

Virtual Communities on the Web: Transactional Learning and Teaching¹

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Introduction

This paper describes the context, project development and use of a web-based virtual community to enhance professional legal education at the Glasgow Graduate School of Law. Together with a number of other ICT initiatives, the community was presented in the RechtenOnline series of masterclasses.² The approaches to learning presented at the workshop were developed over a number of years by the author and others, and continue to be developed and expanded. What is described below is therefore a constant work in progress; but the paradox of all educational implementations is that every engagement with students is, from their point of view, a once-only encounter – Heraclitus' step into the river, as it were – and thus our work can be described as cycles of both finished product and constant evolution. Below, we shall outline the context of our ICT implementations, give an overall view of our approach to teaching and learning using ICT, and then describe particular aspects of the projects we use to teach our students.

Context: The Diploma in Legal Practice

In Scotland there are a number of routes to qualification as a solicitor or advocate. It is possible to sit examinations held by the Law Society of Scotland in what are known as the 'qualifying subjects', a pass in which qualifies the candidate to proceed to a postgraduate course in professional subjects, called the Diploma in Legal Practice. The commonest route to the legal profession, however, is *via* university study. In their undergraduate years, most students study for their LLB degree in one of a variety of routes stretching from 2-4 years, depending on their previous experience & pattern of study. This is followed by the postgraduate Diploma, which lasts for over six months – effectively a full academic year. All students then enter a traineeship of two years in a legal office, during which the Law Society of Scotland requires them to undertake a Professional Competence Course and, during their traineeship, to undertake the Test of Professional Competence.

¹ My thanks to Patricia McKellar, Scott Walker and Anton Vedder for their perceptive comments on drafts of this chapter.

² The masterclass at Hilversum contained the essence of this paper, in the form of presentations and lectures; but also included seminars in which staff were given feedback on their ideas about developing web-based teaching and learning in law. The essence of any masterclass is communication and dialogue, preferably at the most detailed level possible given the time restraints of the class. Given this, we set out the aims of the masterclass as follows. During the two days we wanted staff to:

1. experience the use of web-based simulations and multimedia in legal learning
2. understand the educational concepts underlying transactional learning
3. identify the factors that affect simulation- and project-based learning
4. use tools that enable them control factors that affect the educational context of a simulation
5. begin the process of planning their own transactional projects

The Diploma consists of eight subjects and one option – in the GGSL we have added another, namely the first in the following list:

1. Foundation Course in Professional Legal Skills
2. Civil Court Practice
3. Criminal Court Practice
4. Financial Services & Accountancy
5. Private Client
6. Professional Ethics
7. Conveyancing
8. Practice Management
9. *Either Company & Commercial or Public Administration*

In the later 1990s the Diploma curriculum underwent revision by the Law Society, with the result that a number of skills were identified as being crucial to legal practice, and which had been, hitherto, not sufficiently been the focus in the curriculum. The Law Society therefore required providers to focus on a number of professional skills areas, namely:

1. Interviewing
2. Negotiation
3. Advocacy
4. Legal Writing
5. Drafting
6. Research

From its inception in 1978 until 1999, the Diploma had been taught at five centres in Scotland, namely the law schools at Aberdeen, Dundee, Edinburgh, Glasgow and Strathclyde Universities. In 1999, however, the Glasgow Graduate School of Law (GGSL) was formed, uniting many of the postgraduate functions of the two law schools of Glasgow and Strathclyde. As a result, we teach over 200 students (this year, 250) on the Diploma. Many of these students have studied law for four years, to Honours level.

At the inception of the joint Diploma in 1999, there was one full-time member of staff responsible for most aspects of course maintenance and development and a secretary, in addition to a number of part-time Visiting Professors (also practitioners). Almost all of the considerable number of classes that take place on the Diploma are taught by 120 part-time tutor-practitioners. This is normal practice in the four Scottish Diplomas. At time of writing, and in part as a result of increasing numbers from around 173 to 250 students, there are now two full-time members of academic staff, an administrator and a number of administrative support staff.

However the greatest area of expansion in the GGSL is probably in the area of ICT (Information and Communications Technology). Here, we have increased our staff from a single network maintenance officer to a Learning Technologies Development Unit (LTDU), which consists of a learning technologies development officer, web programmer, two multimedia and web designers a network officer and two part-time temporary student project officers. The reasons for this considerable increase in staffing will be explored below, as well as the effect that LTDU has had upon the programme of study.

Extensive paper-based materials have always been provided by the Law Society of Scotland for the subjects, which for the most part are composed of styles and explanatory text; but little extra for the teaching of skills was provided by the Law Society. This is especially true of what might be regarded as 'performative'

legal skills, *ie* interviewing, negotiation, advocacy (Maharg, 2001a). The Law Society is keen to see the Diploma develop from what it was before, namely yet another academic course focusing on substantive and procedural law, into a programme of study where skills and knowledge are integrated. This is the subject of a Law Society Foundation Document, currently being written by the author and an ex-President of the Law Society, in which the whole professional training programme is described in these terms.

Model of Skills Acquisition

In thinking about how we might integrate skills and knowledge in our curriculum within the context outlined above, we were drawn to ask fundamental questions about the nature of skills learning itself, particularly when this is done outside of the workplace. What is the most effective way for students to learn legal professional skills within the academy? What is the role of teaching in helping them to learn? In our teaching interventions, how can we best support student learning? At a fairly deep level we realised that we needed to adopt a framework of skills acquisition and integration with knowledge that would help us build the applications we wanted use.

There are many models of skills acquisition, some more applicable to legal learning than others, in spite of their claim to be generic models of learning. We chose the Dreyfus model, below, to illustrate *levels of standards* in competent performance, for two reasons. First, 'competence' is the standard of performance adopted by the Law Society of Scotland for its new training regime. Second, the model is useful to explain to students the various levels of performance in a non-judgmental way -- too often 'competence' is contrasted with 'incompetence', and there is no description of how competence feeds into practitioner expertise. There is also a neat irony in taking the model to describe what we do in online projects, precisely because it was derived from a book where the brothers Dreyfus argue against the reliance upon computer-generated models of human understanding (Dreyfus & Dreyfus 1986)

Level 1 Novice

- Rigid adherence to taught rules or plans
- Little situational perception
- No discretionary judgment

Level 2 Advanced Beginner

- Guidelines for action based on attributes or aspects (aspects are global characteristics of situations recognizable only after some prior experience)
- Situational perception still limited
- All attributes and aspects are treated separately and given equal importance

Level 3 Competent

- Coping with crowdedness
- Now sees actions at least partially in terms of longer-term goals
- Conscious deliberate planning
- Standardised and routinised procedures

Level 4 Proficient

- See situations holistically rather than in terms of aspects
- See what is most important in a situation

- Perceives deviations from the normal pattern
- Decision-making less laboured
- Uses maxims for guidance, whose meaning varies according to the situation

Level 5 Expert

- No longer relies on rules, guidelines or maxims
- Intuitive grasp of situations based on deep tacit understanding
- Analytic approaches used only in novel situations or when problems occur
- Vision of what is possible

There is much to discuss in a complex model such as this. It is easy to see that the model will be applicable to students on the first step of their professional career; but Dreyfus' model is applicable to all levels of a profession and at all times. There are times, for example, when even the most expert practitioner will be moving tentatively and cautiously in the domain because he or she is aware that certain procedures may be risky, or may not have been attempted very successfully before, and so on. In such cases, level 5 expertise drops away to level 4 or 3. And when they move out of their practice domain lawyers, like all professionals, are often aware of their lack of expertise. For example, many lawyers are aware when they become tutor-practitioners that the type of event, their knowledge of students' prior knowledge, the expectations of the student audience are all relatively unknown to them, and therefore their level 5 expertise as practitioners suddenly drops to 3 or possibly even 2 as tutors.

At the GGSL, the aim is to ensure that all students become competent trainees. In other words, our benchmark standard, at the level of what might be reasonably expected of a trainee in the workplace, is level 3. What might be reasonably expected of a trainee, of course, is a lot less than what might be expected of an assistant of three years' standing, or an associate of say five years' standing. At the stage of the Diploma in Legal Practice, therefore, students are really only at the stage of a novice or advanced beginner at most. It is dangerous to generalise, of course, but the majority of students' performances would fall into 'novice' category. Our use of ICT in multimedia projects (used to model competent and expert performance to students), and in projects based on simulation-based learning (see below) serves to increase the quality of their performance, and move them faster and further up the Dreyfus scale.

This is already happening. We have comments from examiners and external examiners that our students are carrying out work that they would expect only a mature trainee or an assistant to be able to undertake. In other words, transactional learning is helping our students to achieve higher up the Dreyfus scale than they would normally do with the older style of Diploma course. This is typical of the findings that one might see in problem-based learning courses, such as exist in medicine, and indeed there are a number of similarities between the methods of transactional learning and problem-based learning.

Simulation-based learning

One of the most effective ways of skills-based learning is simulation – the creation of scenarios within which students play roles, create documents and make choices based on information and legal knowledge. This is one of our key methods of learning within the Diploma. We use ICT to help us to create the projects within which students work, and the communicational delivery systems by which they interact with staff and with each other. ICT is also used to help us create and manage the backdrop to the scenarios – the sense of the real.

Quite early on in the creation of the simulations, I saw the opportunity to create a virtual town on the web. Within this town students would play the role of solicitors, and would be able to contact other professionals, institutions, public bodies, etc., to obtain information and play the part of being a solicitor in practice. Other roles would be played by online tutors or facilitators who would masquerade as characters over the web in order to communicate in role with the students. Note that our aim was not to replicate reality – impossible, and not necessarily a productive educational heuristic – but to simulate aspects of it.

This is not a new idea. The idea of what might be termed conceptual urban communities is an ancient one. One might point to the example of Plato's *Republic*, or Augustine's *urbs beata*, City of God, or Christine de Pizan's *City of Women*. Later we have the rise of the Renaissance concept of the ideal princely or republican city-state, and later in utopian literature the concept of a wholly imaginary landscape of political, economic and cultural ideals, which act as a commentary upon pre-existing forms of society. The genre underwent many changes. In the nineteenth century, it turned positively dystopian, with grim views of the city such as is presented in Dickens' *Hard Times*, or broader visions of society in Samuel Butler's *Erewhon*. In the twentieth century the genre changed, becoming much darker – Ray Bradbury's *Fahrenheit 450*, Fritz Lang's *Metropolis* or Ridley Scott's *Bladerunner* give us truly nightmare visions of our cities.

Our use of the fictional city and online environment is much more modest and focused on educational purposes. Our fictional city has a number of aims, namely to provide students with the:

- backdrop for legal transactions – what might be termed the 'realia' of professional legal work. The term realia derives from archival work, and includes a vast array of objects in that domain, such as scrapbooks, newspaper clippings, advertisements, photographs, wills, bank books, account books, etc. We have created many such objects in the virtual town.
- characters, institutions, professional networks which they can communicate
- virtual offices within which they can work as they might work within a law firm
- IT communicational systems embedded within the virtual community
- as close as possible a simulation of actual legal transactions.

All this would require to be presented over the internet *via* web pages. In a sense, the city would be a type of online community, but quite unlike other online communities. These have been extensively studied by web sociologists such as Sherry Turkle, whose work has demonstrated the power of the web to create online communities and sustain them. The concept has been taken up by strategic gaming creators. The early versions of multi-user dungeons have been transformed not only by vastly improved graphical interfaces, but innovative use of network capabilities, where virtual worlds can accommodate the virtual selves of players. What has attracted the interest of commentators such as Turkle is the extent to which the relationships between players' virtual and physical selves develop in the adventure games that they play.

In the adventure games, of course, these virtual selves, known as 'avatars' can become remarkable players in their own right. The players in Sony's online game *Everquest* have been bought and sold on Ebay for large sums of money. The virtual worlds are enormously complex phenomena – or perhaps the term 'phenomenaria' would be a more accurate term (Skaalid 2003). Castronovo has

calculated that the GNP per capita of Norrath, the imaginary world of Everquest, lies between that of Bulgaria and Russia. These are densely immersive environments, with significantly growing economies (Castronova 2003a; 2003b), cultures (Dibble 2003) and educational preferences. This leads us to interesting points about the relationship not only between selves online, but between the virtual and the real. What, for instance, is the relation between avatar and physical self? Surely it is the case that in a game such EverQuest our physical self has a number of digital identities that we can take up and use as extensions of our selves? And is this not similar to aspects of identity-formation and use within the real world? In this sense, social psychology theories of identity within the real world such as symbolic interactionism (Goffman 1959; 1965) are highly pertinent to the analysis of avatars as identity-constructs, and as such, of interest to educationalists.

Of course, the power of the interaction that is present in Ardcalloch is very much restricted when compare to that of online games. Real students, playing the part of trainees in their virtual firms, can slip in and out of character quite easily, and the environment is rarely as wholly immersive as EverQuest can be to sophisticated users. However, as we shall see from the feedback that students gave us, students were able to learn from the activity of 'trying on' or fitting their real self into their online self as a legal professional. This, after all, is what many of them are going to do for real in less than a year's time, and we make it clear to them that now is the time for them to practise roles and transactions which will be all too real in the coming few years.

Construction of the project environment

In many ways this was a slow process for us, as we matched existing resources to our ambitions to create an online community. There are three main criteria for success:

- *matching of educational task to ICT application.*
There is nothing to be gained for students in performing tasks with technology that could be performed in a simpler, easier way without the technology. It must be clear to students that the task has involved them in a use of ICT that has simplified or enhanced their ability to carry out the task.
- *a matching of aims and ambitions to resources*
clearly one's ambitions need to be matched to the resources that are available. However it was sometimes difficult to discern in advance what was an achievable ambition and what was over-ambitious. This applied not so much to the area of technological innovation, but to what might be regarded as educational implementation. One example concerned the construction of the student firms. While we followed best practice guidelines in collaborative student learning, it became clear from student experiences during the first year we used firms that we needed to do more to persuade students to work together in firms, and to adopt forms of best practice themselves. In the first year, students worked within an environment that had no real hierarchy. There was a 'case manager' for each of the projects, but this was not enough discipline for those periods when work was high-pressured, or when members of the firm refused to work on the projects. The second year, we instituted a form of hierarchy, with tutors on a course called Practice Management acting literally as practice managers for the firms. Tutors met with the firms at least once a month. Students were required to fill in logs and to email these to tutors before each firm meeting. This worked well to reduce problems within firms. In this example, then, we had a mismatch in the first year caused

by the introduction of collaborative learning. As a solution we analysed the curricular shape of the course, and aligned tutor resources to provide a resolution to the problem.

- *The environment ought to be satisfying and intuitive to use, and link seamlessly with the rest of the teaching and learning that students are required to undergo on the course*

This means not only planning and testing the environment, but planning in advance the types of information that students need to know when they are using the environment. For example, they will want to know what will happen to their work, how they will chart their progress in learning, how they can obtain feedback, what happens if they fail a learning outcome, and the like.

There is a synergy between environment and student projects. Clearly the environment must support the projects; but it also ought to go beyond it. The first project around which the environment was constructed was the Personal Injury Negotiation project (Maharg 2001b; Maharg 2002a), which was first implemented in 1999. This had been created three years earlier at another university as a simple email negotiation between teams of students. There were no realia, no virtual community tools, and there was no web-based functionality. In 1999, the first sense of an online space given to students was a webpage consisting of photo-montage, later developed as a rather crude schematic map with no interactive features. That year we also created fifty document sets, based around the same basic scenario, but differing in key details such as type of injury, wages details, names and addresses, etc. These document details were labelled as variables within a database of all available documents.

The next year, 2000-2001, we brought a second subject into the environment, namely Private Client. Hitherto, this subject on the Diploma had been assessed by four brief open-book class exams. However, this method of assessing students was unsatisfactory for three reasons. Foremost was the fact that the form of assessment was an uneasy mix of academic and professional practice. The examinations were in fact drafting activities carried out by the whole student body in an exam hall to ensure that there was no plagiarism and that the same activity was being carried out under the same conditions. The examination form of assessment was therefore used for specifically functional reasons, not because it was the best form of assessment for the subject. Secondly, students were asked to draft documents under pressure of time and often without access to the style books that they would have had in the office. Finally, the academic examination structure did not produce results that were satisfactory to the practising lawyers who taught the course. Students could gain as much as 80% and more in an examination, and yet fail the assessment because they might have made an error with the result that, in practice, the document would have been 'bounced' either by a court official such as the Sheriff-Clerk, or by the trainees' supervisors.

For these reasons we decided to hold four online assignments. Students would use the online office environment to carry out the tasks as if the work had been passed to them by a Private Client supervisor in the firm, and their tutors would take the role of supervisor in marking their work. The fiction of the virtual firm would thus mimic the situation they would find themselves in during traineeship, and therefore be a much more appropriate assessment. Students were given two opportunities to pass each of the four assessments. If all assessments were passed first time, the firm was awarded a merit. If one of the learning outcomes was failed at first attempt, students were given online feedback by the tutor and asked to re-submit. Students were told that if they failed at second attempt they would be withdrawn from the project and presented for the subject examination.

A third project, namely Conveyancing, in which students buy and sell domestic property over the web, was added to the environment, and others such as Public Administration, Company & Commercial (setting up and winding down a 'shelf' company) are in the process of being created.

As the projects increased in number and complexity, we assembled a sense of place built around the original, very simple schematic town map. The following year (2000-01), the map was redrawn so that it was graphically more sophisticated, and included website links built into it (Figure 1). These resources were gradually increased, and in 2001-02 a directory was added as the number of characters, businesses and institutions grew in size (Figure 2). Currently, the map exists as a Flash application, zoomable, with many small photographs attached to streets to give a sense of an actual place. The virtual office has similarly been developed incrementally. The first year of operation (1999-2000), it was little more than an email address. The next year we used Outlook to develop a more sophisticated environment (the application was used at that time by a number of larger Scottish law firms as the interface to their office systems); and later still we built a truly web-based application in Visual Basic and other applications. This year, the office environment has been designed around MS SharePoint Team Services amongst other applications, with a greater range of collaborative learning tools – task organiser, calendar, firm minutes, confidential logs, discussion forums and alerting services.

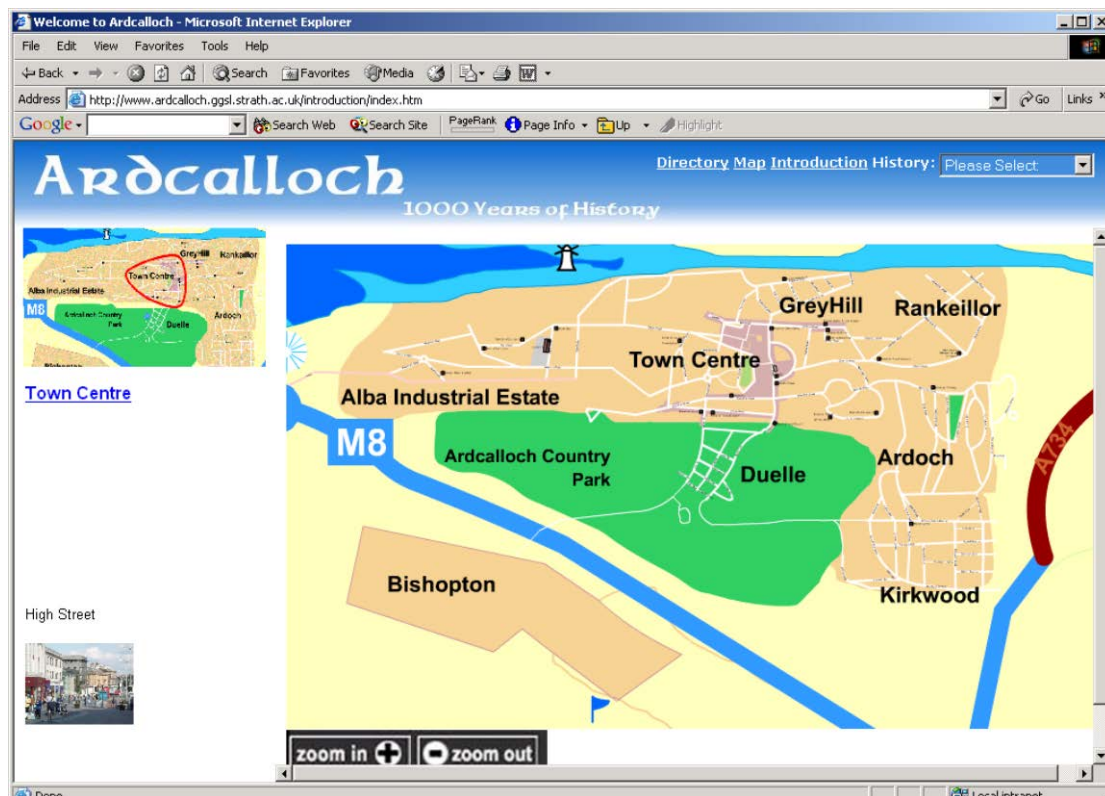


Figure 1: map of Ardcalloch

As the number of websites grew, it became important to manage their development as mini-projects, and to consider the interface with users of the virtual environment. It was not possible for us to create a generic web template for our town sites. In reality, commercial and institutional website design is really only limited by the funds available, the creative flair and, it might be added, the

bad taste of the designers. It was necessary for us to create sites that gave a presence of a business or an institution to the viewer, without importing into the site all the actual functionality of a real commercial site; and so many of our sites are 'brochure' sites. Some have more extensive and complex text than others – in part this is due to the enthusiasm of particular designers, and we were happy to give them relatively free rein on this. After all, if the websites in the town all had a similar look and feel, or simply dealt with matters relating to the projects, there would be no sense of realia, of the sheer randomness of reality, about the town.

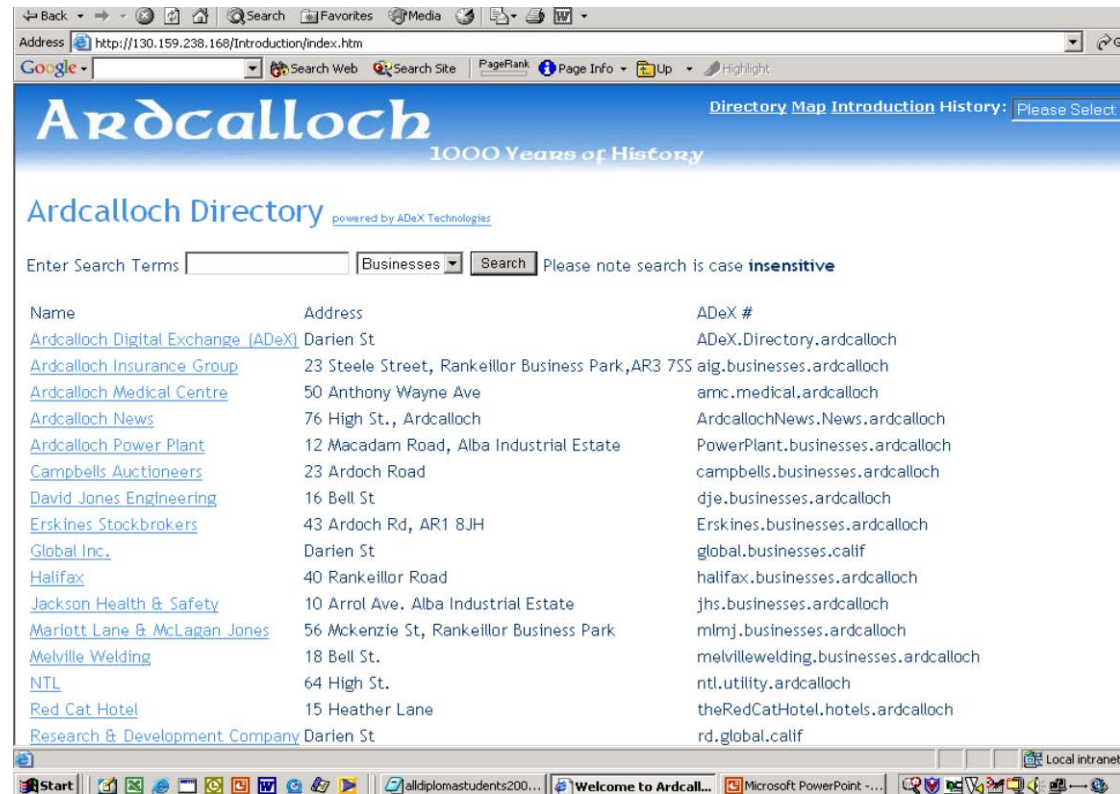


Figure 2: Ardcalloch directory

With projects increasing in number and complexity, the directory became more important as a way of navigating information within the town. The first directory was relatively crude in design, but the following year we devoted considerable efforts to creating a substantial directory sub-divided into categories – institutions, businesses, law firms, citizens. 'Law firms' was an anomalous category because it was so specific, but it was necessary to create it because students would want to check this list most frequently, and because of the number of law firms within the town. The sheer number of law firms within the town was the subject of comment in the Ardcalloch News, an online newspaper (written by students), who noted in a weekly column that there were more lawyers than nurses in Ardcalloch, and wondered whether this development was good for society...

Working within an online simulation environment affects attitudes not only towards IT but also towards how it can be used within a legal office practice. One of the issues we were concerned about was that of security – not the security of our own systems, which was an altogether different matter, involving university and departmental systems, but those affecting legal practice. Communications security and secure encryption over the internet remains a serious issue for lawyers, and we needed to alert students to this in our online environment. We

did so with the introduction of a fiction, namely 'AdeX' – Ardcalloch Digital Exchange. We informed the firms that under a Scottish Enterprise scheme to develop local broadband culture and communications, Ardcalloch had won a grant to install and use a wide-area broadband which also included secure digital communications systems. Lawyers could thus communicate with each other and with everyone else within Ardcalloch the need for third-party applications or delivery methods. The fiction raised the issue of internet security to students without actually inhibiting communications in the projects.

Photographs, attached to streets, give a visual sense of place to the town (see Figure 1, bottom left-hand corner). This is important for the long-term development of the project in a number of ways. First, the town becomes recognisable a west of Scotland provincial town, perhaps around the size of Ayr, and very much smaller than Glasgow. Indeed, many of the photographs were taken in similar towns such as Port Glasgow, Greenock, Paisley, and were added to the map. Second, if the town is to be used by other disciplines within the university (and there is no need why this should not happen) such as architecture, the built environment, planning, urban studies, social work and the like, then the representation of place becomes important for their students. Thirdly, the map photos help to give a sense of 'distributed identity' to the various districts within the town (described below).

This sense of locale is also present in the history of the town (Figure 3). We wrote a brief historical essay on the town, available on the website by historical period, that describes the town's place in Scottish history and particularly in Scottish legal history. In the seventeenth century section, for instance, we have a local laird adopting oppressive actions towards his neighbours; but it is not until he threatens royal power by an attack on the garrison at Dumbarton Castle that he is brought to justice. Many of the details of this incident are taken from events that happened in Orkney under the earldom of James Stewart, and we quote seventeenth century Scottish prose describing Stewart's misdeeds as being those of the Ardcalloch laird's. All these details and many more give a sense of place within history and a continuity of culture.

The history is also linked to the websites in the town that students can access. For instance, there is a Faculty of Procurators (a professional grouping of lawyers within a locality in Scotland), and their website describes their development within Ardcalloch, relations with their sister Faculty in Glasgow, and their place within local legal culture. The town's development as an urban centre is described in detail. The centre, for example, is the old medieval heart of the town. To the north-east lies Grayhill with its the jetties and modest docks developed in the nineteenth century, and the slum housing associated with this area (currently being redeveloped as a 'Silicon Dock'). Further east is Rankeillor, with its lines of modest tenemental housing. South of this lies the unique architectural development of Ardoch, designed by the planner and visionary Patrick Geddes, as a response to the problems of slum housing that were developing in Greyhill in the early twentieth century. Further south lie the middle-class suburbs of Kirkwood, while expensive housing is situated in Duelle, in Ardcalloch Park. To the west lie the new developments of the Alba Industrial Estate, a late-twentieth century solution to the problems of local unemployment.



Figure 3: history of Ardcalloch. The drop-down box, top-right, gives access to seven different periods from early medieval origins (extract shown above) to the twenty-first century.

However, the actual cultural development of any place also displays discontinuities and ruptures. The creation of a fiction enables us to focus on aspects of society and culture in decline, and the local response to that, and to deploy these as an integral part of transactional learning. On the Professional Competence Course (PCC), for instance, we use the virtual community to enable us to target specific sectors of the economy and local economic patterns that we want to use for teaching purposes. In the PCC we use a fictional multinational company called Global. This company, with headquarters in California (AdeX ID: www.global.businesses.calif), entered the Scottish economy in the wave of NASDAQ confidence in the mid-nineties, to produce products for the European market, and to take advantage of local R&D expertise in the universities in Glasgow as well as government and EC grants. The global downturn has required them to withdraw from Ardcalloch, and this has created a range of legal problems, which form the basis of many of the modules within the course. Some of these problems are the focus of several modules, so that trainees are able to work on the same legal problem from a variety of different perspectives. The problems, and the general economic background to the firm, are described in two articles in the media centre on the company's website.

The students' virtual offices have similarly been developed incrementally (Figure 4). The first year of operation, they were little more than email addresses. The next year we used Outlook to develop a more sophisticated environment (the application was used at that time by a number of larger Scottish law firms as the interface to their office systems); and later still we built a truly web-based application in Visual Basic and other applications (Figure 5).



Figure 4: public-facing front page of a student law firm

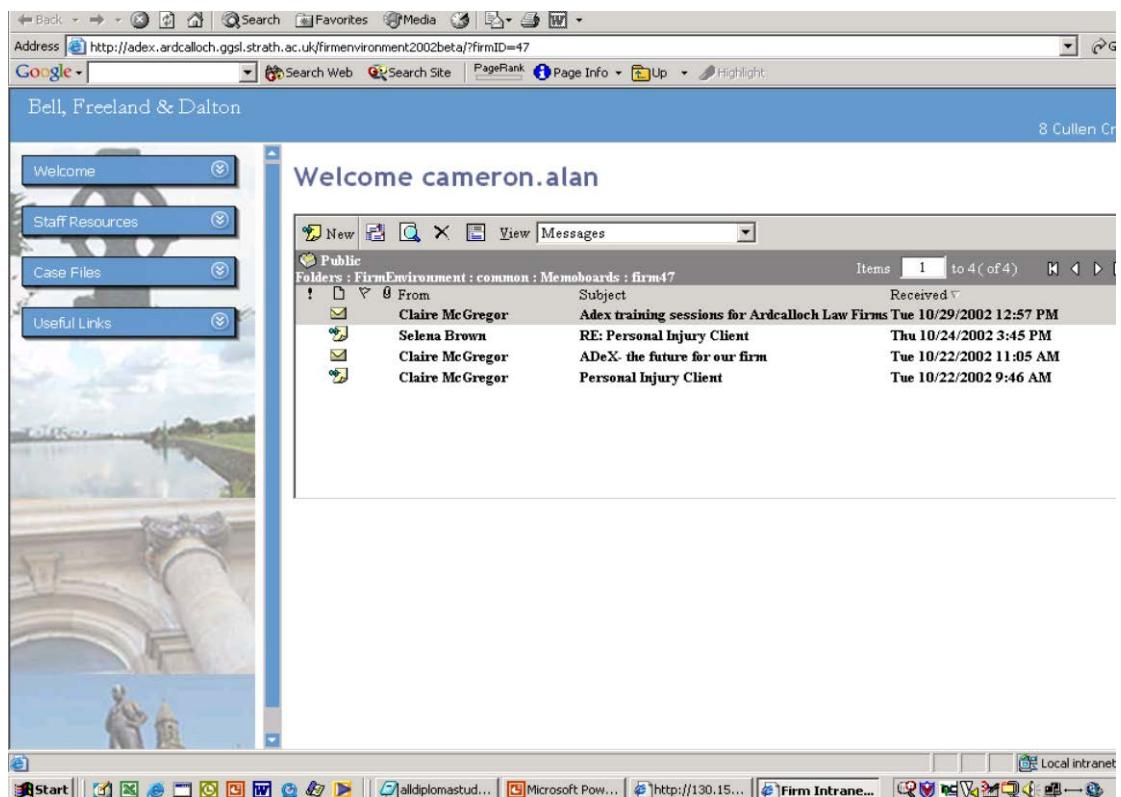


Figure 5: Memo-board of a student law firm. Note the 'Case files' link to the firm's correspondence in the online projects.

On one level, what we have created is a learning management system (LMS), one that is specifically developed for students who are at the professional stage of legal education. On another, though, what we have is a problem-based learning environment, one that is focused on legal transactions, and one that builds an online community of educational interests. These transactions, and the theory behind them, are explored in more detail below. Before we go on to consider this, though, we should perhaps describe how we developed these resources over the past four years or so.

The virtual environment has been in construction over this period, and has involved many personnel. When we started to develop it, there were only two of us involved in the project – Scott Walker and myself. Scott, now our Learning Technologies Development Officer, has a background in ICT and AV; and he is responsible for the technical design of our environments. For the first few years, we employed student programmers to help us construct web pages. Gradually, we brought together a technical team which could construct learning applications using an ‘agile methodologies’ approach to the production of learning applications. We give special consideration to:

1. *adaptivity*. Agile methods work *via* processes that adapt & thrive on change. This applies as much to our working method itself as to the product of the method.
2. *the situation of users*. We think about who will be using the software and in what environments and to what purpose. We also consider our own role in the production, testing and use of the software.

(Beck *et al* 2001)

At present, our Learning Technologies Development Unit comprises Scott, a programmer, two graphic designers and a network maintenance officer. The virtual environment has enabled other ICT initiatives, too: the development of substantial multimedia resources; the design, implementation and integration of webcasts within the Diploma; and the use of ‘objective questions’ – sophisticated multiple-choice questions – in assessment of legal knowledge. In all of this, we have found it essential for academics to work as closely as possible with the LTDU team; and we have formulated this as a number of guidelines in an internal working paper:

1. academics need to get involved with us at as deep a level as possible.
2. academics provide content, and can change that content as the project evolves in line with the development of the project
3. developers make all technical decisions, including software they will use, the time it will take to do certain pieces of work, and the way the work is pieced and processed
4. developers and academics have an equal say in the management of projects
5. developers and academics need to be in regular communication with each other during a project. Agile solutions require much in the way of communication, and not only between academics but also within the developing team (what’s been done, how, by whom, etc).
6. developers meet regularly and ask the following sorts of questions about a project:
 - what are we doing well?
 - what have we learned?
 - what can we do better?
 - what puzzles or is inhibiting us?

(Maharg, 2002b)

Transactional Learning

Transactional learning is a key concept for us, and explains much about our approach to learning the law. We use it in a number of different senses, and below are the various definitions, with examples.

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. Indeed, 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 carrying out a transaction. We shall see examples of this in the presentations, but let us give you one rather extended example of this.

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 that was the basis of the pursuer's claim took place. 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 playing golf on a local course, etc., to which I responded in kind. 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 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.

2. *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 (or 'conveyed', as we say in Scotland), 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 of 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.

3. *Transaction + reflection.*

Transactional learning involves thinking about transaction – indeed (to go back to the root of the word) thinking *across* transactions. It includes the ability to rise above detail, and 'helicopter' above a transaction; or the ability to disengage oneself from potentially damaging views of the group process, and re-construct that view. It means that students need to be encouraged to adopt the habit of documenting firm transactions using instruments that are focused and private to the firm and their Practice Management tutor/consultant. Reflection, even in a group, is an intensely 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, which details what they have done in the past three weeks or so. And the Practice Management course is assessed by a 1500 word report by individuals on the workings of the firm.

4. *Collaborative learning.*

Transaction as collaboration, indicating the root of the word: literally 'acting across'. Students are valuable resources for each other, and it might be said that universities still do not recognise this sufficiently or harness the power of this form of learning to enhance student learning. Collaborative learning breaks down the isolation and 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 (there is assessment value to all our online projects, 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 professionalism (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 learn about how to play to each other's strengths in the firms. This 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, and 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.

5. *Holistic process learning.*

Transactional learning ought to be based on holistic and process learning, *ie* learning from legal processes. 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.

While the process of chunking knowledge and linking chunks is often sufficient for undergraduate study of law, in the early years at least, it is not sufficient for professional students. 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, 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 as possible in carrying out whole-to-part and part-to-whole thinking.

Example

In all projects we aim to give students a strong sense of process using diagrams, graphics and charts. This makes the process of familiarisation with the process much easier. It is also easier for students to delegate the work, and collaborate on the results of that work, and to fit that work into their own working timetables. What we have in fact are multiple and *real* online communities created around the concept of a virtual town. Around the project-based learning tasks are groups of interested parties: LTDU, tutors, firms, and so on. It is critically important that all the interests are accommodated within the virtual fiction, using not only email routing, multiple views of web pages and the like, but personal calendars within firms, confidential logs and other forms of online organisers.

Student Feedback

We collect considerable amounts of feedback from students. We ask them to focus their feedback on the ease with which they could use and navigate the environment, their achieved learning in the project, and on other issues such as linkage with the rest of the Diploma programme. Below are some comments that give a sample of the student experience of the PI negotiation project:

1. We were unsure how to deal with the question of medical consultant's fees, given that we did not realise at first that there would be a fee and therefore did not seek the permission of the client to obtain a medical report and did not inform him in advance that he would be liable to pay the fee. When subsequently told by our client that he could not afford to pay a consultant's fee, we had to take responsibility for the fees ourselves until insurance paid for it. This was one of the questions that we posed to the discussion forum, as we were initially unsure how to deal with the situation.

2. I felt that one of the things we could have improved on was the checking of our correspondence before sending. On at least two occasions we had to send letters apologising for previous inaccuracies, or for mistakes in whom we had sent the letter to. In practice this would suggest a lack of professionalism, and would be unforgivable. It also led to inefficiency in the long run, wasting time on extra letters.

3. Moreover, if we had thought a little harder we could have minimised the number of letters we sent, by requesting all relevant information from a person in one go, rather than having to continually request further details. This was particularly true of our correspondence with Mr Graham, and in real life I suspect that a client would get a bit impatient if he was constantly harassed for more evidence. I did feel that we all lacked a little bit of experience in such matters; knowing what to ask for and from whom, and I am confident that this exercise has helped us in that regard. Finally I would say that I allowed my personal organisation to slip as the project went on, and my filing system went a little awry. This then led to further difficulties, such as in the compiling of this report, as many of the hard copies of letters that we had all been given were out of order. A saving grace was that, as a group, we had compiled a collective file, meant to mimic a proper law firm's file, which contained a copy of all minutes of meetings, correspondence, memos, e-mails etc. That was an excellent idea.

4. I found the whole experience to be extremely worthwhile. I believe it was as close as students will get to experiencing the 'real thing' before we commence our traineeships. It certainly taught us the importance of fact gathering before jumping in and trying to find a solution.
[...]
Next time I would like to have a negotiation meeting. We took a decision as a firm not to have one mainly because we did not think that we would achieve much from it. Instead, we conducted the whole negotiation by letter. This undoubtedly had the advantage of letting both sides digest the contents of the letters at their own pace and responding accordingly. However, with hindsight, I think I would have enjoyed the experience of

having to be fully prepared in advance of the negotiation meeting for anything which the other side

5. The negotiation project certainly helped focus attention on letter writing skills and general IT skills. There were functions such as not to file and attachments to emails that I was not familiar with at the beginning of the project, but now using them is second nature. Furthermore, most projects/essays in the undergraduate degree have concentrated on testing your legal research skills; the negotiation project was probably the first assignment that I have done that has highlighted the importance of fact gathering. Finally the negotiation project gave you the opportunity to participate in the whole transaction from start to finish and take pride in the final settlement that you helped to achieve.
[...]
Although at the beginning of the project I was dubious as to its worth, I can now understand why it is done and feel that it is probably the most practical thing we have done on the Diploma.
6. While establishing the facts was important, there was an additional challenge in this exercise that was both useful and amusing. It very quickly became apparent that this was an exercise in plain English. [...] I enjoyed trying to frame questions [to the client] so that both the tone and the content would be more likely to evince a response. This was largely successful with only one rebuff for 'legalese', but in the same letter we got gossip about extra-marital exploits!
7. Despite the difficulties with the firm I have enjoyed the project. I am optimistic that the sessions with VG [counsellor] will be an invaluable experience to us all. Even without this, simply going through the process of recognising the difficulty and deciding to seek assistance has been personally challenging and illuminating. I have had to examine my part in the group process in order to be open to learning better ways of dealing with issues. I feel I have benefited personally and professionally. This has not been an easy experience but real learning seldom is. It poses a threat to existing ideas and ways of operating. An essential element in the learning process is being open to having one's ideas and views challenged and this cannot be achieved without risk.

Conclusions

The basis of our innovations is not just merging of skills and knowledge, but the curriculum planning, the cross-subject development and integration of ethics throughout the programme. In other words, there is a considerable amount of educational planning that goes into the curriculum, most of it largely unseen by both students and part-time tutors, but which is essential to the transactional learning that takes place. Critical to the success of the virtual community is our ability to predict and deal with the practical, contextual factors we encountered when implementing transactional learning, and much else. A good example of this is the difficulty students have when carrying out two Conveyancing actions simultaneously – one a purchase and one a sale. We still need to support students better while they are performing these two transactions.

Our experience is that use of the web for the building of communities, both fictional and actual, does work. However there is no question but that, at this stage of web application building at least, the process is resource-intensive. For this reason, we put the case to management of the GGSL, based on educational

as well as financial grounds, that there should be a unit dedicated to the production and maintenance of ICT resources. This included not just the creation, expansion and maintenance of the virtual community, but webcast and multimedia resources as well. Our case was accepted, and LTDU was brought into being. LTDU is now an essential, core function of the Diploma: quite simply, the virtual environment innovations, and other initiatives such as multimedia and webcasts could not have been produced without it. It is an essential element of the approach taken in this paper, and its work is proof that ICT can indeed radically improve and enhance student learning.

What we have set out above is, we would hold, relevant to undergraduate as well as postgraduate legal education. Indeed, we believe that even the most apparently abstract conceptual subjects in the legal curriculum can at least in part be taught, learned and assessed using variations of transactional learning. Professional education is sometimes seen as having different educational aims to that of undergraduate education. Certainly, in terms of the types of skills and knowledge that are taught, the two are quite different. However, I would argue that strategies that can be used in professional legal education can also be used in undergraduate programmes. The basis for this claim lies in educational research. Essential to our task of implementation is the body of constructivist theory that is put into practice in the virtual environment, and which is for us an essential guide to actions in the virtual world.³ Well before Bloom's Taxonomy it has been axiomatic that the development and integration of skill and knowledge is one of the chief aims of education (Bloom 1956). It may be appropriate to focus at times on either skill or knowledge in the course of a programme of study; but the overall aim of any educational strategy should be to give students opportunities to practise integration of knowledge and skill. Contemporary educationalists of Higher Education emphasise this aspect of the learning process (Biggs 2003, Ramsden 1993, Laurillard 2001). We are already adapting our approach for undergraduate education – for example, in a new problem-based induction course for first year students that is integrated across study guides, tutorials, webcasts and which takes into account the social aspects of learning through collaborative work. Our approach is one that can not only be adapted to undergraduate learning, but to legal learning across jurisdictions as well (Maharg & Muntjewerff 2003). In this sense we hope that transactional learning can also become transnational learning as well.

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³ Constructivism, of course, is only one of many theories of learning. For other implementations of e-learning we use other theory. In our construction of multimedia online resources for example, we use cognitive feedback theory that is more appropriate to the teaching & learning environment within which students use the resources.

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Brief biography

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