Through a Screen, Darkly: Electronic Legal Education in Europe

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Abstract

Electronic legal education involves the use of information, communication and instructional technologies to enhance students’ learning of the law and to provide law teachers with environments and tools for teaching the law. With the fast growth of the Internet many Law schools and Law faculties are moving their education and training into web environments. This may open new ways of teaching and learning the law by providing students with an environment in which they can manage legal information and legal knowledge for their personal professional use. However it is clear that throughout Europe there are divergent as well as convergent uses of the web and IT. This article explores some of the issues inherent in this, and suggests a number of projects that would enable ICT in legal education to facilitate the aims of the Sorbonne-Bologna process.

Introduction

Dante and Bach, with their intense love of structure and creativity, would have taken enthusiastically to computers. So too would Accursius, Blackstone, Stair and Grotius for whom, in their own unique ways, hypertext and databases would have been natural extensions of the ways they wrote about systems of law and legal reasoning. For law teachers in the twenty-first century, though, computers can often be objects of puzzlement and uncertainty. What should we be doing with them in our teaching? How can they increase student learning? How are they affecting administration in universities? Above all, in the context of this special issue, how is ICT currently used in European law schools, and what might their future role be in legal education within the framework of the Bologna-Sorbonne Declaration? In this article we shall examine some of the effects of information & communications technologies (ICT) in European law schools. We shall highlight one way in which ICT can be ‘institutionalised’. We then give a brief account of the types of e-teaching interventions used in European legal education, together with some examples of applications and environments. We follow this by focusing in more detail on two types of approaches taken in Scotland and the Netherlands. We shall conclude this paper with a list of what we consider to be desirable projects to improve the position of ICT in European legal education. That such conclusions can be drawn at all is symptomatic of the slow rapprochement of higher education institutions across Europe, of which the Bologna-Sorbonne Declaration, with its commitment to inter-institutional co-operation, mobility schemes and integrated programmes of study, is but one clear sign.1

It must be said from the outset that our survey of ICT practices in Europe is not based on a systematic survey of all law faculties and departments. Such a survey is a major undertaking, and is about to be undertaken by at least one EU MINERVA project. Rather, we have taken those centres where we knew of developments or use, and described in a little more detail why they are using ICT, how they are doing so, and the general results. While it is possible to adopt a comparative jurisprudential approach to the subject (and the article by Burkhard Schafer in this issue does just that), we have taken what might be termed a comparative educational approach, drawing upon educational research into ICT from stages other than the tertiary, and from different educational systems. That such an approach can be fruitful is borne out by the wealth of comparative educational research in almost every area of education.\(^2\) In the case of legal education, it can illuminate how ICT is being used and how, for us all in our separate jurisdictions, there may be communal lessons to be learned about its use.

**Learning and managed environments.**

Before we outline some of the approaches taken across Europe in legal educational fields, it will be useful to consider generally the status of computer- and network-based information systems in universities. With the development of managed learning environments (MLEs), such information systems have become significant forces on the teaching and learning environment of law schools. As yet, little is known about their effects on learning or teaching, in spite of the fact that many law schools are signing up to use them; and the research base from the direction of legal education is very small indeed.\(^3\) As we shall see, some of the general research on networked communications could be useful for us to bear in mind when considering how we might use MLEs effectively in legal education.

For the past ten years a team of researchers at the ‘Travail et Mobilités’ unit in the University of Paris X-Nanterre have been analysing patterns of computerisation in universities across Europe. They focused on how it affected organisational change, how it was used for self-evaluation purposes, and how it affected administration and management of students.\(^4\) They came to a number of general conclusions:


\(^3\) For an indication of the extent of their use, see Appendix 1 which shows the usage of MLEs by Dutch law schools and faculties. WebCT and Blackboard both post lists of HE institutions using their products. See [http://www.webct.com/company/viewpage?name=company_webct_customers](http://www.webct.com/company/viewpage?name=company_webct_customers) and [http://company.blackboard.com/clients/index.cgi](http://company.blackboard.com/clients/index.cgi).

1. at the higher end of university management, the use of electronic data and information systems was unsystematic

2. use of computers as a means of decision-making was greater in departments than at the central administrative and managerial functions, and was applied in quotidian, rather than strategic, decision-making within universities

3. computer-based information systems attracted more support from administrative and clerical staff than from teaching staff; and the use of these systems tended to increase the distance between these two groupings within the university. ⁵

The advantages of IT in information administration and at departmental level are fairly obvious, and need no rehearsal here. Gueissaz’ team’s conclusions from these and many other findings, though, are not entirely positive. Information networks, far from increasing communication, could actually make communication between groups within the university more difficult. Ownership of and use to which data could be put could become a source of suspicion and discord. And the new information networks required new staff posts, committees and procedures to organise and regulate network issues. All this administrative and informational infrastructure, Gueissaz argued, required to be integrated into traditional, decision-making processes if they were to enable, rather than inhibit, decision-making.

What is happening as regards IT in university administration is mirrored generally in society. The Bangemann Report forecast that IT would bring about massive changes to the way we work and live together, but was not blind to the stress fractures it would cause to the fabric of society. ⁶ Technology, however alien and new it may appear to every generation, is always deeply political, deeply cultural and imbued with our moral values: it is never merely a neutral agent.

A typical example of this in the domain of legal education is the decision of universities or departments to use a managed learning environment (MLE) in its teaching & learning – BlackBoard or WebCT are examples, and universities throughout Europe are using, or are considering using, such systems. The strategy involves major decisions regarding registry services, the creation, handling and access to personal data and academic course information, and much more. ⁷ Often the decisions are clothed in three layers of knowledge conception: a democratic conception, which often includes reference to distance learning and transparency;

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⁷ For extensive information on this, see the JISC site, especially at http://www.jisc.ac.uk/mle/
an economic conception, referring to income generation and competitiveness, and a discipline-related conception, where the greater efficiency of discipline-based learning is adduced.\textsuperscript{8}

However, the decision-making processes involved in the choice of a commercial MLE or the decision to create one within the university can rarely be made by traditional committee membership and structures, composed as they are of discipline specialist academics and administrators. As a result, new actors emerge ‘whose relationship with more traditional (collegial or administrative) structures cannot easily be defined.’\textsuperscript{9} As Jos Boys points out in a recent report on MLEs, these new committees and actors often take on interesting attitudes, because they implicitly see themselves sitting uneasily between the formal committees at the administrative centre, and the teaching and discipline clusters in faculties and departments at the periphery. He observes that ‘problems with implementation are most likely to be ascribed to a generalised need for a ‘culture shift’ because of the current lack of experience of ICT rather than to specific institutional issues about organisational/educational change or the integrative demands of scaling-up’.\textsuperscript{10} As a result, the interpretation of the model of what a MLE could be (since there are many conflicting models of the environment) becomes seriously degraded to limited portal concerns. What have always been regarded as separate systems of learning services -- registry services, archival services, library functions, learning interfaces -- still remain so in the MLE, and the key opportunity for change, organisationally and technically, is lost. Indeed, he argues that ‘the portal approach is taking hold precisely because it enables institutions to avoid difficult questions about how they organise themselves’ (our emphasis).

Boys’ point is profoundly paradoxical, but very much in point. What he is describing is in effect a means by which technology is used by an institution to avoid change by allowing the institution to appear to embrace change through the introduction of new technology. ICT thus legitimises standard, traditional practices, and is prevented from challenging the dominant paradigm. It can then be assimilated, and becomes institutionalised. For real change to happen, Boys concludes that higher education needs to implement, \textit{inter alia},

- A problem-seeking, not a solution-driven, approach to ICT
- An explicit model for managing change
- Explicit goals, both organisational and educational
- Development methodologies centred on quality of content and processes, not technical compatibilities


\textsuperscript{9} Gueissaz 2002, \textit{op.cit}, p.72

\textsuperscript{10} J. Boys, ‘Managed Learning Environments, Joined up Systems and the Problems of Organisational Change’, at \url{http://www.jisc.ac.uk/mle/reps/#2}, 2002
• Involvement of students
• Alternative ‘visualisations’ of a MLE’s functions.

What applies to the administration of learning within an MLE applies also to the virtual learning aspects of the environment. ICT often fails not because the technology fails, but because the above points are not part of its implementation. In other words, and to apply Boys’ words to the local context of the law school, MLE technology can enable teachers to avoid difficult questions about how they organise their teaching, and can be used to support shallow learning and the transmission model of legal learning. Its rigidity can also mean that law teachers find it difficult to implement how they want to teach, as opposed to how the technology wants them to teach. What happens then is that teachers turn into technicians.\(^{11}\) As Galton put it, referring to school teachers,

> By making certain [teaching] techniques mandatory you run the danger of turning teachers into technicians who concentrate on the method and cease to concern themselves with ways that methods must be modified to take account of the needs of individual pupils (p.203, his emphasis)

And, we might add, the individual needs of students studying law, with its own culture, genres of writing, forms of argumentation and sub-topics within the general field of law.

**Contemporary uses of electronic legal resources in Europe: web-based examples**

And yet, staff must start somewhere to use technology, and where best to start but with the forms of documents and the educational approaches that they know well. With the incredibly fast growth of the Internet many Law schools and Law faculties are moving their education and training into the web environment. The web environment enables a more integrated approach of using the technologies in legal education. It also enables teachers to assemble, store and (re) use materials for learning the law. Maybe even more important it may open new ways of teaching and learning the law, for example, by providing students with an environment in which they can manage legal information and legal knowledge for their personal professional use. The following examples are taken from members of ELFA. They are not included here as representatives of jurisdictional practice, but as useful exemplars of the types of web-based teaching learning and assessment becoming common practice throughout European law schools and faculties.

In the Faculty of Law at the University of Helsinki (http://www.helsinki.fi/oik/tdk/english.html), Kristian Siikavirta has created two webpages, on for students in his teaching and research area (law and economics – see http://www.helsinki.fi/~siikavir), and another for disseminating general information regarding webteaching to the rest of the faculty -- http://www.helsinki.fi/oik/tdk/tdk/tukihenkilonsivu/. The Faculty makes use of an electronic learning environment (WebCT) for all first year students. There are also a few WebCT supported courses available for other students. Kristian has co-designed most of them and he maintains helpdesk user rights in the law faculty. His own WebCT-based learning environment has been constructed for the use of postgraduate students.

At the University of Aarhus in Denmark, Tom Latrup-Pedersen has created information for his students on international and student exchanges, as well as posting information on using the net and animated PowerPoint slides (http://www.jura.au.dk/~latrup)

Daniel Stenner, at the Westfälische Wilhelms-Universität in Münster (www.uni-muenster.de/Jura.tkr), has produced an internet-based learning-tool that is designed to help German law students in preparing for the first degree or Staatsexamen (www.jurlink.net). He has integrated interactive tools and substantive material, for example self-tests on different fields of law, a video simulation of an oral exam, and handouts from professors and judges etc. He also participates in the RION project, a fairly new initiative and not yet fully launched. This is a joint project involving eight German universities, designed to support professional education by using virtual environments and synchronous as well as asynchronous tools (http://www.uni-muenster.de/Jura.tkr/oer/projekte/rian.htm). His role in the project is to provide content for telecommunications and media law -- one of the aims of RION is to train students on legal issues that can be easily accommodated by the new media.

At the Max Planck Institute for Comparative Public Law and International Law at Heidelberg (http://www.virtual-institute.de/eindex.cfm), Thilo Marauhn is responsible for development of the Institute’s website and virtual institute. This contains archives of documentation, as well as links to groups and organisations working within the fields of human rights and international law. Thilo also makes use of simple html-technology for presenting learning materials to students on the web http://www.uni-frankfurt.de/fb01/marauhn/start1.html; and recently received special funds for the development of elearning tools for the teaching of public international law and EU law.

In the Faculty of Law at the University of Leuven, Blackboard is used extensively to organise online materials for students and staff -- http://www.law.kuleuven.ac.be/jura. A good example is the work of Jos Domortier at the Faculty’s Interdisciplinary Centre for Law and Information Technology at: http://www.law.kuleuven.ac.be/icrinew/education.php
At the University of Orléans Thibaut Massart co-ordinates a Diploma in ICT (www.dessdicom.com), and manages a website for his teaching in the form of an attractive newsletter at www.droitdesaffaires.org using Webzine Maker™.

In the University of Barcelona Miguel Peguera makes use of a virtual office environment metaphor for his students that mimics a professional legal environment (http://www.law.warwick.ac.uk/subtech).

At the University of Trento Department of Legal Sciences, Giovanni Pascuzzi has posted materials from his courses at www.jus.unitn.it/users/pascuzzi/materiali.html, and the text of his book, Cyberdiritto, on the web at www.jus.unitn.it/users/pascuzzi/pubblicazioni/. In addition he has produced a CD entitled Cercare il diritto (Researching the Law). The CD-Rom reproduces a virtual legal library with the aim to explain how a lawyer can retrieve legal materials (statutes, case law, legal literature) consulting specialized books and periodicals – see www.jus.unitn.it/users/pascuzzi/pubblicazioni. He has also produced a hypertext guide to the Italian law on Delict (Tort) entitled La responsabilita civile.

At the University of Aberdeen’s School of Law the Roman Law Resources site is a major contribution to civilian scholarship and Roman law learning – see www.iuscivile.com.

At Warwick University, the UK Centre for Legal Education provides a wealth of material (some of it shared with BILETA) on legal education, and advertises events, publications and much else (http://www.ukcle.ac.uk).

These, and many other such examples, reveal the range and variety of web-based teaching and learning. Much of it is local to an institution and faculty. Yet in many ways this is a strength, for the local materials are generally regarded by staff and students as immediately relevant to their courses and ways of teaching and learning; and while the web can be used for many innovative purposes, it is also a valuable source of information. There are a two interesting points about this use of the web. First, it is generic to all jurisdictions across Europe. Second, to say that these and many other sites simply give out information is to miss the importance of the web as both a display and interactive medium. Aberdeen’s Roman and civil law site is a scholarly resource, as is the UKCLE site; Giovanni Pascuzzi’s site provides information on legal research as well as enabling users to carry out legal research with his CD.

This type of web development is generic across Europe. We will now consider in more detail two educational interventions using ICT which present an interesting contrast, not least because they have been developed in different jurisdictions.

ICT in Legal Education in the Netherlands: legal knowledge and legal reasoning
Boys’ paradox – that technology can be used by an institution to avoid change by allowing the institution to appear to embrace change through the introduction of new technology -- is applicable not only to institutions, but potentially to all national and international programs as well. The HYPATIA research programme initiated by the Faculty of Law of the University of Amsterdam is an example of an approach designed to foster real change. The focus within this research program is on the implementation of development strategies centred on quality of content and processes. The research programme thus treats the design of electronic materials for learning the law as a research activity.

In designing these electronic materials a principled and structured design approach is taken. This approach involves three major types of research categories:

1. basic research in the modelling of legal knowledge and legal reasoning
2. applied research for realizing the electronic materials
3. integrated research where the emphasis is on managing existing electronic materials and delivering courses.

We shall consider each of these categories in turn.

1. The major hypothesis of the research programme is that electronic materials for learning the law should incorporate models of legal knowledge and legal reasoning. These models are (re) constructed following two perspectives: the legal perspective and the knowledge engineering perspective. The programme thus draws together research both in the field of law and in the field of artificial intelligence and law. HYPATIA also incorporates an empirical research component. Empirical studies are carried out to gain insight into legal experts’ methods of problem-solving and law students’ difficulties with acquiring and using legal knowledge.

2. In applied research, the basic research results are used to design the electronic environment in such a way that it addresses students’ specific differences in acquiring and applying legal knowledge. Instructional design decisions are thus made on the basis of a global theory on learning and instruction. In this way the design process results in a coherent and consistent instructional model that makes it feasible to evaluate the electronic materials extensively.

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12 Op cit

3. The integrated research category is concerned with the construction of an infrastructure for learning object repositories. Knowledge of existing tools is essential, but it is also necessary to construct a classification scheme that integrates these existing applications in a repository. This clarifies the complexity of, and distinctions between, types of applications. It enables us to consider what electronic materials are already available, and what tools are still missing and need to be constructed to service all aspects of learning the law. In time, such electronic materials can be made available in a ToolBox for learning the law, and made available to law teachers and students. The electronic materials in the ToolBox are materials that cover a wide range of legal knowledge and legal skills to be acquired by law students. But if staff and students are to select the proper tools for teaching or learning, we need to define selection criteria.

A classification for electronic materials for learning the law

HYPATIA defines a classification of electronic materials for learning the law as follows:

1. Communication tools -- that help to structure, organize and support communication in accomplishing a certain legal task (for example, use of email or chat box in an online legal clinic; use of e-mail, chat box, video conferencing in a legal negotiation tool)

2. Information tools -- that contain legal data that are needed in order to carry out a certain legal task (for example, law databanks, precedent databank, a databank with models of legal documents)

3. Instructional tools -- electronic materials for the effective and efficient acquisition of legal knowledge and legal skills

Instructional tools are electronic materials intended to support the learning of a certain body of knowledge or a certain (set of) skills. This is a fairly amorphous category and in addition, there is a considerable amount of research ongoing into the construction, implementation and effect of such tools. In more detail, they can be divided into three sub-categories

1. Knowledge acquisition tools -- tools that support the learner in acquiring the meaning of concepts and the relations between concepts.

2. Training tools -- tools that use the acquired knowledge in performing a legal (problem solving) task, skill acquisition tools.

3. Test tools -- tools that present the learner with assignments to test her knowledge and performance.

Legal training tools is probably the most heavily-used category, most of the existing electronic materials for learning the law are tools for skills acquisition. Classic examples would include CATO, CoCo, Instructieprogramma Juridische en Fiscale Bibliotheek and PROSA\textsuperscript{15}. These tools set out to teach students case reasoning skills or statutory reading skills.

**Coaching systems**

Computer programs that provide an environment for students to acquire skills in applying domain knowledge and that assess and correct students in their performance, are referred to as ‘coaching systems’. Coaching systems differ from instructional systems that only present subject matter (domain knowledge) and that only check whether the student has understood the presented material. Most so called “intelligent” computer assisted instruction systems, i.e. systems using AI technology, are coaching systems\textsuperscript{16}.

Such a system presents the student with an environment in which she can practice the skill to be acquired. During practice the student’s activities and outcomes are monitored, making it possible for the coach to correct errors and mistakes and to plan further practice. A coaching system consists of an environment in which the student is enabled to perform the task to be learned. The coaching system monitors the activities and outcomes of the student and compares these with the required activities and outcomes. These systems therefore imply some normative view (as most teachers have – a significant point we shall return to). A deviation is viewed as an error or inefficiency. When the coaching system encounters a deviation it subsequently diagnoses what may have caused it. Based on the outcome of this diagnosis the coaching system presents remedial information to the student user.

Coaching systems may differ in three major factors. The first factor is the degree of similarity of the training environment to what might be termed the ‘real’ environment. The second factor is the degree of freedom the student has in performing the task; and the third is the degree to which a coaching system is able to “understand” what the student is doing and what her results mean.

All such systems tend to be task-based. A task is performed in some environment, and the environment defines some problem or goal to be achieved and makes explicit the conditions under which the problem is to be solved. In real-life environments coaching systems are in fact “help” systems. Here a user performs a real life task being the task to be learned or trained in the real life setting. Such coaching systems present the user the real environment, not a simulation, and offer help to the user during task performance. In general, however, the

\textsuperscript{15} http://www-2.cs.cmu.edu/~aleven/dissertation.html; http://www.rechten.unimaas.nl/edit/ICT/index.htm;


\textsuperscript{16} If only for the simple reason that instructional systems are hardly cost effective when compared with traditional media such as books and other written course material.
environment in a coaching system is not a real environment, but a representation of reality, i.e. a simulation. Simulation environments can vary to a considerable extend in the way in which reality is represented. Where the environment simulates the problem situation that defines the task to be learned or trained, the coach sees to the learning or training of the skill to be acquired. The coach may vary on task performance that is required or allowed and, related, tutorial style. Coaching systems vary in the degree of freedom the student has in performing the task. To start task performance the student is presented with an initial situation and a problem specification. However, the tutorial style from there on may vary from constrained to totally free.  

In the constrained setting there is an explicit setting of the task. The task is differentiated into a task-directed problem or activity, the goal is stated and the sub-tasks that have to be carried out are traced. In a more open setting the student is presented with a situation. Without explicitly setting a task the coaching system asks the student to explore the environment on the basis of this situation.

Another issue here is the appearance of the coach. The coach can either be present as textual feedback and hints, or as a pedagogical agent who is present in the environment. An example of this is the pedagogical agent 'Steve' who is a human-like agent that collaborates with students in a virtual world to help them learn. Coaching systems also vary in the way the knowledge is explicitly represented in the system.

Systems that use an implicit knowledge representation encode decisions not knowledge, and for this reason are classified as non-intelligent. Systems that do explicitly encode the knowledge

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19 See [http://www.isi.edu/isd/isd/carte](http://www.isi.edu/isd/isd/carte) for a short demonstration of Steve. These human-like agents are also referred to as "atavars". Using animated pedagogical agents in learning is also referred to as 'guidebot-assisted learning'. Guidebots help to keep the learner on track, interact with the students in learning environments, engage in instructional dialogue and enhance motivation.

are labeled as ‘intelligent’. Explicitness of knowledge representation comes in degrees, of course. With an explicit knowledge representation it is possible to make inferences and to give explanations on the basis of the representation.

These three major factors on which coaching systems may vary (namely, environment, coaching strategy and knowledge representation), may also serve to classify and compare existing coaching systems.

**PROSA**

PROSA is an example of a coaching system currently in use at Faculty of Law at the University of Amsterdam. It presents an environment in which students can learn to solve cases in administrative law by applying statutory rules. Its instructional model is based on theories by Gagné, Anderson and Merrill amongst others. It focuses on helping students improve their skill in solving legal cases, and does not introduce them to new legal concepts. Students are presented with a problem in administrative law, and are taken through the problem logically to the conclusion. In the process they are supported in managing information during problem-solving, they are given systematic guidance, and can acquire a knowledge of the structure of administrative problems and their legal solutions in Dutch law.

The program was closely evaluated, first in a field test using pre-test and post-test control and experimental groups, and then in a typical examination, comparing PROSA-trained students with those who underwent only the normal teaching in the Faculty of Law at the University of Amsterdam. The results were interesting. The first evaluation proved conclusively that there was significant improvement in legal case-solving skills for those students who were trained using PROSA. One would expect this result to be confirmed by the official examination. However, the examination showed no such significant difference between PROSA-trained students and students who sat the exam without PROSA training. After close analysis of the results, and the method of examining and marking, it was apparent that the examination questions tested conceptual elements that PROSA did not support, and that the marking process did not necessarily test students’ case-solving abilities. Indeed, as Muntjewerff points out, the ‘post hoc analysis on the grading models that were used in PROSA and in the exam showed that after re-grading the exam the PROSA way’, the effect of the first evaluation appeared again in the results.

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23 *Ibid*, p.272
The results of the PROSA evaluation are interesting not only for applications based on ID principles such as PROSA, but for many other applications, too. The results bear out the observation by Jos Boys quoted earlier regarding the relationship of new technologies and pre-existing systems of information and knowledge. Boys pointed out the disparity between the two, a disparity evident in the second PROSA evaluation, where it became clear that the examination tested one form of knowledge representation and PROSA quite another. Both evaluations are valid ways to assess students’ knowledge and skills in administrative law; both represent normative views of the learning process. It could be argued, though, that PROSA encourages a more sophisticated form of problem-solving.

But what the second evaluation proved beyond doubt is that the adoption of an ICT application such as PROSA requires staff to consider not just superficial factors such as timetabling access to the applications, on the look & feel of buttons on the screen, but also fairly fundamental aspects of teaching and learning, some of them outlined by Boys in the list above (p.X).

**Electronic Legal Education in Scotland: virtual environments for professional learning**

In October 2000-2001, the Law Society of Scotland introduced a new curriculum for the Diploma in Legal Practice, the professional training that LLB graduates in Scotland must undertake if they are to become solicitors or advocates. The new curriculum emphasised the integration of professional skills and knowledge, and was based upon a competence-based view of professional practice.

The problem for the providers of the Diploma, however, was that the curriculum was still divided in an academic way, into small discrete areas of law. The curriculum therefore was still academic in form, while attempting to induct students into the reality of professional practice.

One solution to this problem within the GGSL was to create a simulated practice environment on the web. Over a number of years from 1999 onwards, we created a virtual environment using HTML, databases and a number of other applications. This consists now of a fictional town, Ardcalloch (situated on the south bank of the river Clyde to the west of Glasgow), and a number of virtual legal firms, within which students practise in groups of four. Each firm completed a number of projects, in PI, Conveyancing and Private Client (wills, trusts, executries). The projects were assessed, and were also an integral part of the teaching and learning environment within the course. Each student firm was given a passworded web page, which was used for firm work in the above projects. Each student also had a private individual page in which they could store their documents and communicate with tutors on individual work.

The metaphor of virtual firms within a virtual town effectively creates a web-based community of interests between students and staff. There are occasions in the projects where tutors play overt roles – for example in the Private Client project they act as senior partners revising student work, or the Sheriff Clerk to whom initial writs, properly drafted, ought to be sent. In
the PI project, however, students contact members of staff disguised as different personae within the virtual town. Thus, if they want to contact a consultant at Ardcalloch hospital to request a report on a client’s injuries, students simply address their correspondence to the appropriate person in the hospital. The mail is re-routed to the online facilitator who then responds in character. The project is thus real-time communication, and uses the capacity of the net to swap identities in order to present the simulacrum of a legal transaction.

Transaction is of course the keyword here. We define this form of learning as ‘transactional learning’ in the following ways:

1. **Transactional learning is active learning.** Transactional learning is active learning, not passive. In that sense, we want students to be involved in activities within legal actions, rather than standing back from the actions and merely learning about them. There is, of course, a place for learning about legal actions -- transactional learning is rarely possible unless students first have a conceptual understanding of what the process actually entails. However, transactional learning goes beyond learning about legal actions to learning from legal actions. There are some forms of learning that can only take place if students go through the process of active learning.

   **Example**

   A student from a virtual firm that represented the insurers in the Personal Injury project wrote to the Managing Director of Melville Welding, where the accident took place that was the basis of the pursuer’s claim. I replied in the character of John Rutherford. Over the course of the nine weeks we became quite friendly, and the student lawyer entered into the role play by referring in his letters to golf on a local course, etc., to which I responded.

   Towards the project deadline, 20 December, the student wrote me a letter asking me to grant access to a specialist Health & Safety consultant employed by the pursuer to assess and analyse the status of the grinding equipment upon which the accident had occurred, but only after 20 December (ie after the project had finished). I wrote back in character, quite amenable to this suggestion, but let it be known that my diary and work flows on the shop floor could easily accommodate an earlier date. I then sent a letter to the student in my character as anonymous PI mentor, reminding the student that he was asking the client to lie in the hope of achieving a better settlement, and of the ethical issues involved in this. The situation was created by the student within the scenario. It arose from the communications flow within the project, and would not have arisen had the student merely learned about ethics and the transaction. Moreover, this is ‘just-in-time’ knowledge, not ‘just-in-case’ knowledge.

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1. **Learning to do legal transactions.** As befits the type of learning that students do in a professional legal course, we aim to give them experience of legal transactions. In addition to learning about how property might be transferred, students also take part in the transaction. They thus learn considerably about the transaction itself. This learning extends not only to a knowledge of bits of the transaction, but to the whole transaction.

*Example*
There are many examples of this. Students learning how to carry out a personal injury transaction by carrying out the transaction; they learn how to prepare a deceased client’s estate for valuation by actually carrying out the process of valuing it.

2. **Transaction + reflection.** Transactional learning involves thinking about transactions, indeed – to go back to the root of the word – thinking across transactions. Such reflection takes many forms. It includes the ability to rise above detail, and ‘helicopter’ above a transaction; or the ability of students to dis-engage themselves from potentially damaging views of the group process within the firm, and re-construct that view. It involves documenting firm processes and internal transactions. These documents are focused, private to the firm and its Practice Management tutor/consultant – reflection, even in a group, is often a private event, and the products require careful handling if the process is not to be fatally inhibited.

*Example*
Students are told that they need to document a transaction as they proceed. They produce ‘Notes to file’ that are records of what was done, when, by whom, why, etc. In addition, they are required to produce an individual ‘electronic log’ for their tutor in the Practice Management course, that details what they have done in the past three weeks or so. In addition, the Practice Management course in the Diploma is assessed by a 1500 word reflective report by individuals on the workings of their firm, and their contributions to it.

3. **Collaborative learning.** Transactions in the firms are forms of collaboration. Students are valuable resources for each other, and the concept of the firm played out in the virtual environment harnesses the power of this form of learning to enhance student learning. Collaborative learning breaks down the alienation of what might be regarded as isolated or cellular learning. There is of course a place for individual learning, silent study, literature review and so on. But students can help each other enormously to understand legal concepts and procedures by discussing issues, reviewing actions in a group, giving peer feedback on work undertaken in the group, and so on. And perhaps what is even more important is that they begin to trust each other to carry out work that is important (the projects are assessments, and many students have clauses in their traineeship contracts that insist they pass their assessments at first diet). In other words, students begin to learn how to leverage knowledge amongst themselves, and to trust each other’s developing professionality (learning about know-who, know-why, as...
well as know-what within the firm). Often, we have found, if there are firms that are not producing good work or keeping to deadlines, it is because they do not know how to work together effectively; and this often arises from a lack of trust.

Example
Students are encouraged to learn how to play to each other’s strengths in the firms. Last year, one firm that could not do this due to interpersonal factors had to be dissolved. They knew little about each other as co-workers, could not trust each other, could not communicate well. On any scale of co-operation, they could not achieve co-working practices. Dissolution of the firm and distribution of the members to other firms was the only option, but not before the students had learned valuable lessons that they carried forward into their next firms.

4. Holistic process learning. Transactional learning emphasises holistic and process learning. This requires a little explanation. In undergraduate seminars and lectures and in their reading of texts, students engage with ideas, and form understandings of legal concepts. They link up emerging understandings with their prior knowledge, and with their anticipation of future knowledge, and the more they become familiar with the discipline, the easier and more efficient this learning process becomes. However this form of learning proceeds by chunks, necessarily because our cognitive attention is limited, and we can only devote a certain amount of attention to this memory-hungry process.

In their traineeship, the students will be asked to undertake tasks that demand a more holistic understanding of legal process and legal procedure. In this sense, students need to arrive in their traineeship not only with a sufficient knowledge of the parts of a transaction – which letter is sent to whom, what it should contain, the legal implications of its content, for instance – but also a holistic knowledge of the whole transaction. When they are given a file-in-progress in the office, for instance, they need to be able to move from part to whole, and vice versa, in order to identify what has been done and what needs done. This process is difficult for trainees precisely because they are unsure of the whole transaction. It therefore makes sense to give them as much practice in carrying out whole-to-part and part-to-whole thinking. This ability, as Dreyfus & Dreyfus pointed out in their influential descriptions of expertise, is crucial to the development of a competent practitioner, and essential to the creation of expertise.25


Example

In Conveyancing, for instance, students undertake complete sale and purchase transactions in the project. The syllabus involves lectures supported by surgeries, which prepare students for tutorials, and then for the online project. The form of learning is thus both face-to-face and online. Students receive feedback on their drafting tasks through assessment of competence on the tasks, are given advice and then, if deemed not yet competent, are required to resubmit. Each firm completed 17 documents for purchase and 13 for sale, often with multiple enclosures. This was an exact replication of the document trail in real life, and culminated in more real-time settlements on the day of settlement than any law firm in Scotland.

This form of transactional learning has roots in many different forms of learning activity and theory. What the simulated environment does is to use electronic resource-based learning to provide students with a supported learning environment in which they can practise the tasks and the procedures that they will carry out for real in a matter of months in their traineeships. As such, it is similar to a number of constructivist approaches to learning, and has obvious parallels with problem-based learning such as is adopted in medical faculties. It can be classified as a coaching environment, as defined above, albeit one very different from PROSA.

Reasons for jurisdictional differences

As can be seen from the brief outlines above, there are quite significant differences in the use of ICT in these initiatives in law schools in the Netherlands and Scotland. What could account for the differences between the initiatives? There are a number of factors:

Use of theory

Each initiative derives its theory from very different traditions of educational theory and practice. PROSA and HYPATIA are grounded firmly in the instructional theory traditions of Gagné, Merrill and others, and in the AI community (both AI & Law and AI & Education). The transactional approach of the virtual community stems from a variety of sources – web-based communitarian influences, Vygotskian educational theory, constructivist and rhetorical theories of learning.

Patterns of Funding

As pointed out above, the Dutch government-funded interventions of the National Programme for IT and Law were research-focused and, by a quite different route than that taken by the TLTP in the UK, produced prototypes and working programs. However, the virtual community is one institution’s response to factors in a local situation, and funding was a direct consequence of the Glasgow Graduate School of Law, a collaborative venture unique in the UK between the

law schools of the universities of Glasgow and Strathclyde. We shall return to this point in our conclusions.

Entry to the profession
In each jurisdiction many of the professional legal skills taught and learned are defined by the knowledge and skills required to achieve entry to the profession. In Scotland, this is defined by becoming a member of the Law Society of Scotland or the Faculty of Advocates. In the Netherlands, as in most if not all continental states, this is defined by ‘fulfilling the requirements of becoming a judge’. In the Netherlands, an inventory of types of legal skills incorporated in the Introduction to Law or Encyclopedie curriculum of Law Faculties (first year) would include complex statutes reading, legal precedents analysis, judicial construction, legal case solving, legal argumentation, legal pleading, legal procedure and legal research. Students take around four and a half years to complete their master’s degree in law (meester in de rechten), after which they take up a training place in a solicitor’s office, or in-house with a company, in government or court administration or in legal education. (Presently, many university law faculties are considering a move to a baccalaureat three-year structure.) After six years’ experience, the legal agent may start upon the track of judicial career training.

In Scotland, there are benchmark academic skills for the undergraduate student close to those adopted in England and Wales; while for the postgraduate Diploma student there is the set of professional skills set out by the Law Society in its new professional training programme. After a LLB lasting two years (fast-track graduate) or three (Ordinary degree) or four (Honours degree), students undertake a year-long Diploma in Legal Practice, which prepares them for their two-year traineeship in a law firm.

Legal (educational) culture
There are a number of significant differences in the structure and culture not only of legal education but of the legal communities in each jurisdiction. The legal cultures which define what the jurisdiction’s legal education consists of (and which of course are sustained by that educational process) are reflected in the approaches taken by the two jurisdictions. The ICT initiatives in the Netherlands focus on the academic skills of textual analysis and problem-solving approaches that are closely modelled on the types of problems dealt with by the relatively small body of legal institutions within the Netherlands, and the tasks undertaken by lawyers in the types of firm structures predominant in the Netherlands. Forms of legal argumentation within courts and other decision-making bodies also define the types of learning


that ICT supports. The ICT applications, in other words, would be seen as embodying both academic and professional skills that would be important for trainee lawyers.

By contrast, the approach taken in Scotland is that of a distinction between the academic skills relevant to the undergraduate law degree and those of the postgraduate legal training courses. In this article we have concentrated on what is being developed in the latter. However it is interested that the major development in coaching tools that has taken place in the Netherlands has not taken place in Scotland, even though the benchmark skills would accommodate such programs. There are two reasons for this:

1. The major injection of finance offered by the Dutch government to universities was specifically aimed at the development of AI-oriented tools. In the UK, the government-funded TLTP projects were much more loosely defined, and as a result, the resources produced were derived from a variety of models and theories. In addition, emphasis was placed by the Funding Councils on the need for practical resources that could be made available for teachers and learners within a discipline, and therefore the result was courseware that was of immediate use, rather than models, research prototypes and theory-testing. The conceptual models produced in the Netherlands are descriptions of components and their interdependencies in terms of functions rather than in terms of machine-executable formalisms and components or, for that matter, actual courseware. PROSA is unusual in this respect.

2. The forms of legal argumentation developed by Dutch legal educationalists were closely modelled on the textual and problem-solving skills of Dutch lawyers. In Scotland, they tend to be modelled on the academic skills of legal research and problem-solving, and the professional skills-set in these and other areas is significantly different. Programmed learning such as PROSA would require considerable adaptation to the Scottish legal educational system, not because the substance of legal logic is different in the two jurisdictions – clearly it is not – but because the form and substance of learning is different, as are the objectives and modes of educational interventions. And similarly with Ardcalloch in the Netherlands. There is no educational reason why such a simulation cannot be used extensively in Dutch undergraduate legal education; but the form and substance of the activities in Ardcalloch would have to be extensively adapted to function effectively within the Dutch system of legal education.

As a result of these and many more local differences, the use of ICT in the two jurisdictions are very different indeed. It is significant in the more or less random examples we took earlier from jurisdictions that there was a similarity in the way that information was being presented to website viewers. Such information will be broadly similar across jurisdictions because it is

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representative of the information necessary for groups of users – staff, prospective students, experienced students, etc. – to perform their roles and functions in the law school. However, when ICT begins to be considered in depth and used extensively on a course, it is inevitable that local legal cultures will bend it to its own ends. And this is a process that should be encouraged, for it is really part of the process of ownership, by which a law school develops ICT for its own particular ends, and adds to the community of educational resources within its jurisdiction. Such diversity is crucial to the survival and health of a legal educational culture, and arguably as important as practice, ideology, history and sources.31

Conclusions: Future Developments

One of the key questions raised at the start of the article was the role that ICT in legal education might play with the Bachelor–Masters program implemented in Europe by the Bologna-Sorbonne Declaration. This entails comparability in academic degrees, a uniform structure for the legal curriculum, and a common system of transfers for course credits. Given the diversity of legal education in Europe, this will not be an easy transition. We must remember that even ten years ago the likelihood of this happening was highly remote; and while progress has been made recently, much remains to be done.

Given that ICT can be used to such diverse objectives as we have illustrated here, is it possible that ICT can be used to enhance and support this process of harmonisation? Surely such a dichotomy of purposes as has been illustrated above means that ICT will be merely one more divisive form of educational practice that curriculum designers have to overcome in order to harmonise European legal curricula?

The answer is both yes and no. As we have seen in the comparison of the University of Amsterdam and the GGSL, ICT is capable of increasing the diversity of educational practice within law schools and between disciplines, and between jurisdictions, for its protean nature can be adapted to quite different ends. However, ICT can also help to ease the passage from one system to another in the Bologna process, for it can facilitate what one commentator has called the process of ‘institutional isomorphism’, by which institutions begin to copy one another’s systems of teaching, learning, administration, information transfer, and the like.32 This isomorphism can extend beyond the boundaries of a jurisdiction. A good example of this is RechtenOnline, a Dutch government-funded project by which law schools in the Netherlands are being given international support, via masterclasses, in their use of ICT in legal education, and where for key academics from each institution there is a carefully planned process of learning about ICT, exposure to different models and approaches, the opportunity to form small projects,

and the duty to disseminate the results to colleagues.\footnote{See http://www.rechtenonline.nl/ (in Dutch)} This project takes examples of good practice globally, and aims to adapt them to the Dutch system of legal education. At the same time, it recognises that implementation of ICT systems of learning (particularly those developed in other jurisdictions) is no easy matter, and therefore the theoretical and educational aspects underlying use of ICT plays a key role in the development of staff who take part in the project. Once again, Jos Boys’ perceptive comment on the reception of MLEs and VLEs is relevant. Adoption of ICT is not of itself revolutionary: in fact, without reflection on the theory and purposes underlying it, it can actually enable institutions and teachers to avoid the difficult questions about how they organise and enhance their students’ learning processes.

In this sense, projects such as RechtenOnline, and organisations such as ELFA are crucial to the implementation of top-down policies such as the Sorbonne-Bologna Declaration, for they act as a forum (rather similar to the Association of American Law Schools) for law schools, in which research projects such as PROSA can begin to be implemented on a larger scale. Within ELFA, for instance, European law faculties can develop their own agendas, their own European links and integrations, their own common curricula. It can also provide an opportunity for lawyers and academics to discuss the development of good practice in ICT across jurisdictions and across disciplines.\footnote{For a detailed discussion of this, see G.L. Blasi, ‘What Lawyers Know: Lawyering Expertise, Cognitive Science and the Functions of Theory’, \textit{Journal of Legal Education}, 1995, 45, 3, 313-97}

In this sense, ELFA’s proposed eLegal project is very timely\footnote{More information is available at http://elfa.bham.ac.uk}. At its recent conference in Seville, it provided a forum for the exchange of ideas and experience regarding elearning in law. With its research into jurisdictional practice and development of modules in the area of European law it aims to promote and assist both the development and the dissemination of European expertise in elearning in the legal field. This will benefit both teaching staff and students of law as well as members of the legal profession. It may thus reinforce collaboration between European Law schools, and help to establish a common core of e-materials in law for use throughout Europe in learning and teaching about European law.\footnote{For further discussion, see M. Storme, ‘The Consequences of European Unification for Legal Education in the Member States’, \textit{European Review}, 2001, 9, 2, 135-46}

Electronic learning, though, has the capacity to go further than this. As we speak there are new forms of citizenship participation are being formed in the UK, and government has made clear its commitment to the electronic arena; in ICT, educational ideas are being extended and developed; key areas of public life are being affected by the transforming telecommunications revolution around us. As Broekman pointed out, the result is the need for a fifth freedom under
European law, after those of persons, goods, services and capital, namely the freedom to participate in a ‘learning society’ – and ICT will have a crucial role to play in such a freedom.\(^{37}\)

As with all times of change, however, there are inevitable tensions. We have pointed some of these out in the area of legal educational theory. Two others will influence the process of change:

**Jurisdictional differences within the Bologna process**

Legal educational practice is highly complex, based on jurisdictional legal structures, the structure and influence of the profession, traditional educational methods, and much else.\(^{38}\) These require to be taken into account in any process of harmonisation, if the process is to be a successful one. The Bologna Declaration cannot but help to encourage this process. We would tend to see this rather less as a process of threatened ‘globalisation’ of legal education, and more in terms of Giddens’ concept of ‘cosmopolitanisation’, or that of the French educationalist Giroux, where ‘dialogic democracy’ is a key element in the negotiations between the various sub-communities. Indeed, if the situation outlined above by Boys is not to repeat itself, then ICT must become an integral part of the legal learning process under consideration by jurisdictions.\(^{39}\)

**Local developments within larger (commercial) developments**

It is axiomatic that the development of ICT applications across Europe is reliant upon large commercial software developments. But all the contemporary developments outlined above have sprung up because local developers perceive how applications can be adapted to their own purposes in teaching, learning & assessment. PROSA is based on AuthorWare; Ardcalloch requires a number of database applications, HTML and Flash. MLEs are shells: content and method still needs to be determined and that requires local development. Indeed, as one recent Dutch study has pointed out, MLEs do not support any single educational approach; and given this, it is all the more important for local development of software and staff development to take place concurrently, and for both to be informed by research findings.\(^{40}\) The same is true of webzines, weblogs, and many other web applications, including virtual communities.

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\(^{38}\) The literature on this is considerable. See, for instance, A. Watson, *Society and Legal Change*, second edition, Temple University Press, 2001


\(^{40}\) See [http://www.cetis.ac.uk/content/20020820131543](http://www.cetis.ac.uk/content/20020820131543) for an English summary of this Dutch report. For the original report, see [http://www.surf.nl/publicaties/index2.php?oid=72](http://www.surf.nl/publicaties/index2.php?oid=72)
Inevitably, there are points of friction between the local and the generic, where local educationalists want to adapt the generic application in particular directions. The commercial and educational success of the generic application will then be determined by its awareness of and response to such needs.

**Suggestions for projects and approaches to support ICT in European legal education**

With all these tensions and approaches, peering into the future of ICT in European legal education is difficult. It is pretty certain, though, that a heterogeneous approach, based on jurisdictional and local needs, is an essential element of progress. Given that, we would suggest the following projects and approaches would be helpful in taking forward the Bologna process:

1. Creation of a publicly-accessible ICT database where developers input and maintain their own projects, to be updated regularly by a dedicated team.

2. Programme of meetings for specialist developers

3. Integration of educational theory with ICT implementations

4. Focus on processes of learning rather than on software products, and on optimalisation of VLEs rather than on implementations

5. Extensive use of student voice in feedback

6. Rejection of ‘one size fits all’ approach to e-learning, and support for diversity and heterogeneity in the creation and use of e-learning.

7. Further research into the factors that explain why certain forms of teaching and learning work better in some jurisdictions than in others

8. Long-term and large-scale comparisons of methods and results, based upon quality evidence. As Ravenscroft put it, the ‘link between current educational practice and learning theory is arguably quite weak.\(^{41}\) This requires the construction of indices of learning, internationally agreed and comparable learning measures, definition of variables, and a generous view of the role of ICT in legal education as going beyond that of merely academic skills and achievements. In this respect, many of the approaches taken by the OECD PISA programme (which monitors student achievement in OECD member countries every three years within an internationally-agreed assessment framework) may well provide a model for good practice.

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Appendix 1: Use of MLEs by Law Schools and Faculties in the Netherlands

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