



15th BILETA Conference: “ELECTRONIC DATASETS AND ACCESS TO LEGAL INFORMATION”.

Friday 14th April 2000.
University of Warwick, Coventry, England.

Teaching Law to the Nintendo Generation^[1]

Michael Aikenhead

Cathy Williams

Dan Hunter

Centre for Law & Computing

Law School

Legal Studies

Durham University

University of Melbourne

The Wharton School

ENGLAND

AUSTRALIA

University of Pennsylvania

USA

I hear and I forget, I see and I remember, I do and I understand.

(Chinese Proverb)

Abstract

As part of its commitment to providing students with the best possible legal education, the University of Melbourne Law School has developed the *Law Multimedia Simulation Shell (LMSS)*. *LMSS* is an interactive multimedia, internet delivered teaching tool capable of being used in a variety of law subjects. *LMSS* was first piloted two years ago in the subject *Dispute Resolution and Legal Ethics*. Following on from the success of that pilot program, five further subjects are under development.

The traditional uses of computers in legal education can be broadly categorised into two groups: electronic textbooks; and quizzing systems. Despite their benefits, both kinds of application only support limited learning styles. *LMSS* addresses this shortcoming, introducing a new approach in interactive computer mediated teaching. *LMSS* provides students with scenarios and exercises in a simulated legal practice, the aim of which is to demonstrate the importance of the procedures, ethics and tactics in real life. While course materials explain the law, experience shows that students often see these rules and practices as abstract, and largely irrelevant. Research demonstrates that placing learning within real-world contexts greatly enhances understanding. *LMSS* therefore requires students to apply those rules and practices in the running of a simulated legal practice. By immersing students in its unique simulated environment, *LMSS* encourages contextualised learning of what are often considered bland subjects.

Context

The higher education environment is experiencing a period of fundamental change. The first of the drivers for this change has been the significant reduction in funding provided by government to universities. For more than a decade Australian universities have been subject to ever increasing pressures from rising student numbers, combined with shrinking resources. This has forced universities to attract funding from other sources. Tied with this has been the introduction of student fees. Students thus demand both increased efficiency in the delivery of their courses, and courses that are more relevant to their vocational aims. Students rightly want value for money and the best possible educational outcome from the time invested in their studies. Together these two factors have led to education increasingly being viewed as a commodity - a commodity that students pay for in anticipation of benefit upon entering the workplace. Faced on the one hand with buyers of an educational commodity who demand increasingly more for their money, and on the other hand with a shrinking funding base, universities are forced to consider innovative methods of teaching.

A third driver changing higher education has been increasing global competition. Universities have always competed for students on a local level and to an extent internationally. However, such international competition for students has been severely limited. The incremental development of educational technologies has begun to change that. Technology now exists whereby complete degrees can be provided via the internet. Universities now exist that provide degrees through courses attended solely online. Law degrees can be taken this way in some jurisdictions. Some of these degrees are provided by traditional universities adapting their traditional courses and delivering them online. Other courses are provided by newly-established universities, existing only to provide degrees online. The worldwide market for higher education through distance learning is worth several billion dollars. The wider value of the higher education market is much greater and the much heralded emergence of the 'knowledge economy' can only increase the value of the market. An indication of this can be seen in the push of commercial entities into the educational market. This is most obviously seen in the establishment of 'corporate universities.' Microsoft, Cisco, McDonalds, and Dow Jones, for example, have all each established such institutions, which provide training and accreditation to the public. In the marketplace, such accreditation can be as valuable as the degrees provided by traditional universities. Commercial entities are also moving into the educational marketplace as partners with traditional universities. These entities can provide the expertise in delivery of material over the internet, the infrastructure, marketing expertise, content production as well as money to support the creation and delivery of courses. A competitive global market -- a rapidly changing and expanding global market -- is emerging to which universities must respond.

While law schools may not want to compete with many of these competitors, continual innovation in teaching of students and continual retraining of faculty will be of key importance. It is inevitable that these changes to the external environment will impact on law schools - if only through student demand. It is imperative that law schools remain flexible and open to the adoption of innovations that are significant and that impact on it. The rapid changes seen in educational technology and internet technology, which have driven the globalisation of education and distance education over the internet, provide new opportunities in law. They provide both a challenge and an opportunity. It is the challenge for universities to harness the opportunities provided by this technology.

The University of Melbourne Law School has sought to address these challenges in several ways - one of which is through the development of innovative teaching tools. The *Legal Multimedia Simulation Shell (LMSS)* is the backbone of the development of these tools.

Learning background

Ramsden[2] and Johnstone and Joughin[3] have argued that deep approaches to learning provide

better educational outcomes. Deep approaches to learning emphasize students having to seek underlying meaning of materials, relating new knowledge to previously learnt material, and organizing ideas into a coherent whole. A central element to promoting deep learning is the provision of a context for learning. Providing contextualised learning helps learners to integrate their learning with existing knowledge, and to organise it into a coherent whole. A primary educational strategy is thus for the students to learn by doing. This is the simple idea that students learn better when they are *involved* in the situation rather than simply processing de-contextualised information. [4]

In addition to contextualisation, several factors, including motivation, feedback and reinforcement, have been found beneficial towards fostering such deep learning. Motivation is important for amongst other things, it promotes the desire for recurrence of an experience. Recurrence promotes reinforcement which is itself beneficial for learning. Secondly, providing a motivating environment encourages learners to engage in activities with which they have little or no previous experience. Feedback is important for at least three reasons. First, feedback helps ensure that learners are not forming and learning erroneous concepts. Secondly, feedback provides learners with the sense of confidence necessary for them to attempt to integrate their learning with existing knowledge. For learners to engage in revision of already held concepts and the learning of new concepts they must feel confident that they are working in the right direction. Thirdly, feedback supports motivation. Learners like to know about their own progress. Feedback provides learners with a means to assess the progress of their learning. Finally, learning has been found to be improved through simple reinforcement. Viewing and reviewing concepts multiple times leads to greater longer term retention than does single exposure.

The value of contextualised learning as a primary means to promote deep learning is recognised in traditional legal education, which often attempts to provide various forms of contextualised learning. Thus the Langdellian case based method is fundamental to legal learning in US law schools. Similarly, seminars and tutorials in the law school often revolve around students answering real-life problem exercises. Many law schools run mooted programs, advocacy exercises, negotiation exercises and client interview exercises. Such programs, in addition to teaching the practical clinical skills that might not otherwise be covered in the curriculum, provide students with an environment in which to apply their knowledge and thereby reflect on and come to a deeper understanding of the subject.

However, there is a limit to the amount of contextualised learning that can be provided by such traditional methods. The ability to immerse students in a fully situated context is extremely limited, given the typically large number of students in law school subjects and consequently large class sizes. Further, traditional methods limit contextual learning to those specific times scheduled for a given course. Students are not provided with the means to experience contextualised learning whenever they want.

The general benefit of computer simulation has been noted as a means to provide contextualised learning in law. [5] [Computer Simulation in Legal Education](#) [n] The University of Melbourne Law School has been engaged in research, development and implementation of various computer simulation systems to support student learning. The *LMSS* is the Faculty's most recent tool. Although the uses of computers in law teaching are diverse, prior to *LMSS* these uses could broadly be categorised in terms of tutoring applications and in terms of quizzing applications. Tutoring application focused on presenting students with information about the law, they operated as electronic textbooks. Quizzing applications focused on testing student knowledge using computer administered tests. Both applications have proven learning benefits. Widely used examples of such programs have been created in the United Kingdom, with *IOLIS*, and in the United States, through the auspices of the Center for Computer-Assisted Legal Instruction, and its *CALI-Author*. Despite their benefits however, both applications only support limited learning styles. *LMSS* addresses this and pioneers a new paradigm in computer mediated teaching and learning.

Description of system

To understand the current version of *LMSS* discussed in this paper it is valuable to briefly trace the history of its development. Prior to creating the *LMSS*, the Faculty created another multimedia teaching program to promote contextualised learning. This program is used to teach the subject *Dispute Resolution and Legal Ethics* and is called *DRaLE-OnLine*. *Dispute Resolution and Legal Ethics* teaches procedures in civil matters, especially in the Victorian Supreme Court. It also teaches professional legal ethical considerations that arise within the context of litigation and legal practice generally. Unlike prior applications, rather than merely presenting students with electronic textbooks or administering computerised tests, *DRaLE-OnLine* immerses students in the operation of a simulated law firm. During their work in this simulated law firm, students must run a litigation file. They must liaise with clients, with other members of their firm, and with other student firms in order to successfully complete the piece of litigation.

This provides students with the all important, and hitherto missing, contextualisation of their learning about civil procedure and legal ethics. Lectures, the reading guide and materials explain what the legal and ethical rules are. However, experience has shown that these rules are often seen by students as abstract, formal and largely irrelevant. *DRaLE-OnLine* provides students with litigation exercises unique in the LLB program, exercises whose purpose is not to teach legal clinical skills, but to act as a medium for teaching the rules of civil procedure and professional conduct. The aim of the litigation exercises is to show in the most practical way how important these rules are. The exercises thus require the application of those rules and practices in a simulated legal firm. The aim is for students to experience the procedures, ethics and tactics of litigation in a real-world professional context.

At its core, *DRaLE-OnLine* is a computer based simulation system. *DRaLE-OnLine* simulates the operation of a law firm. Before students use the system they must team up with three classmates to form a hypothetical law firm. They must also choose a name for their firm. The name of the firm and the four students who constitute the firm's partners are then recorded by *DRaLE-OnLine*. From then on all interactions between *DRaLE-OnLine* and the students, between students using the system, and between students and their tutor is deemed to be communication from students as partners of their firm.

DRaLE-OnLine is structured around realistic problem exercises that students, as members of their firm, must complete. Each exercise requires the firm to run a litigation file through a portion of pre-trial procedure, in opposition to another firm. Each firm acts for different parties (either plaintiff or defendant) in different files. Firms are randomly paired up by computer; the effect is that each firm is opposed to a different firm on each exercise. Each exercise requires interaction between the firm, its opponents, the court and the firm's client. The allocation of tasks among members of the firm is entirely for members of the firm. For example in the first exercise, students act for the liquidator of a company (Fitzroy Nuts Pty Ltd) which has gone into liquidation and is seeking to recover a debt for nuts supplied to a customer (Nuts Galore). Students must communicate with their client to determine the detailed nature of the dispute and then take appropriate steps to recover the debt. As a first step students must contact their client to obtain further information and to take instructions on the course of action the client would like to pursue. Thus informed students must formulate the correct approach to the problem. This requires communication amongst the students - as partners in their firm. Students must agree amongst themselves what the appropriate strategy is and how to implement it. As the simulation progresses, students will eventually have to serve notice on the opposition and finally institute court proceedings to recover the debt. During all their work students must comply with appropriate procedural rules and display necessary ethical standards and professional courtesy. Thus students must obtain appropriate instructions from their client before acting and students must obtain the necessary consent from colleagues before sending out correspondence in their firm's name. When dealing with their clients, students are encouraged to

make filenotes detailing the nature of their dealings for the benefit of the other partners. If students wish to institute proceedings they must submit documents to the court for authentication before serving them on the opposition. All actions undertaken in the firm's name require the consent of the majority of partners in the firm. All interactions between students within their firm, between the firm and its clients, between the firm and its opposition, as well as all documents created by the firm, are recorded thus allowing the professional conduct of students to be assessed.

As the course progresses each firm is required to handle more than one case at a time. *DRaLE-OnLine* currently contains three cases, each of which represents a discreet problem exercise, and as the simulation progresses students and their firm are required to conduct these three cases simultaneously. However, *DRaLE-OnLine* has been constructed in a modular fashion so that further problem exercises can easily be added.

DRaLE-OnLine has proved highly successful as a means to teach *Dispute Resolution and Legal Ethics*. However, *DRaLE-OnLine* was also found to suffer several drawbacks. First, entering exercises into *DRaLE-OnLine* was a complicated task. Typically this had to be done by the designer of the actual system. It was not possible, as would be highly desirable, for the lecturers teaching *Dispute Resolution and Legal Ethics* to themselves write new exercises and enter them into the system. Secondly, *DRaLE-OnLine* was created to simulate the operation of a law firm in which students must team together and interact with other simulated firms run by other students in the course. Forcing students to interact to this high degree sometimes proved inhibiting. In particular some students simply proved incapable of working with others. Some students within the same law firm were overbearing on their partners, and required far too much work from them. Other firms had partners who did not contribute as much to the operation of the firm as did other partners. In addition, while partners in the large majority of firms did cooperate and run their firms smoothly, problems also arose between opposing firms. A small minority of firms simply did not put in enough work to enable the students in the opposing firms to realistically complete their exercises. Although perhaps reflective, or perhaps overly reflective, of actual legal practice, each of these situations resulted in problems when trying to provide students with individual but fair assessments of their work.

The third problem with *DRaLE-OnLine* was that some students did not fully understand the operation of the system, and thus how to run the simulated exercise within the system. Although the system contains a 'Help' facility, some students did not understand the 'story' unfolding during the exercises. Finally, *DRaLE-OnLine* did not incorporate any means to test student learning as they were using the system. The only method of assessment allowed by *DRaLE-OnLine* was through assessing the pieces of work actually written by students and stored on their simulated case files.

LMSS was developed by the faculty to address each of these problems. First, *LMSS* has been built as two components. The first component is an authoring environment which faculty members can use to write exercises for use within the system. The second component is the simulation system which students see and with which they work through exercises. Unlike *DRaLE-OnLine*, *LMSS* does not require students to work as partners within a simulated firm, nor to interact with other such firms. Rather, *LMSS* allows exercises in which students work on simulated problems on an individual basis. Whereas *DRaLE-OnLine* simulated the operation of a multi-partner law firm, *LMSS* is used to build simulations for environments where students work as individuals.

It is easiest to illustrate this with one example exercise that has been created with *LMSS* in order to provide contextualised learning in the subject *Introduction to Business Law (IBL)*. This is a subject taught by the faculty to non-lawyers. The exercises in *IBL* simulate the work of an in-house lawyer in a small computer hardware supply company. The company is involved in the wholesale bulk purchase of computer hardware which it then sells to retail customers. In this simulation, amongst other things, it is the in-house lawyer's job to oversee purchases and sales of computer equipment. For example, one scenario in the system revolves around a change of delivery dates in a contract for

the wholesale purchase of hardware. It is the students task to review the actual contract for sale and particularly the clauses covering delivery. The student must identify possible ambiguities in the these delivery clauses and refer to the prior correspondence between the company and the supplier, as well as the company's standard form contract and the suppliers standard form contract, in order to clarify the company's legal position regarding delivery. The student must then draft a report to the directors of the company informing them of the company's legal position.

A second scenario in this business law simulation involves an employee of the company who has provided potentially misleading information to a customer. Acting as the company solicitor the student must review whether the company can be held responsible for these statements and what the consequences would be of being held responsible. The student is required to run a file within the system in which the student stores research notes about the problem and in which the student writes a report to the directors of the company to inform them of the legal position. Similarly, the student is required to draft a memo to the directors and to the staff outlining how they should act when giving advice in order to best protect the company.

In these business law simulations each scenario typically involves the student receiving correspondence within the system - this correspondence forms the basis of the story underlying the simulation. Such correspondence might be a memo or email from a hypothetical boss or a letter from another character in the simulation. Since it is based on HTML and XML, and served over the web, scenarios created with *LMSS* can incorporate any content that can be delivered over the web, such as graphics, attached documents, and audio and video. The student must then work through the problem that unfolds through this correspondence - researching the legal issues raised in the problem and writing a piece of advice. This piece of advice is itself stored on virtual case files maintained within the system. Students are also encouraged to make notes of the results of their research and ideas within these virtual files.

In order to address the problem of students not understanding how to use the system, *LMSS* incorporates a 'Guide.' When students logon to *LMSS* they have the option of interacting with the system through a 'Task List' or through the Guide. The Task List is a sparse form of interaction which simply indicates the next task that the student must complete within the scenario. It is up to the student to determine how to complete this task and then to do so. It is anticipated that as students become familiar with the system that they will use this approach. In contrast the Guide provides much more support for students working through a scenario. Typically the Guide will support the student in completing a scenario by indicating the internal elements of a particular task and indicating how each of these tasks is to be completed within *LMSS*. As students complete a particular task, the Guide automatically updates and indicates which task must be completed next. For example in the *IBL* simulation, if the student must refer to past correspondence between the company and its supplier, and the student must read the relevant standard form contracts, the Guide initially tells the student to go to the Library section of the simulation. Once the student is in the Library, the Guide automatically updates and indicates which piece of correspondence to read first. Once the student has read this correspondence the Guide again updates and indicates the next document to be read. This process continues until the student has read all the necessary material and is ready to formulate a response to the problem. In this way the Guide directs the students through the operation of the scenario itself.

The Guide can however, also be used to provide students with information other than simply how to move through the scenario, such as information about the area of law relevant to the problem or with information about the general approach to solving the problem posed by the scenario. In this way the Guide acts as a pedagogical support for the student.

Finally, the Guide provides testing and reinforcement for students. *LMSS* incorporates means by which scenario writers can incorporate mini-tests within their scenarios. Such mini-tests can be true/false questions, multiple-choice questions or can be short-answer questions. For true/false and

multiple-choice questions the Guide merely indicates how the student performed on the test and can be used to provide potted explanations for right and wrong answers. The Guide responds to short-answer questions by using Keller-plan interactions. Here the student types a short answer into the system and the Guide responds by asking the student to compare their answer to a 'model answer' which the Guide then presents on screen. The Guide highlights important elements in the model answer that the student should have addressed in their own answer. Student answers to all forms of testing can be recorded by *LMSS* and thereby used by teachers to assess individual students or to collect statistics about student performance as a whole. *LMSS* can also be used to allow students to view their own performance on tests, thereby providing them with a way to view and assess their own progress.

Records of student performance on these tests also provides teachers with a valuable new form of information. By checking statistics on student work, teachers can gauge where student understanding as a whole is generally poor in a given subject. This allows teachers to adjust teaching accordingly and focus on such problem areas. This information allows teachers to tailor their teaching to the particular student group in the particular year.

Outcomes

DRaLE-OnLine proved an extremely valuable teaching tool. The response from students to using *DRaLE-OnLine* has been very positive. Just as importantly, external examiners in the subject have been very complimentary about the depth of student understanding displayed by students after using the system. Both are extremely encouraging not only for *DRaLE-OnLine* itself but also for the approach to computer teaching and learning promoted with the system. The provision of means for students to work through real-world problem exercises at any time convenient to them enhanced their learning. By providing a situated learning environment *DRaLE-OnLine* fostered deep learning of legal principles. *DRaLE-OnLine* allowed the provision of more contextualised problems than prior resources allowed and enabled students to undertake such problems at any time convenient to them. In fostering such deep learning *DRaLE-OnLine* encourages better understanding of concepts, and consequently better long-term retention of fundamental principles of law.

It is anticipated that simulations developed with *LMSS* will provide similar benefits. In addition however, *LMSS* allows for simpler creation of exercises than did *DRaLE-OnLine*. It is anticipated that easing the creation of problem exercises will encourage the creation of more scenarios within any given subject, as well as the use of *LMSS* in a wider number of subjects. *LMSS* also provides immediate feedback and response for students, focusing their attention on mistakes as they are made.

Simulations are currently being constructed to teach business law and to teach the skills of legal research. A system covering the introduction of a new tax regime is in the final stages of planning, while several other systems are envisaged. *LMSS* was constructed using open source products (SQL, XML, XML-parsers, etc), and is accessible using any web browser. While simulations being constructed with *LMSS* are in widely varied areas of law, the underlying approach remains the same. Along with the positive feedback from students and external examiners, this provides further encouragement that *LMSS* embodies a valuable approach and has provided students with a useful resource with which to take more control over their own learning, and a means to provide them with the quality, flexibility and accessibility to deliver the best legal educational experience possible.

LMSS has been designed to make learning more immersive and more flexible, and is accessible from any computer connected to the Internet and using any standard web browser. It is accessible at any time. As teaching takes place on the networks rather than in classrooms, learning moves from being directed to being exploratory. *LMSS* fosters deep learning through contextualisation and the provision of feedback during simulations. *LMSS* reinforces learning by allowing the provision of more contextualised problems than currently possible. And perhaps more importantly, students have

reported that working through simulated real-world problems is actually fun. Perhaps this is the best indicator that the simulation approach does indeed benefit students.

[1] Note: The authors are currently at different institutions, but the work reported on in this paper was undertaken at the University of Melbourne Law School. Funding for this was provided by the generous support of the Dean of the Law School, Professor Michael Crommelin, and from a Teaching and Learning (Multimedia Educational Technology) Grant from the University of Melbourne.

[2] Ramsden P., *Learning To Teach In Higher Education* (1992) Routledge Publishing.

[3] Johnstone R. and Joughin G., *Designing Print Materials for Flexible Teaching and Learning in Law* (1997) Cavendish Publishing.

[4] Le Brun M. and Johnstone R., *The Quiet (R)evolution: Improving student learning in law* (1994) Law Book Co.

[5] Widdison R., Aikenhead M. and Allen T., [[5 International Journal of Law and Information Technology 279-307 and Proceedings of the Thirteenth BILETA Conference.](#)]