quite conceivably, a law student may choose to study at more than one law school simultaneously!

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