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Web Based Training: Its Strengths and Weakness in the Teaching of Law

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Part 1: *From Neophyte to Net Wonder (and was it worth the trouble)*

Abstract

A review of technologies currently used in Law teaching, and a suggestion that one way forward in CBT should be decentralised teaching using World Wide Web technologies, allowing individual teachers to teach their subject in the way that they think best, while still retaining a co-operative environment where resource sharing and additional research can be undertaken by the students in a familiar environment.

Introduction

That Computer Assisted Learning and Computer Based Training are being increasingly promoted as resources for teaching, training and learning both in Industry and in Academic circles is beyond doubt. However, how such learning tools can easily be integrated into a useful, student centred resource is not always self evident when dealing with law subjects, especially those which have traditionally been viewed as "black letter" areas, such as employment law. There are several reasons for this, not the least of which is a natural reticence on the part of many academic staff to alter teaching methods which have been proven to work, and work successfully over a prolonged period of time. In this they remind me of the recent I.B.M. advertising campaign, where a "boss" when told that the future is the Internet and that he must be on it, asks the "unthinkable" but very valid question---Why?

There are several reasons which can be cited, each with varying levels of success. For me the most basic reason is also the most important. Computing, and computer skills in terms of Word Processing, use of communications packages (mail and web) together with the ability to conduct legal research on-line are no longer optional extras, they are life skills which the professional bodies, (to which many of our students will eventually belong) are increasingly recognising as being absolutely essential. In the light of a world where standards are rapidly being thrashed out for electronic commerce across the world with all that means, where business is adopting communications technology as essential for, efficiencies sake, they are entitled to expect that their lawyer, who should, after all, be one of their essential advisors, will also be familiar with the technology and be able to utilise it. The remainder of this paper rather than dealing with the question "why" use technology, will attempt to answer the next obvious query---how to use it effectively.

When most objections to change are examined in the light of the developmental speed of the use of computer technologies, and the natural desire on the part of the lecturer to be the controlling or facilitating centre of influence in courses offered to their students, it becomes clear that for computer based learning to become a significant method through which students learn, control of the content of computer based training should rest, as far as is possible with the staff delivering the course. This is especially true given the relatively frequent need for updating of the material inherent in this type of course, and the consequent requirement for the teacher to have the ability to do this "maintenance" quickly and easily, since it is better to have no law than

out of date, and therefore incorrect law.

There are several methods in which the use of technology can be profitably introduced to the teaching of law. As with most teaching innovations, the difficulty, and the real test, is ensuring that the innovation is structured in an organised way as an integral part of the course, as an enhancement to the whole rather than just an awkward adjunct.

The Scots Law Courseware Consortium have produced several packages in the past to be used as teaching aids in a variety of law courses. There are however, at the risk of being thrown to the wolves, some difficulties with them as I have experienced them. The two main difficulties which I encountered were that a non-standard interface meant that students and lecturers had to learn each package separately, (this takes time and for me meant that I spent more time learning how to use the software rather than gaining any knowledge), as the teacher I found that using the courseware I could not adapt it sufficiently or quickly enough to take account of developments as they happened in the class. I am aware that there are moves to address both of these concerns in some cases by transferring material to web technologies, however, this will take time to filter through to the classroom, and more time for to be implemented.

I do not in any way advocate ignoring the available courseware but my experience would be that it cannot have the immediacy and therefore the responsiveness of other methods of technology based teaching and therefore should be used as a supplementary method of teaching rather than being relied upon to impart major parts of the course content. This is especially true where control of the material does not rest with the academic delivering the course who is therefore best positioned to judge the requirements of their own course.

The same difficulty besets the various legal drafting software packages, it is neither practical nor cost effective in most cases to allow student programmers to customise these packages, therefore they are of limited use. These are problems which are not simply going to disappear, and are worsened by the built in obsolescence which appears to plague almost all I.T. initiatives.

One teaching method which to a great extent avoids these difficulties is the use of simple e-mail. This has been used successfully for several years by Dr. Paul Maharg in legal writing courses such as the Negotiation skills project run in both Strathclyde and Caledonian Universities. E-mail can also be an invaluable source of feedback from students both formally, through specific exercises, and informally, since the course lecturer is available on-line in a way in which s/he can be approached in a relatively private environment. This can sometimes facilitate a more honest and simultaneously less adversarial or intimidating learning environment.

Alternative methods utilising e-mail which have been piloted with varying success include the use of what are termed listservers as either replacements or supplements to tutorial time. These "listservers" or mailing lists are simply methods by which mail from one person is distributed to everyone on the list. In Strathclyde this is one of the main methods of communicating with our distance learning LL.M. class in IT law. The lists are used both for students to submit work concerned with particular projects set by the staff and also for more general topics and new items related to IT law developments. Staff in other institutions have used listservers in a more or less similar fashion utilising their own subject material and found them a valuable addition to the time which they can spend with the Students. This is an especially telling comment today when perhaps the biggest worry of academic lawyers is that market forces are cutting into teaching and student contact time to an almost intolerable level. To some extent and in certain limited circumstances the use of e-mail lists can at least attenuate this situation. As with most technologically based teaching methods, listservers function at their best when they are employed as part of a much larger educational strategy. In Strathclyde Law school we use them in conjunction both with our Web based materials and with some classes. This is achieved in three main ways, the first is through the tutor or lecturer commenting, both privately to the student, and publicly to the list, on materials contained on the web and on the students own work. The second is the incorporation of a digest of the lists into the law school website available on production of a password. This digest provides what students say is a valuable archive of recent and topical information relevant to their studies. The third, and perhaps the most vital is the student led development of our own search engine, references made by the students in their work are collated automatically and added to a relatively small, subject specific web search engine called Phantom. How useful or otherwise, this engine is depends entirely upon the input which both staff and students make, so far it has grown exponentially, mainly it has to be said, because of the high degree of student input.

With the emphasis being placed today on the student's comprehension of course materials and their ability to assimilate, and own, their knowledge rather than their undisputed ability to regurgitate, utilisation of listservers, and the "web" can, and should be seen as effective teaching methods conducive to deep learning

and fuller comprehension rather than simply yet another method by which materials can be made available to the students.

At it's simplest, the interactive process through which students gain access to available course materials forces them to at least ensure that the "Web pages" which they are viewing are the correct ones, the only method which they have on doing this is actually looking at the material. The system of hyperlinks upon which the "WWW" is based also serves to ensure that the student who is using web based materials has not missed any of the essential elements of the material, since contents pages, if correctly constructed with clear headings and sub headings can be used to "map" what the student has and has not yet seen. The very act of "forcing" the student to download and perhaps print the material ensures also that in the act of downloading the pages the student has to verify that what is on screen is actually the material which they wish to see. In contrast with a lecturer simply distributing handouts on paper (which may not be looked at again until just before the examination) the student has, at the very least seen and by default, understood that relationships exist between the headings of the material which they have accessed.

Of course the separate issue of the necessity of ensuring that law graduates are sufficiently I.T. literate to function within the lawyers office of today, and of the future, is being addressed as an integral component of their course, thus breaking down the technophobia which afflicts so many legal professionals today before it has a chance to develop. The integration of what is essentially a life skill as essential to the lawyer of tomorrow as being able to draft a disposition cannot be underestimated.

For any computer based learning to be successful it must fulfil several criteria, not all of which will be immediately apparent to the students. It must be :-

- Timeous and up to date
- In a form with which the contact staff are comfortable
- Easy to edit
- Cost effective

To my mind there is only one currently available, widely accessible technique which fulfils all these criteria - an internet (or intranet) web site, located on a computer to which the staff have direct access, (and therefore control), and from which the students can download the material as needed. Two very good examples of this are the Strathclyde Law school web site (URL) and the Clyde virtual University (URL). To this end, our paper is the story of one teachers experience in setting up an experimental web site specific to her course, an undergraduate class in Labour Law taught to around sixty students.

The remainder of this paper will attempt to demonstrate three fundamental stages in introducing computer based learning into this type of course:

- **Teaching the teacher.** The mechanics of setting up a simple website as a teaching resource, The software used, where to get it and how to use it at the most basic level, keeping it simple, both to allow the teacher an easier learning curve, and to allow the reuse of existing materials wherever possible.
- **Teaching the students.** How the Lecturer is able to introduce and use the website as either a core or supplementary resource in teaching. How student responses can lead to improvements and development of the site, thus producing a form of interactivity which would be difficult if not impossible to reproduce in a solely paper based environment.
- **Critique.** Lecturing Labour Law utilising aspects of C.A.L. Does the teaching method change substantially? Are we changing the learning method? Is the depth of the students understanding affected? What improvements can we make?

Teaching the Teacher

Before embarking on the, hopefully, fascinating tale of how the Labour Law website was developed, the tools used, and the final report on the experiment, I would like to clarify the levels of computer "expertise" which Annick and I brought to the project at it's inception, so that it is clear that this was not a project run by "experts" or people with an academic background in Computing per se.

For my part, I would describe myself as a computer hobbyist of about five years standing and student of Computer Law. While this is, no doubt, clear evidence to some of a deep seated neurosis in my character, I

prefer to see it as a complimentary perspective on my legal interests. I have little formal training in computing, except the ordinary undergraduate courses which most Universities now run, but I do have an interest in how networks function, not so much at a heavily technical level, but in what they can be used for, and therefore, I have developed that interest to a level where I (hopefully) know what not to play with. Annick, I would describe as a typical computer user, familiar and comfortable with Word Processing, the basic uses of e-mail and with access to the "World Wide Web". She can be differentiated from a computer hating lecturer only in as much that she wished to learn how to create a website with the specific objective of using this site to assist her in her teaching, to create a complimentary tool for her normal teaching, not to replace it.

In the beginning

The first priority, when attempting any form of computing project is to ascertain the skill set of the people involved. In this project, the ability both of the staff and the students to use browser software such as Netscape or Internet Explorer at least at a basic level of functionality was obviously essential. Also essential however, from the staff perspective was the ability to create source materials in the form of web pages. For such pages to be of any more than marginal use they must incorporate the usual gamut of web based local and remote links, together with the ability to download additional material. Of course such pages must be, as with any written presentation, formatted to a reasonable standard and easy for the user to comprehend. The major, indeed the only difficulty here is that while typing ordinary text presents no problems, and a little care will produce a very high standard of work on paper, web pages on the internet are in a very different format, where the layout is governed by a basic programming language called HTML, or hypertext mark-up language. This language comprises of tags which govern everything from which text is underlined or larger to how and where links to remote sites are dealt with. The difficulty with this was that Annick had no experience in using this language, and as with most non-computer specialists, had little interest in learning a whole new language simply so that she could create a simple web site. If such expertise were necessary, then it would be better to leave it to the computer staff, and those who already know computers since an academic lawyers time is extremely limited, and therefore valuable, too valuable to spend learning a fairly complex and mechanically time consuming programming language.

It was therefore with some scepticism that we began to look at the Web Editor programs which are currently available with which we hoped to design our web site. While the best of these programs are dedicated commercial products such as Pagemill for Macintosh. There are several free or inexpensive editors such as HTML Assistant which while very powerful, are not tools for a novice user. (6) Since our goal was to create a relatively simple web site in a short time with the least amount of effort, the simplest solution was to utilise, if at all possible, editors, test browsers and eventually servers with as simple and familiar an interface as possible.

I decided that the best solutions were usually the simplest, and opted to use the MSWord Internet Assistant. This piece of software is freely available for all versions of Word 6 and is, in fact, standard with Word 95 and 97. It is extremely simple to install and relatively stable unlike many other similar offerings. It is far from perfect in that more advanced HTML code cannot be generated (since the user is limited to the options given in the program) and nor does it necessarily generate web pages in the most efficient or "cleanest" manner. However, for practical purposes this simply means that it cannot be used to create some of the more decorative web pages such as some of those at Masons (7) Its most serious drawback for our purposes is that it does not respect all the formatting, such as footnotes, tables and other text effects which are available within Word.

Despite these criticisms, due to it's almost seamless integration into an already familiar package, I felt that the benefits of a gentle learning curve using an already familiar environment out-weighed the benefits of a more powerful editor. If such an editor should be necessary at a later stage, then it could easily be obtained. At which time the user would be ready to utilise the additional facilities. In other words, the software being used is selected on a needs driven basis, rather than simply because it is available.

The browser chosen was Netscape, versions Three and Four, the reason for this being pragmatic in that this is the software which the students accessing the materials in the University Computer labs would use. For this particular web site there was no necessity for us to set up a dedicated web server since the materials which were produced were, from the outset, intended to form part of the much larger Law School web site, although they could also have been used as a stand alone site. The actual setting up of a web site need not present any practical difficulty given that there are various web server packages, of varying complexity, available without cost for most platforms. All that is needed is a permanent, or semi-permanent connection to the Internet. (8)

Examples of these include:

- Apache: A powerful and versatile package available free for almost every computer platform imaginable. Unfortunately it may be too difficult to configure for the beginner
- The Personal Web Server from Microsoft: This is a stripped down free version of a commercial product which comes as an optional extra on the Windows95 installation CD or as a free download from the Microsoft site. A single click will install all the necessary software and even set up default pages and directories which can then be edited easily. When used in conjunction with Word97 or any editor which can save as HTML, this becomes a totally integrated suite for publishing directly on the web from any networked machine. This makes it suitable even for the absolute beginner to Web publishing. The negative side of this particular product is that due to its reliance on Windows95 internal security, the security of the server itself may be compromised if certain options are utilised allowing people access to your material from all over the web. This can be a problem if you wish to utilise copyright material, either your own, or with permission, unless the password system actually works.
- Webserver1.0: As with the previously mentioned products this server program is available free of charge and while later versions, with increased flexibility and monitoring are available, they both incur a charge for use and are more difficult to configure
- Net-presenz version 4.1 A free Mac server. (check the web)

If, as may be the case for some delegates, your personal machine is not sufficient to the task of running as a server, or if, despite all assurances you do not feel able to use your machine for this purpose, there are several sites on the Internet which will allow users to store web sites free of charge on their systems (10)

Annick and I have brought a few copies of the software we use with us for distribution to anyone who may be interested in producing a similar site at their leisure. I will also be willing to go over the installation and configuration details of the servers with anyone who is interested. Additionally, locations on the internet and, at least basic, instructions on how to set up the server products mentioned are included in appendix (1) at the end of this paper.

One final technical point or issue which is worth mentioning is that of the name under which your server is to be known on the Internet, its "Domain Name" or "Sub-Domain". Simply put, almost all servers on the Internet are known both by name as well as by number, this situation and its consequences is currently one of the hottest issues in I.T. law. The name, which must conform to certain accepted norms is simply a method to enable humans, rather than computers, to easily remember and recognise where the data that is of interest to them is stored. The name will usually be allocated to you by whoever is in control of your main external network connection, in my case, this is the Strathclyde University Computer Centre. However, if I am willing to run the system without a name e.g. stephen.strath.ac.uk, relying solely on my "I.P." or internet protocol number) then the server will function perfectly well without a name. In effect, this means that if anyone were to enter, in my case, <http://130.159.116.101> they would access the material stored on my office machine in the Stenhouse building in Strathclyde. Links can of course be made between named servers, such as the central Law school server and unnamed machines such as mine and Annick's.

I'm on-line, Now what?

For Annick, I think that this was the most terrifying bit, how to translate her work, knowledge and experience into something which would become a useful teaching resource, rather than simply techno-babble or something which the students would ignore. For me too this was the most difficult part of the learning experience. I knew that what I was asking Annick to do was relatively easy, for someone with her level of knowledge, I knew what the software had to do, how to get it to do it, now all I had to do was transfer that knowledge to her in a form which was acceptable and intelligible - in Annick's words, I had to take off the Anorak and use ordinary language completely stripped of Jargon.

I have never regarded myself as a technical or mathematical person, indeed I failed higher Maths the first time round, so I have always thought of myself as rather a layman when it came to the technical side of computing, since all I really know is how to use them. In this, I rather suspect that most computer scientists would agree since the only technical background I have is what I have picked up out of interest or because I wanted to do something specific.

However, there is a mistaken assumption here, namely, that what a technician regards as computer literacy

and competence is the same thing as the naive user would see, As the second 1996 BILETA Report on Information technology and Legal Education notes, the technology has moved on so far that computing professionals are hard put to keep up, what chance then for those of us who are either legal academics or practitioners.

I would suggest that for a legal academic to even attempt to remain abreast of all the technological advances is pointless and perhaps more importantly, impossible. A much more practical approach is to pragmatically determine precisely what information or skills it is that you wish to impart to the students, and then to determine a methodology. It is with this in mind that I have attempted to outline a very simple and practical way whereby non-computer expert teachers and other academics can efficiently utilise both the readily available computing power and their time so that they can concentrate on their main function, research into and the teaching of, law.

Computer competence today must be defined in relation to what an individual, whether an academic or a student, can do, in relation to what they need to be able to do. To use an old analogy, you don't have to be a mechanic to be able to drive a car, having some contact with a garage will be enough most of the time.

It was with this fundamental concept in mind that Annick and I decided to attempt to set up her labour law website. After a ten minute panic, where she thought "help, I can't do this, he's talking Klingon" (4), she began to actually enjoy doing the editing necessary to create a usable web page, having written down (on paper) a simple process to create the necessary "hyperlinks" (5) using the form of:

- select the text
- click on the second menu from the right
- select "insert hyperlink"
- click "web view" button
- if it looks right, it probably is right, so click "save as HTML"

Admittedly Annick was in the fortunate (?) position whereby, since I was sitting at just across the room she was able, if necessary to ask for help if she ran into difficulties, however this was not necessary. And I was able to continue with something else while she completed her editing unassisted. The only minor difficulty which was encountered using the assistant for Word software, once Annick had gained the confidence that she could indeed create basic websites with little difficulty was paradoxically getting pages within the site itself to link correctly, rather than the links to external sites elsewhere on the Internet, however, it only took a few seconds to correct each link. As previously mentioned, this exercise was limited to the production of a simple, but effective and useful web site by a non technical law teacher, the addition of such tricks as frames, fancy graphics, cgi scripts and all the other web tricks which can be employed. Should there be a need for these, there are many technical people who are able to integrate them into web sites, I suppose that ultimately if more pure law staff produce web based materials themselves rather than having the technicians and development staff do it, then the developments staff will find themselves with much more time and potentially more resources with which to create fancier and more advanced network projects such as L.I.S.A.(11) and the C.V.U.

I hope that this part of the paper has been of some use to anyone considering setting up a legal base web site who has been intimidated by the supposedly technical mystique. I'll leave it to Annick to discuss her experience of putting the theory of web based training in the context of Employment law into practice and our final critique.

Part 2: Taking off the anorak (and Was it Worth the Trouble)

Lawyers do use a specific language which is very precise in its meaning (in my case it is also a question of learning English). I am not gifted in languages and when I was in Dublin doing my LLM thesis I had to learn, by myself, how to use word processing on Apple Macintosh, a couple of years ago it was hell. When I went to Strathclyde University they had only IBM compatible PCs and I had to learn how to use the machine all over again. I found the task very frustrating, because generally speaking, I could not understand the language of the PC. On my arrival in Strathclyde it was made clear to me that Computer use and Teaching methods had to meet at some point because (1) that was good for the department in its competition with other universities, (2) that was supposed to be good for my personal development, and (3) generally I think because every body

believes this is the way forward (fashion of the moment).

Having suffered so much in the past trying to understand word processors by myself, I was therefore discouraged from incorporating any form of computer related elements into my teaching methodology. I then tried not to do things on my own and went along to a university staff development seminar which was intended to explain the use of the Internet. I came out not quite knowing what it was all about, very confused and definitely discouraged.

This is, I believe, the great discouragement people experience in trying to understand computers. Nevertheless I was determined to find out how to use this monstrosity. At this point Stephen joined the University and we ended up sharing an office. I could not understand him when he spoke "computer"; it made me feel like I was beamed up into a Star Trek movie. However, I decided to give technology another chance since I had a project at this stage (motivational factor).

I had, last summer gone through the whole equal pay lecture course including the complex area of pension rights. I wanted to use this part of the labour law class to experiment with new teaching methods and since we were being strongly encouraged to use computer assisted learning by the university: I decided to go for it. This is not a theoretical paper in any sense, but rather an EMPIRICAL experiment.

II. Teaching Students (case study)

1) Situation and setting of the class

The class is composed of about 60 students from different levels and backgrounds: there is a mix of second and third years law students and second and third year Arts students (which include resource management, politics and social science). Only a minority of them have previously studied European Law, which is almost a prerequisite for labour law. The idea is to reach each student individually despite the inequalities in their legal background.

- Some internal factors influenced the teaching method in the use of IT.
- I had a set area of teaching which was not over extended and very well defined - i.e. equal pay.
- I had reviewed my lectures notes very extensively and they were up to date (and they were on my computer = word processing). They represent about 10 hours of traditional lecture (lecture-based).
- Labour Law and especially Equal Pay is a cross-jurisdictional subject involving questions of Scots, English and European Law all of which have different procedures and principles.
- Students in the class were multidisciplinary and at various levels of legal knowledge.

I referred to Stephen for advice and he suggested the creation of a web site for the already existing intranet of the Strathclyde Law School. Not knowing any other alternatives I went along with this. My methodology decided, I had first to create the site. Secondly I had to adapt my teaching methods to external constraints and to my choice of IT based teaching.

I lectured on Equal Pay topic within the Labour Law I subject. I was not the class co-ordinator and as a result could not decide on the method of assessment, which was a traditional written examination. In previous years, the course had been covered by traditional lectures, as was the rest of the Labour Law course that semester. There are four one hour lectures to cover the whole of the Equal Pay topic which is rather a short amount of time for such an extended area of law.

On introducing the computer based learning, students were advised that they should expect to spend 1 to 2 hours working on the computer for each hour of lecture time (i.e. (4) = 6 to 8 hours). The Equal Pay classes took place at the end of the semester. Students at this stage were used to a classical teaching delivery, therefore there was a great deal of student resistance to the introduction of a new methodology.

2) Re-evaluate the aims and objectives of course delivery

My main aim in any lecture is always to encourage Independent Learning or at least effective lecture learning.

One of my major problem is that I do not know of any official, comprehensive aims and objectives for using IT in legal education. My observation is that IT is frequently used as a goal rather than as method in legal education. Standard justifications mainly include that (1) it is a transferable skill and (2) it gives the university points in competing with others. Both are honourable points which I do not want to dispute, however, alone they can not be sufficient in themselves.

It was therefore up to me to define aims and objectives allowing me to develop teaching strategies which incorporated computing elements in my class. The aims and objectives were set as follows:

1. To develop personal transferable skills.
2. To increase both effectiveness and efficiency.
3. To achieve a better learning process in the class room; enhancing the learning experience of students during the lecture.

It is especially this last aim that was important to me. Most of the time, students sit through the lecture taking notes but with no learning taking place. I wanted my lectures on equal pay to be a learning experience.

3) The Learning Experience

I set the lecture with the idea in mind that the four hours of teaching I was going to do in that class should be a *learning experience* for students.

The research on student learning indicates that one of the strongest influences on the quality of student learning is the teaching received. I was more concerned with developing effective skills and conceptual understanding, than the coverage of a specific knowledge base. I intended to focus on the learning process by using IT tools. Students therefore had to take much more responsibility of their own learning.

Assumption: At this stage students in Labour Law I should have had a basic training in using computers and the law school Intranet. However, if this training was as good as the one I received, it was probably quite weak, despite computing being a compulsory first year subject.

To compensate for this potential difficulty, I gave them full instructions in order to be able to access the Equal Pay web site before I took on the class. [see retroprojector !].

Lectures were designed to be restricted in terms of classical teaching-delivering and extended in term of group discussion and co-operative learning in groups. In other words lectures were leading to ways of thinking about aspects of the discipline, and were not a detailed presentation of information which were to be found in the web site.

4) Appreciation/critics on the aims and objectives

What happens in one part of an educational system has an impact on another - i.e. the assessment has an impact on aims and objectives which has itself an impact on the content of the course and on the teaching method (and vice versa). By focusing on what students are expected to achieve by the end of the period of learning, the lecturer is in a strong position to establish what to teach and how. Although objectives are difficult to write, especially when the lecturer has limited knowledge about the potential of IT, once they have been established, the necessary assessment is obvious. In this case I had to start by thinking about the assessment since the format was imposed on to me.

5) Evaluation

As the web site was an integrated part of the Equal Pay course, the material could effectively be used to encourage an independent approach to learning. Students decided when and where they studied, whether to work alone or with a partner, and how much time to spend. They could work at their own pace, going back over material that they find difficult and choosing to explore the subject to the level of detail they feel appropriate.

The course structure required students to take greater responsibility for their own learning, they could no longer passively attend lectures and take down notes. They had to exercise self discipline in managing their time to ensure that they covered the necessary material. The milestone was the interactive lecture itself where they were required to deal with questions related to the subject matter. This approach frees me from having to cover basic materials in class, enabling a shift of focus to more application based material.

Was it worth the trouble?

There is always two faces to every thing.

Positive

The possible alternative would have been to give my students a handout.

1. As a practical financial aspect for my department, it is cheaper to create a web site and to let student pay their own printing if they want to print at all. Although this is not a major point for the lecturer it could well be for the faculty. Environmentally speaking it does not save on the use of paper. If students cannot afford printing they can always have access to the material anyway.
2. I believe that students actually had at least a minimum read through the notes if anything. If I had given to them a photocopied handout they probably would not have looked at it. Because of the setting of the web pages they had to at least look at the title of each page to ensure that they print the correct page, if they were printing at all.
3. Adaptability. It is definitely easier to update the web material for students rather than to update a paper based handout.
4. Does the lecturer save time by using computer aided teaching? I take into consideration that (1) I had to create the lecture notes anyway, (2) it was fairly easy and quick to turn my notes into web pages (It took me about 3 hours to create the site - not counting the time spent learning to use it), and (3) I was going to use an innovative teaching method anyway. I do not believe that computer aided teaching has saved any time for me. It is the overhead of change. However, I think it did not add on my work load as learning how to use it and creating the site were very quickly (less than half a day). I easily adapted and learned to become efficient with the techniques used.
5. It was easy during the lecture to spot the areas which students had trouble dealing with. As a result I could concentrate more on the difficult points. I knew that some areas were particularly difficult before going into the class e.g. pension rights but other areas which I had previously thought to be straightforward, were not so. The interactive lecture permitted me to deal with these newly discovered problem areas e.g. notions of male comparator and work rated as equivalent. I was also able to spend more time on these areas with students because they had access to the notes beforehand, via the website .

Negative

1. There are always risks in using IT: one risk is losing sight of academic rigor. It is important to make sure that by using fancy new teaching methods students still enhance their legal skills.
2. I believe documents on the web are not made for enhancing students concentration. The material is laid out in such a way that one must constantly cut the reading flow to turn the page. To that extent, documents are less readable. However, not everyone agrees with this comment, in particular my co-author.
3. The availability of sufficiently powerful, and reliable technology to both produce and run web technology may be a minor problem in some cases, as may be the continuing issue of student access.

Students feedback

Not all students were enthusiastic about the changes but the lecturers impression after the class was positive. Students have been asked to complete a brief questionnaire in relation to this very part of the Labour Law class where they had to reflect on the use of computers in the learning process. The general comments were very positive and none had suggested going back 100% to traditional lecturing. There were nevertheless a couple of students who did not like to learn in this way, principally, it would seem, due to a general nervousness and lack of fluency in using computers. Indeed, as students had asked me to, I have reiterated the experiment in the second semester. My tutors, however, reported that a few students still did not know how to use the site, nor how to find it, and how to deal with it.

The website statistics provided by our web manager (Moirra Simpson) shows that the web site on Equal Pay was the more visited site of the Law School undergraduates subjects. Students as well as lecturers need to be told in simple language about the computer element.

Conclusion

I suppose that ultimately, the most important methodology in any form of teaching is for the person imparting the knowledge to be absolutely certain that the information which they have shared has been both accepted by the recipient and understood. In the field of technology, as in virtually every other academic or practical discipline, this means that the subject must be demystified. In essence this simply means that the jargon must, where possible be replaced with "normal" understandable English, or at the very least explained. This is especially important where technology is being utilised by non-technical staff, where technobabble, while precise and accurate, is far more complex than the user either needs or wants. Non technical academic lawyers have little enough time to deal with the complexities of TCP/IP HTTP, POP3 and all the other acronyms which populate a technical discussion of computers. Like car drivers, they need to know how to drive, they do not need to know how to calibrate an engine, however useful it may on occasion be, that is the job of the mechanic. Neither are high powered, all singing, all dancing multimedia extravaganzas the answer, since in law, the greatest part of our working day is either reading or writing text. What is needed is a basic understanding of how to use relatively simple tools to produce basic, but easily accessible materials for our students. An easy learning curve for the lecturer will filter down to the students. If the staff feel that they have achieved something valuable (which in itself builds their confidence in the use of IT), they will promote it's use to their students, and the students will themselves accept the use of technology much more easily. In other words a bargain must be struck; the technicians and hobbyists among us must take off the anoraks and, and explain in clear and unambiguous terms how to use the incredibly powerful tools which we now have virtually at our fingertips, while the less technically minded must have both the confidence in themselves and the willingness to accept a relatively easy leaning curve in the pursuit of a greater dissemination of information to a greater number of students.

Notes

(1) <http://law-www-server.law.strath.ac.uk>

(2) <http://cvu.strath.ac.uk/campus.html>

(3) The current version of the site (configured as a subject heading within a larger site can be found at http://law-www-server.law.strath.ac.uk/Teaching/labour_ord_qxq/labourindex.html

(4) For those who do not follow "star trek" the klingons are an alien race who communicate in a very guttural language which bears a remarkable similarity to Russian.

(5) hyperlink, is one piece of Jargon which I don not feel can be removed even at the most basic levels of web page creation, however, there is a tendency for all of us who are comfortable with the technology to simply use the jargon, just as there is a tendency for us to use legal jargon, the problem arises in that we expect others to understand the computer language in a way that we would not expect a non-lawyer to follow legal jargon. In a way it is rather similar, I think to the tendency of first year law students to fill essays with half understood jargon rather than aiming for the clarity that is the trademark of good legal practice and teaching. In fact the only two pieces of jargon which were needed were, "hyperlink" and HTML, everything else was self explanatory.

(6) These are mainly "free ware", or "shareware" products and are available at least in demonstration models without charge from various sites on the Internet. Several are stored on my FTP site, but they can also be obtained from any of the other sites mentioned in appendix 1

(7) <http://www.masons.com>

(8) The installation of so called firewalls or other particular network issues may require a more specialised solution, but in general, this will only be in cases where you wish your site to be accessed from without the Institution and can usually be dealt with via your own technical support staff.

(9) It should be stressed that I have not used all the packages, and that this is solely my personal opinion, however, both as an undergraduate, I found them difficult to use and as a teacher I found them difficult to teach.

(10) This sounds too good to be true and with the exception of the CVU it is. The concept behind geocities.com and similar initiatives is that in encouraging users to locate their sites or homepages in a particular location a higher premium can be charged to commercial interests who also wish to utilise their services. The consequences of this are that such sites are sometimes slower to load due to bandwidth restraints. A additional point to consider might be the revised Janet pricing policy as regards the accessing of materials stored in the U.S. as from the next academic year.

(11) L.I.S.A. is a Java program developed in Strathclyde University by Orlando Connetta, it's purpose is to provide students with an on line environment for self assessment, currently in Beta test it is not yet widely available

All the software discussed in this paper, together with the paper itself are available from an FTP server set up on my University Machine. The address is <ftp://130.159.116.101>, this will take you straight to the software, and is probably the quickest download for those with direct JANET access. For those without direct access other addresses where the software is available include: <http://www.shareware.com>; <http://www.jumbo.com>; <http://www.win95.com> At each of these sites, a web page asking you to search for names of software is available and can easily be used, allowing you to easily locate exactly the software you require. The possible downside of this method is that since these sites are physically located in the U.S. download may take a little longer.