

# Authenticity in Learning: Transactional Learning in Virtual Communities

***Draft*** paper

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'Learners need instructional conditions that stress the interconnections between knowledge within cases as well as different perspectives of viewpoints on those cases [...]. Learners need flexible representations of the knowledge domains that they are studying, representations that reflect the uncertainties and inconsistencies of the real world' (Jonassen, 1992)

## 1. Authenticity in learning

One theme running through the many versions of experiential learning is that of 'authenticity' – the correspondence, in some way or other, of learning to the world of practice. The concept is an important one, for it lies at the heart of the attempts by educators since John Dewey (1916) to address the relationship between learning and life. In dealing with it, we must acknowledge that there are many factors that affect authenticity of task such as context, learner motivation, task, feedback, social interaction, and social presence; and it is clear from the literature that they require to be carefully managed in any curriculum that involves e-learning.

In many respects, a number of educational theories such as constructivism have evolved in order to make sense of this concept, and adapt in in one way or another to forms of education. Jonassen (1993; 1994) and Tenenbaum *et al* (2001) give us in broad terms the key elements of constructivist learning; while Wilson (1993, 77) characterised it as being 'best understood as ordinary cognitive

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practices that are situationally defined, tool dependent, and socially interactive'. Constructivism has been used and adapted in many disciplines – in Chemistry (Dalgarno 2002), in scientific discovery education (de Jong *et al* 1998, Maharg & Barton, forthcoming), and Business Studies (Nurmi and Lainema, 2001). Such practices are based on forms of experiential learning, and authenticity is a key element of them – indeed it is often taken as being the touchstone of the situated practices that Wilson describes in his paper (see also Gredler 2004).

Such authenticity is based on a number of attributes. As Petraglia shrewdly observes, truly authentic experiences can neither be 'predetermined nor pre-ordained'; and it is this quality, together with the willing suspension of disbelief in what is after all a simulated activity that marks out the successful authentic experience. The aesthetic basis to such suspension points the way to an identification of the ground of authentic experiences, which far from being within us, is distributed in the world. As Barab, Squire & Dueber (2000) frame it, authenticity lies 'not in the learner, the task or the environment, but in the dynamic interactions among these various components [...] authenticity is manifest in the flow itself, and is not an objective feature of any one component in isolation' (38; quoted in Herrington, Oliver, Reeves, 2002, 2)

Behind the authenticity debates lies an implicit model of mimesis, namely that in an educational encounter there is, in some form or another, a replication of reality. This mimetic replication can also involve analysis and discussion and the many forms of symbolic interaction that takes place in what might be termed second-level analysis of both conceptual knowledge and experience.

However, we would argue that what one might call the mimetic fallacy (echoing that in the domain of literary theory) is insufficient to describe the role of educational theory in legal learning, and the complexity of the reality of actual educational encounters. Education has more to offer us in the way of reflection, variation, feedback and negotiated learning than a mere mirroring of real-life tasks; and the reality of professional practice and culture often affects such tasks in ways that are unexpected, difficult to predict and almost impossible to replicate.

In this paper we want to suggest three propositions:

1. That, in Jonasson's terms quoted in the epigraph above, 'flexible representations of knowledge' can be created using electronic resource-based learning environments that can considerably enhance the student experience of learning the law.
2. But we must always be aware that in creating such learning environments we are in the curious position of mediating student experience at *two* removes. First, we simulate the experiential context of an actual task, for example, writing a letter to a client. We then mediate this simulation at a second remove, namely through the process of mediating the simulation in the electronic domain. The result can be that users' experiences of the task are so far removed that the task no longer becomes an authentic one.
3. However, if we:
  - focus on creating carefully-designed simulation tasks along the lines of what I shall call 'transactional learning'; and
  - create flexible, sensitive software instruments by which students can express themselves and carry out that task-based learning,
 then we become involved in creating an environment where students can begin to comprehend through active learning the complexity of a professional legal task or transaction. Computers thus become flexible instruments of changes in perception and learning. In this sense, Jaron

Lanier's comment drawing an analogy between musical instruments and computers is apt:

'[...] I do think of instruments as having the best interfaces that have ever been designed [...] If there's any object in human experience that's a precedent for what a computer should be like, it's a musical instrument: a device where you can explore a huge range of possibilities through an interface that connects your mind and your body, allowing you to be emotionally authentic and expressive'. (Burkeman 2001)

Note how Lanier uses the term 'authentic' in a different way to that used by constructivists – one more akin to that of arts-based and expressive disciplines. Used to create the interface that Lanier describes, the electronic environment is not a hindrance but can actually enable authenticity and communication. What Petraglia (1998) has termed the 'rhetoric of authenticity' may then be harnessed to enable understanding and knowledge of what we might term the rhetorics of legal practice. Electronic mediation of experience can thus enable richer and more complex role play and personal engagement arising out of experience than would otherwise be possible using more conventional media.

## **2. The virtual environment: Ardcalloch**

In the use of a virtual community with professional law students at the Glasgow Graduate School of Law (GGSL) we are developing a model that will help us develop task authenticity (Maharg, 2001; Maharg & Paliwala, 2002; Maharg & Muntjewerff, 2002). I call this 'transactional learning'. Before I go on to describe the features of transactional learning in more detail, however, let me first describe the learning environment that we have created for students in order to facilitate this form of learning, and its educational context.

Transactional learning is used principally on the Diploma in Legal Practice at the Glasgow Graduate School of Law. This is a postgraduate, one-year course taken by students who already have a LLB degree, and who wish to become either solicitors or advocates in Scotland (the course comprised 252 students in 2004 – over 50% of the total annual intake into the profession in Scotland). After completion, students require to undertake a two-year traineeship with a firm of solicitors (or if they wish to go to the Bar, then one year and a period of preparatory training), before they are granted their Practice Certificate by the Law Society of Scotland.

Within the Diploma at the Glasgow Graduate School of Law we have created a virtual learning environment (VLE) that we use to help students learn how to learn practical legal transactions. It consists of a fictional town on the web, situated on the south bank of the river Clyde, quite close to Glasgow. The town is represented by a civic history, a map and by an online directory of several hundred institutions, businesses, virtual student law firms, and people (see figures 1-3)

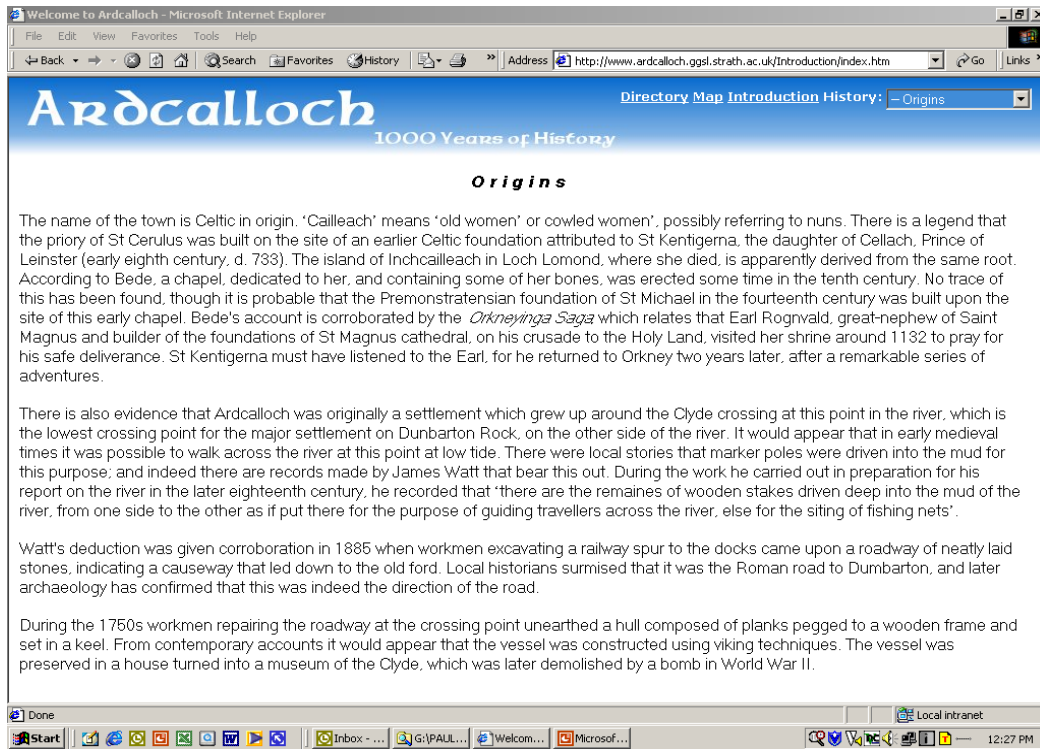


Figure 1: history of Ardcalloch – extract of section from town origins to early medieval period.

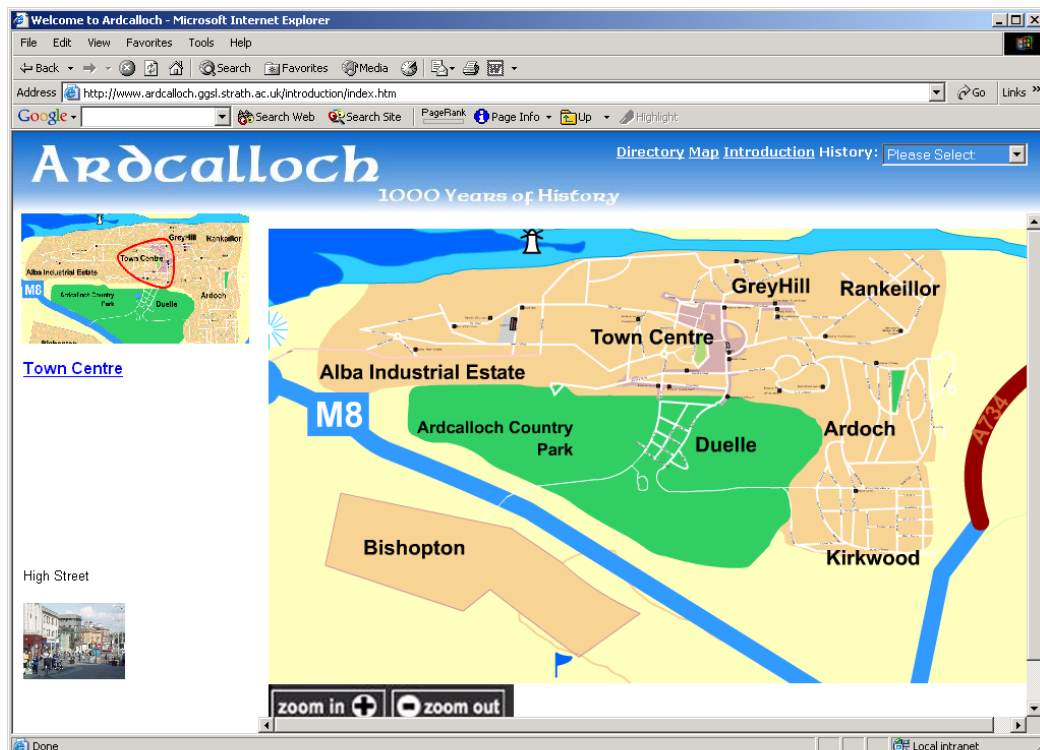


Figure 2: map of Ardcalloch

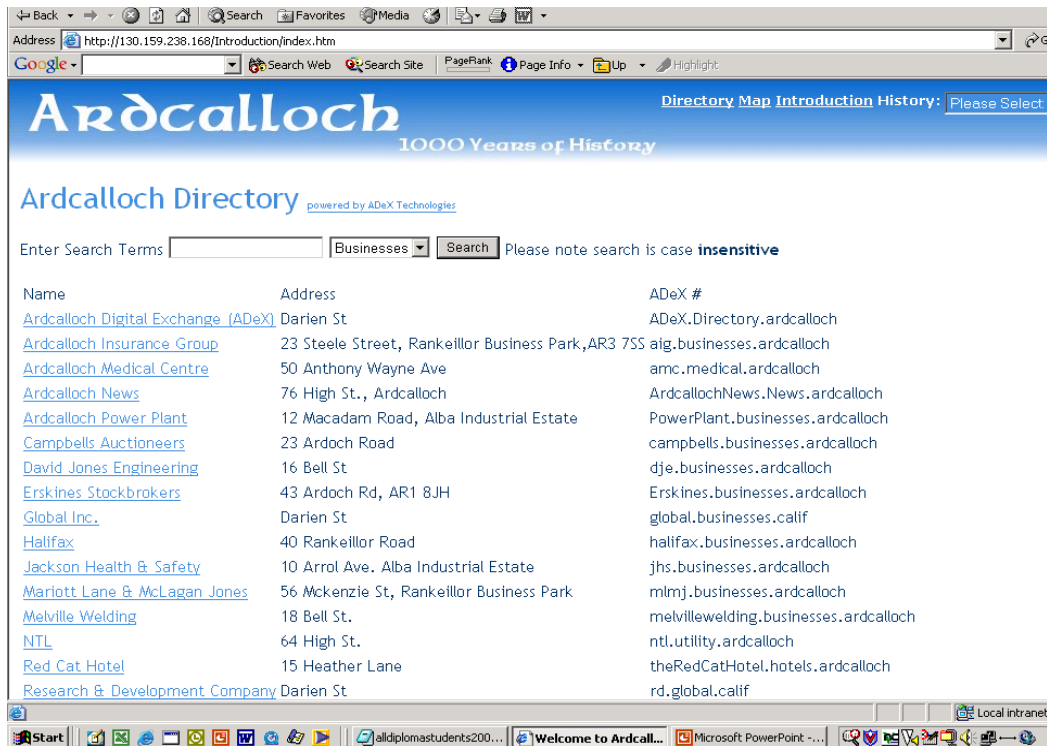


Figure 3: directory of Ardcalloch

The fictional town is of course an ancient device, whether sombre Platonic Republic or the dystopian futurescapes of *Bladerunner*, or vast contemporary multi-user online games such as *Second Life*. In most, there is no separation between the backdrop of the narrative and the sense of place: the narrative is often an integral part of the place itself.

The same is true of our use of the fictional online environment; and in this sense we have learned a lot from the way in which narrative and constructed place interact with each other. We use the environment as an integral part of the transactions that students carry out in the course. In Conveyancing, for instance, they learn how to convey domestic property using a text book and styles resources, both of which are used in a series of face-to-face tutorials. They then put this learning to use in the transactions whereby they purchase *and* sell property over the web. This means that by the time they have completed the Diploma, they have experience of two entire conveyancing transactions – both purchase and sale. Such experience is fairly unique on courses such as the Diploma, where normally students are trained in dealing with parts of transactions, but rarely have experience in dealing with an entire transaction. In order to create the background to the tasks, we created fictional clients and firms with which there would be interaction by the 'real' firm of students. There could thus be real-time messaging between the client, the other firm, the student firm, and relevant institutions in Ardcalloch.

This has been adapted to a number of different legal domains. For example, we run simulations along similar lines of a Personal Injury transaction, and we are in

the process of setting up a Public Administration simulation whereby firms will apply for a liquor licence on behalf of clients wishing to open a bar or bistro. In Private Client, students learn and are assessed on their ability to wind up the estate of a deceased client (this is discussed in more detail below).

### 3. Transactional Learning

In all of these projects, the common denominator is the legal transaction. The Diploma educates and trains students to become capable trainees in firms; and therefore the education that students engage in ought to be as practical as possible. From the outset, it became clear that we would need to define, for ourselves and others, what 'transactional learning' actually meant; and we stated the following five characteristics as defining what at present we would claim to be the outline features of our current practice:

1. *Transactional learning is active learning.* Transactional learning should be 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 discussing 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. We would claim that there are some forms of professional legal learning that can only take place if students go through the process of active learning.
2. *Transactional learning is based on doing 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 conveyed, students also take part in the transaction. They thus learn considerably about the practical realities of legal actions.
3. *Transactional learning involves reflection on learning.* Transactional learning involves thinking about transactions -- 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 development of the ability to dis-engage themselves from potentially damaging views of the group process within the firm, and re-construct that view. It includes documenting firm transactions.
4. *Transactional learning is based on collaborative learning.* Transaction as collaboration, indicating the root of the word: literally 'acting across'. Students are valuable resources for each other, particularly if they have opportunities to engage in both cumulative talk (the accumulation and integration of ideas) and exploratory talk (constructive sharing of ideas around a task – van Boxtel *et al* 2000) In the GGSL, we create around 64 'virtual firms' of four students, in which they carry out transactions using the virtual community (see figure 4). Collaborative learning breaks down the isolation and alienation of what might be regarded as individual or cellular learning. There is of course a place for individual learning, silent study, literature review and so on, and we emphasise this as a preparation for collaborative work. 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 the projects). 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 virtual 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.

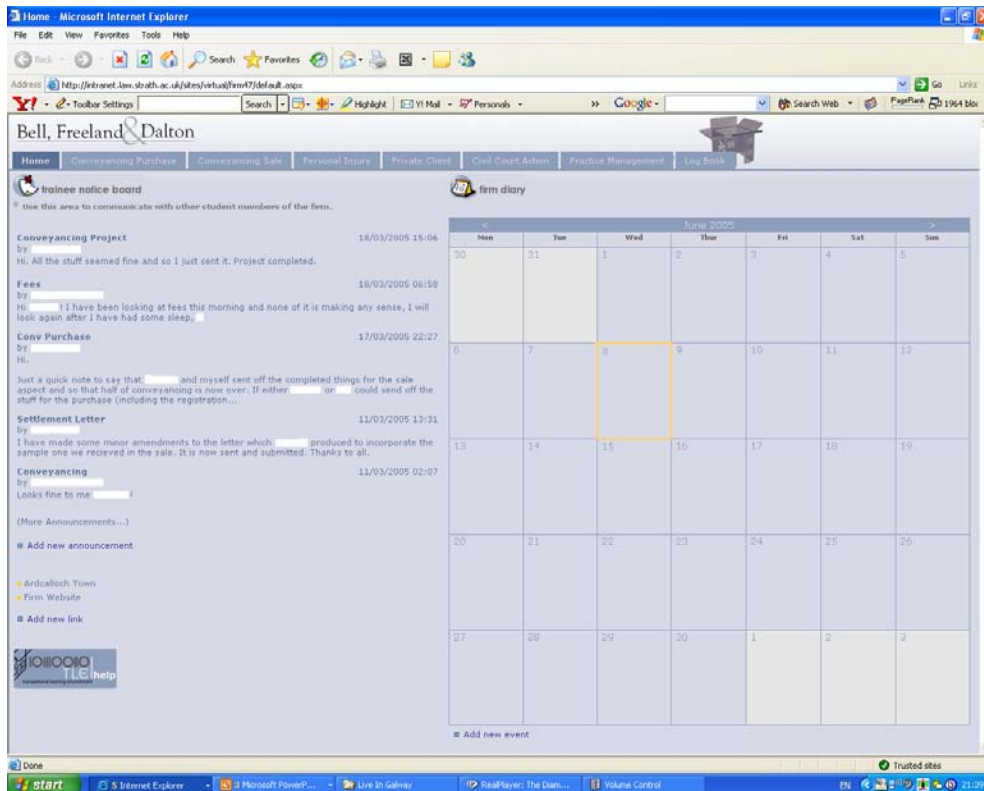


Figure 4: Student firm's intranet home page (with discussion forum – student names removed for privacy). Note the tabbed links to transactions below the firm name strap-line.

5. *Transactional learning requires holistic or process learning.* In seminars and lectures and in their reading of texts, students engage with ideas, and form understandings of legal concepts, the identity and purpose of documents, actions and the like. However such learning is part-to-whole; we also need to give them opportunities for whole-to-part learning, and for learning about legal process. The transactional projects provide the environment for this form of learning.

#### 4. Transactional Learning in Practice: example 1, Private Client Project

How might all of this translate in actual educational practice in professional legal education? In the Diploma curriculum, 'Private Client' is that subject dealing with transactions such as the inheritance of property after death, the winding up of a

deceased client's estate, and the making of wills. After consultation with tutors we focused on four assessment points:

1. Drafting a will
2. Drafting an initial writ
3. Composing letters to other professionals to ingather and evaluate the deceased's estate
4. Dealing with inheritance tax arising from the deceased's estate.

In the first year we held these assessments as open-book examinations. However it became clear after the marking of these assessments that open-book assessment was not particularly appropriate for the tasks in hand. Students could score as much as 80% or more in the assignments, but could so fail particular elements of it that the documents produced by students would be regarded by practitioners as seriously flawed documents in certain respects – the wording of particular clauses, or the omission of key phrases or clauses, for example.

Instead, we decided to use the virtual learning environment of Ardcalloch as both a learning tool and an assessment tool, and to turn the open book examination into a form of coursework. The four assessment tasks would be strung together as the narrative of a transaction. The project began with a memo from a senior partner to the four trainees in the firm, asking them to complete the winding up of an intestate estate, and giving the necessary details. The students then required to fill out an initial writ to begin the transaction. They knew from their tutorials the details that should comprise the writ (though of course the details of the scenarios do not replicate the templates they are given in tutorials – students must adapt the template to their own scenario). There were deadlines for each of the assessments that students knew in advance, and could therefore plan their work. They had all the information that they needed at the start of the project that would normally be available to them in the real life transaction. They also needed to gather information from characters or institutions in Ardcalloch, particularly when they in-gathered and valued the deceased's estate.

At the same time, we wanted to leverage knowledge between members of the firms. As with all such transactions, the firm itself is given a mark, not the individual four members of the firm. Each of them therefore require to co-operate with each other, and there must be evidence that they have agreed each assessed document before it is submitted. In this way, we want to maximise learning within the group, and ensure that they have the experience of working on a legal transaction as part of team, with each person taking responsibility for part of a transaction.

Each firm was given a different scenario. Effectively all scenarios were built around the same generic narrative – deceased dies intestate, and brother or sister arrives at the office with a collection of his or her estate – bank books, bills, share certificates, etc. This meant that we needed to create 64 different scenarios. In order to manage the detail of this, we created each scenario as a database of details which draw upon the central scenario. In planning this, we resorted to laying out the scenario as a matrix. What we have, in effect, is a cascade of variable across the scenarios which creates every scenario as a unique set of data. The problems involved in the creation of such a huge number of course documents were considerable, and it is only recently that we have developed administrative systems that will cope effectively with the generation, cross-checking and final proofing of such datasets.

Did this work as a form of transactional learning? Many of the students believed the assessment was useful to them, and embedded well within the subject, as the quotes from this year's course feedback below demonstrate:

- *Assignments were excellent from a practical point of view – I would feel confident enough to complete these tasks in the office now. Our assignments were also returned promptly which was great.*
- *Assignments were a good way of bringing together knowledge obtained at tutorials. It is a practical subject and it makes sense to assess with practical assignments.*
- *Again excellent practice for traineeship.*
- *Realistic and a very reasonable form of assessment.*
- *Provided with good feedback when made mistakes with any of these assignments. Allowed us to complete them properly the second time round. Good idea that students have an opportunity to correct work as I feel that I learned more and got more from the exercise as a result.*
- *Support and advice was given by the tutor on relevant problem areas of the assignments.*
- *Very good assessments – helped understand work done in tutorials. Very useful.*
- *Good learning tool – feel I learned more doing this than just reading about it.*

Each transaction takes place within the context of a 'firm' of students working together under the guidance of a practice manager: in reality a practising lawyer who is also a tutor on the course. Each firm practices within the virtual community of Ardcalloch using their firm's 'intranet' containing practice management tools such as correspondence files, style libraries, firm noticeboards, diaries, activity logs and personal logs which effectively integrates these transactions together into the year's caseload for the virtual firm. The TLE is therefore integrated through, around and within the curriculum. It becomes the core element of the course for the students where learning is integrated with practice and they are supported in making the transition from law student to lawyer. This authentic immersion allows us to shift students from merely learning process, procedures and facts to learning, through first hand experience, about professional capabilities such as personal responsibility, team working, ethics, client care and risk management. And this transition is clearly articulated by students in the reflective reports they submit to us at the end of the year:

*"...it is good practice to keep clients updated with regard to the progress of their case, as it can take a relatively long time from when the client's instructions are initially received to finally concluding the case for them"*

*"...working in the virtual environment has also helped me focus on the concepts of individual and collective responsibility"*

*"...our projects were quite clearly not completed in isolation...it was therefore vital to prioritise our workloads"*

*"...the [Project] really emphasised the importance of client care...this aspect was vital to the successful completion of the project (as well as any future transaction in my traineeship."*

*"...served to highlight the link between risk management, practice management and professional office skills."*

*"...taught me the importance of a client-oriented focus and strong client relationships... I believe we all learned valuable lessons in relation to people management that we will take with us to our respective traineeships."*

*"Specifically...I was able to visualise transactions and the chain of events...this knowledge is something that cannot effectively be taught in lectures."*

*"...prioritisation was imperative to the success of our firm."*

*"...I learned how important it is to use simple and concise language when corresponding with clients...it is important to make clients feel at ease and one of the most effective ways of doing this is to ensure that they understand what is happening."*

*"...the importance of a letter of engagement will stay with me"*

*"...through our mistakes we discovered that sending three letter to a client in one day is not good practice!"*

It was clear that the TLE with the tools it provided, but more importantly, built on this underlying philosophy towards professional legal education, provided exactly the conditions we needed to develop our VCA project as we had always envisaged it.

## **5. Transactional Learning in Practice: example 2, Virtual Court Action, Phase 1**

The Virtual Court Action was developed as one of the portfolio of cases assigned to the student firms within Ardcalloch. As with the other TLE projects, it appeared as one of the files within the virtual firm environment and involved citizens of Ardcalloch raising or defending a civil action. The TLE provides a level of reality and richness that was not possible in the previous phase of the VCA. For example, the Sheriff Court could now become a significant presence within the transaction rather than an anonymous email address (which it was in an earlier incarnation of the project in another institution). The Sheriff Court website could provide information the firms might need to help them progress their action (forms, guidance notes etc.) and be updated on a regular basis to reflect current 'live' cases. It is also now possible, given the sophistication of the tools within the TLE itself, to extend the project beyond its previous scope to incorporate filmed interviews with clients; include payment of court fees within the transaction; and extend progress of the action through the adjustment stage and up to the options hearing where the students would present their case in the court in front of a 'real' Sheriff.

At the start of the project, those firms who are acting for the pursuer will receive a memo from their senior partner outlining the case and instructing them to raise an action, along with their client's precognition and any relevant productions. It is our intention, in future, to provide a video of the client interview and require the students to draft the precognition themselves. The pursuer firms will then raise the action, drafting documents, corresponding with the Sheriff Clerk, the defender and their client as required and following the correct procedure within the given timeline. The opposing firms will, when instructed by their own senior partner, defend the action in the same way. At a certain point in the process, the firms will receive additional information from their clients which will require them to make adjustments. Each pair of firms will start with a unique scenario, but

they will also progress their actions uniquely, since they will have to make strategic choices, respond to each other's claims and deal with new information or unknowns as the transaction progresses. The transaction takes on a life of its own and by the end of the process the firms must be in a position to present a motion at the options hearing. Within the project therefore, students learn through experience about civil court styles, documentation and procedure, legal drafting and advocacy skills.

At the same time, the tutorial topics are synchronised with timescales the student are working to within the transaction so that, for example, students will have practiced and discussed the drafting initial writs or defences with their tutors before they have to carry this out on behalf of their clients within their firms. Additional support is provided through the webcast learning environment which has also been developed at GGSL. The Civil Court Practice course was the first within the Diploma in Legal Practice to exploit the power of the webcast environment to its full with the integration of video, multimedia, graphical and text-based resources into a rich student-centred learning environment. Students currently use this resource in place of traditional lectures alongside a fairly traditional course of weekly seminars. The webcast environment is viewed positively by students who report flexibility and re-usability to be among its most valuable benefits. However, it is still regarded as the 'academic' part of the course, its use being primarily directed towards study and passing exams.

It is important to remember also that the VCA project does not now run in complete isolation. The firms are also dealing with other transactions at the same time within their virtual firms – notably the purchase and sale of a house, and winding up an estate of a client who has died intestate. And it is this immersion into the 'real' world of practice that provides a rich learning environment where students develop their time management, team working, client care and resource management skills and enables the students to start the transition from student to trainee.

## 6. VCA, Phase 3

Our aim in the Diploma is essentially to enable students to leave us with what Biggs (1999) refers to as functioning knowledge, based on the idea of performance of understanding or an ability to put knowledge to work, and to start practising as a trainee solicitor. This concept of functioning knowledge is also reflected in medicine in Miller's Triangle of Clinical Competence (Knows, Knows How, Shows How, Does) where the top level refers to actual performance on a daily basis, with three levels of competence defined below that. According to Biggs, functioning knowledge is dependant on declarative (knowing what) knowledge, procedural (knowing how) knowledge and conditional knowledge (knowing when and why). We can view the webcast element as providing the declarative element and the tutorials the procedural element. In addition, Schön defines a 'reflective practicum' where learning by doing and a dialogue of reciprocal reflection-in-action between coach and student are the main features (Schon, 1987). He defines a practicum as "a setting designed for the task of learning a practice" (*Ibid* p 37) where students learn through undertaking projects, frequently in a group situation:

The practicum is a virtual world, relatively free of the pressures, distractions and risks of the real one, to which, nevertheless, it refers. (*Ibid* p 37)

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And it is through the medium of the group that a student can immerse himself in the world of the practicum...learning new habits of thought and action." (*Ibid* p 38)

A practicum may fail because its striving for realism overloads students with practical constraints or because (...) it leaves out too many important features of real world practice. (*Ibid* p 170)

In many respects Ardcalloch and our TLE models this notion of the reflective practicum. Indeed, we would argue that the reflective practitioner – or at least Schön's model of professional practice as embodied by this term – is an key element in simulation models, and pretty much essential if authenticity of practice experience is to be achieved.

The third phase of the development of the VCA therefore is more ambitious still, and will involve integrating the Virtual Court Action as it exists within the TLE with the webcast learning environment. The TLE and VCA project allows integration of these two components within an environment where conditional knowledge is developed, and thereby enabling students to transform their learning into functioning knowledge. Re-configuring the course with the VCA project as the main foundation upon which everything else is structured will provide an opportunity to integrate the theoretical and practical aspects of the course more closely. The webcasts and seminars then become learning resources, seen as directly supporting the transaction and allowing students to link seamlessly from the TLE to various points of the webcasts environment as required in a form of 'on demand' learning within the context of the reflective practicum. This ability to blend their student or 'learning' identities with that of their 'role-play' identities as professional trainees will, we hope, create a new form of support scaffold for the students within the TLE; one where work and learning are seen as being part of the same continuum thus providing the conditions for students to further develop their professional skills and achieve a level of functioning knowledge and reflective practice.

Developing this idea further then, and placing it within the wider context of our philosophy of professional legal education we have now identified a number of paths or 'views' through which students are able to learn and acquire knowledge. At this stage we are not attempting to define either taxonomies of learning or functional specifications but instead describe different, overlapping views of knowledge which depend on user purpose, the task in hand, prior knowledge and confidence or familiarity in handling the resources. We have called these:

**Linear View:** where students come to understanding of concepts by moving through them in a linear fashion, determined largely by the way the materials or course itself has been structured. This view can support initial familiarisation or detailed knowledge of concepts but is essentially a highly structured form of learning which deals with one concept at a time in a pre-determined fashion.

**Structural View:** where students have the ability to navigate their own way through a flowchart or knowledge map based on key concepts so that patterns, relationships, and processes start to emerge. This view is still structured to some extent in that the navigational nodes and branches are pre-determined and set, but it supports understandings of overviews and connections between concepts while still retaining an ability to drill down into detail to a linear view where required.

**Transactional View:** where knowledge components are embedded within an actual transaction, available chronologically as the transaction progresses in a just-in-time fashion. This view enables students to integrate their understanding of concepts more deeply (declarative knowledge) and at the same time apply the concepts to particular problems (procedural knowledge) thereby constructing their own learning and functional knowledge.

**Navigational View:** a student-centred, interactive conceptual map of knowledge that allows students to swiftly identify elements of learning for understanding. This view supports the student in exploration, questioning and going beyond existing principles, perhaps when they are presented with unseen or unfamiliar problems.

We see a potential mapping of these views to Biggs' SOLO taxonomy and recognise that they support different types of learning at different stages of the learning process. They are also context specific, guiding the view of the knowledge base available to the students. It is on these emerging philosophies, therefore, that we intend to develop our e-learning tools making them a more coherent, continuous and harmonious whole.

## 7. Conclusion

Looking to the wider perspective, it is clear that if e-learning is to be successful, it requires a change in perception of traditional ways of thinking about education, and in educational practice – much of the research literature supports this view (Holt *et al* 2002; Waycott 2002). If the change is to be successful, those of us involved in e-learning needs to give thought to the management of change within his or her organisation, whether that be a university or a law firm. Such change is always contingent upon local circumstances: of personnel, of hardware and software, of educational aims, the needs of a specific discipline, the horizon of what is possible on a particular course, the often fiendishly-complicated problems of timetabling, diarising and so on (Maharg 2004). This is hardly surprising; for the management of learning is really only another version of the management of culture change. Often, high-end theory, either educational or legal, has little to say about this (Barton, McKellar, Maharg 2000; Weiss 1995). And as much of the research points out (albeit this stems from universities in the West, rather than in Asia or the Far East where the local educational situations in Higher Education are quite different – Biggs & Watkins 2001; Le Brun 2002), it is the ground-up perceptions and moves for change that come from teaching staff that are most likely to succeed in the long-term. Hannan and Silver (2000, 2) point this out, emphasising the contingency of change: 'initiatives to improve teaching and learning that were located in a department [...] were more likely to succeed', and were more like to be sustained when grown from within a department or unit, than imposed from without.

If this is true of higher education, it is true also of e-learning in law firms. Even more so with this audience is there a need to produce imaginative and creative applications that lock into what fee-earners and others do in every day practice, and produce applications that enhance, enchant and engage practitioners. Drills and skills, mini-quizzes, talking heads and the like can go so far in ensuring compliance. But if learners are to return from learning to everyday tasks feeling they have learned significantly, they need attractive environments, elegant presentations of knowledge and above all activities draw them into absorbing

tasks and which retain the complex, multi-layered sense of reality – what Jonassen in the epigraph to this paper called ‘the uncertainties and inconsistencies of the real world’ – while at the same time enabling them to reflect on practice, and obtain feedback upon that practice. They also need powerful tools to create of such learning objects the programme of learning that they need for their own individual needs.

Is this possible? Yes – the experiments at the GGSL prove that is possible to create such authentic learning tasks, using simulation and transactional learning. More than that – it is absolutely necessary if learning is to disengage from formal, traditional educational models which were appropriate for classrooms in the paperworld era (and still are in many ways). In our internet age, though, we need to rethink the architecture of education, and use the new materials of digital learning to prepare our students not only for the globalised world of knowledge around them, but also the avalanche of knowledge that awaits them in our technological century. Barnett’s (1999) age of ‘supercomplexity’ is already upon us as far as knowledge and technology is concerned. If there is one way of coping, indeed thriving in this environment, I would hold that it lies in the route of re-thinking authenticity in learning for our law students. Transactional learning is one such possible route to authentic learning, in both universities and law offices.

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