1-1-2010

Entry Into Valhalla: Contextualising The Learning of Legal Ethics Through the Use of Second Life Machinima

Des Butler
Queensland University of Technology

ENTRY INTO VALHALLA: CONTEXTUALISING THE LEARNING OF LEGAL ETHICS THROUGH THE USE OF *SECOND LIFE* MACHINIMA

PROFESSOR DES BUTLER[*]

An ability to recognise and resolve ethical dilemmas was identified by the Australian Law Reform Commission as one of the ten fundamental lawyering skills. While the 'Priestley 11' list of areas of law required to qualify for legal practice includes ethics and professional responsibility, the commitment to ethics learning in Australian law schools has been far from uniform. The obligation imposed by the Priestley 11 is frequently discharged by a traditional teaching and learning approach involving lectures and/or tutorials and focusing on the content of the formal rules of professional responsibility. However, the effectiveness of such an approach is open to question.

Instead, a practical rather than a theoretical approach to the teaching of legal ethics is required. Effective final-year student learning of ethics may be achieved by an approach which engages students, enabling them to appreciate the relevance of what they are learning to the real world and facilitating their transition from study to their working lives. *Entry into Valhalla* comprises a suite of modules featuring 'machinima' (computer-generated imagery) created using the *Second Life* virtual environment to contextualise otherwise abstract concepts. It provides an engaging learning environment which enables students to obtain an appreciation of ethical responsibility in a real-world context and facilitates understanding and problem-solving ability.

I Introduction

Seminal reports in the 1990s both in Australia and overseas criticised law schools for their concentration on teaching content at the expense of the skills and other attributes required to be a practising lawyer. One attribute emphasised by the Australian Law Reform Commission as one of the ten fundamental lawyering skills

---

[*]   LLB(Hons). PhD. Professor of Law, Faculty of Law, Queensland University of Technology. Australian Teaching and Learning Council Teaching Fellow.

requiring greater attention was ethical awareness and responsibility, and the ability to recognise and resolve ethical dilemmas.[1] Today in law schools around the common law world there is an increasing understanding that just as an appreciation of legal ethics and professional responsibility is an indispensible part of legal practice, ethics training is an indispensible element of legal training.[2] Nevertheless, the track record of ethics training in Australian legal education has been described as generally less than impressive.[3] A 2003 study for the Australian Universities Teaching Council found that the commitment to ethics learning in Australian law schools was far from uniform.[4] The study found that some law schools include a dedicated legal ethics subject in their curriculum (some in first year and some in final year), whereas others cover ethics as a component of a stand-alone subject. Some law schools prescribe ethics as a core subject, while others have a legal ethics elective. Some seek to teach legal ethics 'pervasively' with ethical issues covered in different subjects over the course of their degrees. In other law schools, legal ethics education forms part of legal practice training, undertaken either after completion of, or in conjunction with, the undergraduate law degree. Equally, different approaches to instruction are utilised, ranging from weekly large group lectures with or without tutorials to small-group classes and clinical experiences.[5] Another study found that some Australian law schools that introduced ethics and professional responsibility subjects into the law curriculum appeared to be relatively uncommitted to their development, success and implementation.[6]

It has been suggested that the immediate reason for these variations is not difficult to identify.[7] The prescribed areas of study for legal

[1]   Australian Law Reform Commission, *Managing Justice: A Review of the Federal Civil Justice System*, Report No 89 (1999) [2.21], [2.77]; American Bar Association, *Legal Education and Professional Development — An Educational Continuum — Report of the Task Force on Law Schools and the Profession: Narrowing the Gap* (1992).

[2]   Roger Brownsword, 'Ethics in Legal Education: High Roads and Low Roads, Mazes and Highways' (1999) 33 *Law Teacher* 270; William M Sullivan, Anne Colby, Judith Welch Wegner, Lloyd Bond and Lee S Shulman, *Educating Lawyers: Preparation for the Profession of Law* (Carnegie Foundation, 2007) ('Carnegie Report').

[3]   Mike Robertson, 'Renewing a Focus on Ethics in Legal Education' (Paper presented at Australian Lawyers and Social Change, Faculty of Law, Australian National University, 24 September 2004) <http://law.anu.edu.au/alsc/MikeRobertson.pdf>.

[4]   Richard Johnstone and Sumitra Vignaendra, *Learning Outcomes and Curriculum Development in Law* (Department of Education, Science and Training, 2003) 122 <http://www.cald.asn.au/docs/AUTC_2003_Johnstone-Vignaendra.pdf>.

[5]   Ibid 120–1.

[6]   Marlene Le Brun, 'Enhancing Student Learning of Legal Ethics and Professional Responsibility in Australian Law Schools by Improving Our Teaching' (2001) 12 *Legal Education Review* 269.

[7]   Robertson, above n 3, 2.

practice (the 'Priestley 11') refer only to the teaching of the formal rules of professional responsibility. Ideally, ethics training should be done in a clinical setting, dealing with the problems of real people.[8] However, by its nature, clinical education can be offered only to a small number of students.[9] Further, clinical programs are so expensive that only a handful of law schools have been able to fund them.[10] Against the background of current national 'broadening participation' higher education policy, these circumstances serve only to compound access and equity issues.[11] The Priestley 11 obligation, however, is more easily discharged by a traditional approach, including lectures focusing on the content of professional responsibility rules, as it is for other areas of substantive law like contract or criminal law. Such an approach may be seen as cost-effective, at least, at a time when there are additional pressures resulting from increased class sizes and a lack of resources.[12] The relatively low government funding for Australian law schools has been recognised as a significant impediment to innovation in the development of curricula and resources centred on effectively inculcating attributes such as an appreciation of ethics and professional responsibility.[13]

However, from a pedagogical and discipline-specific perspective there are many deficiencies in such a traditional approach. The New South Wales Law Reform Commission has stated:

> The Commission wishes to make clear its view that it is inadequate to teach legal ethics and professional responsibility as if these are matters are [sic] etiquette which must simply be transmitted, committed to memory and recalled on the appropriate occasions (such as at the examination). Rather, these are matters which are bound up in the fundamental nature and essence of lawyering and legal professional *practice,* which necessitates a *process* or *problem-solving* approach to the subject. Ideally this involves a clinical approach, and certainly the opportunity for reflection and discussion, but in any event we regard the 'large lecture' as an unsuitable pedagogical technique (and the large lecture hall an unsuitable venue) for creating a professional sensibility and developing a thoughtful and lasting commitment to ethical conduct.[14]

[8] Andrew Boon, 'Ethics in Legal Education and Training: Four Reports, Three Jurisdictions and a Prospectus' (2002) 5 *Legal Ethics* 34, 60; Roy Stuckey, 'Teaching with Purpose: Defining and Achieving Desired Outcomes in Clinical Law Courses' (2007) 13 *Clinical Law Review* 807, 827.

[9] Margaret Castles, 'Challenges to the Academy: Reflections on the Teaching of Legal Ethics in Australia' (2001) 12 *Legal Education Review* 81, 92.

[10] Law Council of Australia, *Review of Australian Higher Education Discussion Paper* (2008) 6 <http://www.deewr.gov.au/HigherEducation/Review/Documents/Submissions2008/209LegalEducationCommitteeLawCouncilofAustralia.pdf>.

[11] Australian Government, *Review of Australian Higher Education Report* (2008) <http://www.deewr.gov.au/HigherEducation/Review/Pages/ReviewofAustralianHigherEducationReport.aspx> ('Bradley Review').

[12] Johnstone. and Vignaendra, above n 4, 3–4.

[13] Law Council of Australia, above n 10.

[14] New South Wales Law Reform Commission, *Scrutiny of the Legal Profession: Complaints against Lawyers*, Report No 70 (1993) [5.24] (emphasis in original).

Further, the traditional 'transmissive' approach like large group lectures no longer meets the expectations or needs of modern students. Abstracted and decontextualised knowledge tends to dominate the pedagogical practices in traditional teaching methods in many disciplines. More often than not, content is prioritised at the expense of depth, with limited opportunities for students to develop skills and attributes required in the professional work environment.[15] Such an approach ignores the interdependent relationship of situation and cognition.[16] Students today are surrounded by ubiquitous information and merged technology, dealing with blurred boundaries between their work, study and social lives.[17] These students generally want the flexibility of accessing their study materials in their own time and in their own way.[18] This flexibility also enables them to juggle the competing time commitments that are a common experience for many, or most, modern students.[19] Technology-based learning environments, by their asynchronous nature, heighten potential learning impact by letting the student user determine their timely application, thereby addressing the issue of flexible access to resources.[20]

Effective student learning of ethics requires a practical rather than theoretical approach[21] which engages students, enabling them to appreciate the relevance of what they are learning to the real world

---

[15]   Jan Herrington and Ron Oliver, 'An Instructional Design Framework for Authentic Learning Environments' (2000) 48(3) *Educational Technology Research and Development* 23, 23; Mark Freeman et al, *Business As Usual: A Collaborative Investigation of Existing Resources, Strengths, Gaps and Challenges to Be Addressed for Sustainability in Teaching and Learning in Australian University Business Faculties* (Australian Business Deans Council, 2008) 13 <http://www.altc.edu.au/resource-business-as-usual-sustainability-sydney-2008>; Marckus Milne and Philip McConnell, 'Problem-Based Learning: A Pedagogy for Using Case Material in Accounting Education' (2001) 10(1) *Accounting Education* 61, 62; Nona Muldoon and Jenny Kofoed, '*Second Life* Machinima: Creating New Opportunities for Curriculum and Instruction' in *Proceedings of EDMEDIA 2009 World Conference on Educational Multimedia, Hypermedia and Telecommunications* (2009) 2243.

[16]   Herrington and Oliver, above n 15, 23.

[17]   Karen Nelson, Sally Kift and Wendy Harper, 'First Portal in a Storm: A Virtual Space for Transition Students' in *Balance, Fidelity, Mobility: Maintaining the Momentum? Proceedings ascilite Brisbane 2005* (2005) <http://eprints.qut.edu.au/archive/00003943/>.

[18]   Oliver McGarr, 'A Review of Podcasting in Higher Education: Its Influence on the Traditional Lecture' (2009) 25(3) *Australasian Journal of Educational Technology* 309.

[19]   Marie-Pierre Moreau and Carole Leathwood, 'Balancing Paid Work and Studies: Working (-Class) Students and Higher Education' (2006) 31(1) *Studies in Higher Education* 23; John Tarrant, 'Teaching Time-Savvy Law Students' (2006) 13 *James Cook University Law Review* 64.

[20]   Andrew Middleton and Richard Mather, 'Machinima Interventions: Innovative Approaches to Immersive Virtual World Curriculum Integration' (2008) 16(3) *ALT-J, Research in Learning Technology* 207, 208.

[21]   Janine Griffiths-Baker, 'Reviewing Legal Ethics and Legal Education in England and Wales — An Unenviable Task?' (2007) 10(2) *Legal Ethics* 121, 121.

and facilitating their transition from study to their working lives. In the absence of funding from government or non-government sources,[22] any approach must be cost-effective and capable of scaling up to cater for the needs of the student body as a whole rather than a fortunate few.

II Machinima and Narrative-centred Learning Environments

It is now widely acknowledged that technology can provide an alternative to real-life settings such as clinical exercises, without sacrificing the critical authentic context.[23] An authentic context can be achieved through either an actual work setting, a highly realistic or 'virtual' surrogate of the actual work environment, or an anchoring context such as a video or multimedia program.[24] A blended curriculum drawing on digital media can be an effective means of promoting active student-centred learning activity by setting challenges, seeding ideas and illustrating problems.[25] Nevertheless, for many academics a significant obstacle to introducing multimedia innovations into their curricula is the prohibitive cost of production, including video and computer software programming, which is often required.[26] Other barriers include a lack of academic technical literacy and commitment to learn new technology, a perceived threat to academic freedom and autonomy, and general 'academic inertia'.[27]

Multimedia involving the use of virtual characters to present tasks and critical information in a simulated environment can be a useful strategy in the creation of more authentic learning environments online.[28] It has been recognised that 'machinima', or computer graphics imagery created without the cost of professional software or professional programming, can be a cost-effective means of creating

---

[22] See, eg, Marlene Le Brun, 'Producing Multi-Media Teaching/Learning Materials for Teaching Legal Ethics and Professional Responsibility in Australian Law Schools' (2001) 12 *Legal Education Review* 157.

[23] Herrington and Oliver, above n 15.

[24] Hilary McLellan, 'Situated Learning: Continuing the Conversation' (1994) 34(10) *Educational Technology* 7.

[25] Middleton and Mather, above n 20, 208.

[26] Jeremy Dunning et al, 'Technology is Too Important to Leave to Technologists' (2004) 8(3) *Journal of Asynchronous Learning Networks* 11; Jennifer deWinter et al, 'Computer Games across the Curriculum: A Critical Review of an Emerging Techno-Pedagogy' (2010) *Currents in Electronic Literacy* <http://currents.cwrl.utexas.edu/2010/dewinter_et_al_computer-games-across-the-curriculum>. Cf Le Brun above n 22.

[27] Middleton and Mather, above n 20, 207–8.

[28] Shirley Agostinho, 'Using Characters in Online Simulated Environments to Guide Authentic Tasks' in Anthony Herrington and Jan Herrington (eds), *Authentic Learning Environments in Higher Education* (Information Science Publishing, 2006) 88.

effective learning environments.[29] Machinima involves 'real world filmmaking techniques being applied within an interactive virtual space where characters and events can be either controlled by humans, scripts or artificial intelligence.'[30]

A feature of game-based pedagogy including machinima is its ability to teach the curriculum both overtly and covertly.[31] Machinima allows a subject to be dealt with in a more realistic manner than if presented in a decontextualised fashion. It enables the creation of a narrative-centred learning environment of the type that has been recognised as providing 'engaging worlds in which students are actively involved in "story-centric" problem-solving activities'.[32] Machinima also offers a broad canvas for storytelling, enabling the depiction of everything from office scenes to outdoor scenes such as those involving cars, aircraft and tropical islands[33] — something that would not be possible to film in the real world without substantial funding. Moreover, generally speaking, machinima is not vulnerable to vagaries due to, for example, weather and noise that may be associated with real-world locations and virtual actors are not at risk of being unavailable due to ill-health or for other reasons.[34]

III *Entry into Valhalla:* Contextualising Legal Ethics Learning

The author was awarded a 2010 Australian Learning and Teaching Council Fellowship for a program designed to address the needs of two separate groups of learners: final-year law students studying ethics; and law academics and other interested educators in higher education wishing to use technology to create engaging learning environments for their students but lacking the capacity to do so. The program sought to address two issues: the need to impart ethical awareness and responsibility more effectively; and staff development

---

[29] Middleton and Mather, above n 20; Diane Carr, *Machinima and Education* (September 2007) Futurelab <http://www.futurelab.org.uk/resources/publications-reports-articles/web-articles/Web-Article794>; Nona Muldoon et al, 'Bringing "*Second Life*" to a Tough Undergraduate Course: Cognitive Apprenticeship through Machinimas' in *Hello! Where Are You in the Landscape of Educational Technology? Proceedings ascilite Melbourne 2008* (2008) 653 <http://www.ascilite.org.au/conferences/melbourne08/procs/muldoon.pdf>.

[30] Academy of Machinima Arts and Sciences, *The Machinima FAQ* (8 March 2005) <http://www.machinima.org>.

[31] deWinter et al, above n 26; James Gee, *What Video Games Have to Teach Us about Learning and Literacy* (Palgrave Macmillan, 2004).

[32] Bradford Mott et al, *Towards Narrative-Centered Learning Environments* (1999) New York State University, 1 <http://www.csc.ncsu.edu/faculty/bwmott/papers/Mott-NI1999.pdf>.

[33] Des Butler, '*Air Gondwana: Teaching Basic Negotiation Skills Using Multimedia*' (2008) 1 *Journal of the Australasian Law Teachers Association* 213, 216–19.

[34] Cf, eg, the problems detailed in Le Brun, above n 22, 'Producing Multi-Media Teaching/Learning Materials for Teaching Legal Ethics and Professional Responsibility in Australian Law Schools', n 160.

to create cost-effective multimedia. The first issue was addressed by developing the *Entry into Valhalla*[35] program, a narrative-centred learning environment that uses narrative to draw students into the exercise, satisfying pedagogical goals in an enjoyable, authentic, motivating and effective manner. The second involved a number of activities including workshops, presentations and a website, which contains a detailed resources manual and instructional videos on the various cost-effective resources used in making *Entry into Valhalla*.[36]

A *The Production Process*

Entry into Valhalla adopts elements of a 'cognitive apprenticeship' approach to learning including modelling, coaching, scaffolding, reflection and exploration.[37] The five modules of the program address different areas of the legal ethics curriculum; namely, *The Legal Profession*, *Admission to the Profession*, *Confidentiality and Conflicts of Interest*, the *Duty to the Administration of Justice* and *Discipline*. Each of the five modules comprises an introductory video filmed in the real world (in which an academic provides an overview of the area to be studied), prescribed readings, self-test quizzes (which provide formative feedback on both correct and incorrect responses), machinima scenarios that depict real-world-type ethical dilemmas, questions based on those scenarios, and further readings.

Entry into Valhalla utilises machinima created using the *Second Life* online multi-user virtual environment and other cost-effective multimedia.[38] *Second Life* allows both free and premium (that is,

[35] In Norse mythology, *Valhalla* was the great hall where Odin received the souls of heroic warriors. It was thus the aspiration of all Norse warriors to attain such a high level of favour that they could enter Valhalla. The name of the program is therefore a metaphor for students seeking to attain a higher appreciation of ethics. The theme is also reflected by the main characters in the program bearing the names of Norse gods. For example, the senior partners of the fictional law firm *Odin's Lawyers* are Tom Thor and Faith Freya, the partner heading the criminal law section is called Tony Forseti (Forseti was the Norse god of justice) and the family lawyer Vanessa Var (Var was the Norse goddess of contracts, particularly marriage contracts). The names were chosen for their distinctiveness in order to aid student recall, something generally not facilitated by names like John Brown and Mary Smith. The names are also less likely to resemble actual persons.

[36] The website forms part of the ALTC Exchange and may be found at <http://www.altcexchange.edu.au/book/using-cost-effective-multimedia-create-engaging-learning-experiences-0>.

[37] Allan Collins, 'Cognitive Apprenticeship and Instructional Technology' in Lorna Idol and Beau Fly Jones (eds), *Educational Values and Cognitive Instruction: Implications for Reform* (Lawrence Erlbaum, 1991), 121; John Brown, Allan Collins and Paul Duguid, 'Situated Cognition and the Culture of Learning' (1989) 18(1) *Educational Researcher* 32. See also Brent Wilson and Peggy Cole, 'A Review of Cognitive Teaching Models' (1991) 39(4) *Educational Technology Research and Development* 47.

[38] It should be noted, however, that while the techniques discussed below relate to *Second Life*, there are other virtual worlds to which they may be equally applied, including '*The Sims*: Leo Berkeley, Situating Machinima in the New Mediascape' (2006) 4(2) *Australian Journal of Emerging Technologies and Society* 65.

paid) access. Users who wish to establish personalised environments within the virtual world that persist between logins can do so either by owning land or by leasing land owned by others. However, land can be purchased only if the user has a premium account.[39] Avatars — that is, the virtual characters in *Second Life* — can be customised, with the ability to change an avatar's shape, skin colour and texture, hair, clothes and accessories. This capability, together with the ability to custom-build structures and to acquire objects ranging from chairs and desks to cars and other vehicles, makes *Second Life* an attractive platform for machinima making.[40] If a user lacks the skill or time to custom-create objects and/or those elements making up an avatar's appearance, those things may either be acquired for free or purchased using the 'in-world' currency known as 'Linden dollars' (L$) either from locations within the virtual world or from websites such as the official virtual marketplace.[41] As in real life, in *Second Life*, the cost of an item does not necessarily reflect its true value: not all free items are low quality and not all sold items are of high quality. Indeed, the converse is not infrequently the case. Also, as in real life, shysters operate in *Second Life*. For example, it is easy to find an item being sold in one location which is available for free in another.

Second Life machinima makers seeking locations to shoot scenes therefore have the option of either constructing sets on their own land or filming scenes at locations constructed by other users. Under the *Second Life* End User Agreement, copyright in objects created in the virtual world subsists in the user creator, rather than Linden Lab. Accordingly, when filming takes place at locations owned by others, permission ought to be sought from the owner/creator for its use. Normally, this will be given in return for attribution in the project. *Entry into Valhalla* utilised both sets designed and created

[39]   Des Butler and Janice White '*A Slice of Second Life: Academics, Support Staff and Students Navigating a Changing Landscape'* in *Hello! Where Are You in the Landscape of Educational Technology? Proceedings ascilite Melbourne 2008* (2008) 128 <http://www.ascilite.org.au/conferences/melbourne08/procs/butler-d.pdf>.

[40]   See also the evaluation of different 3D environments as machinima platforms in Jeffrey Bardzell et al, 'Machinima Prototyping: An Approach to Evaluation' in Anders I Mørch et al (eds), *Proceedings of the 4th Nordic Conference on Human–Computer Interaction: Changing Roles* (2006) 433. *Second Life* (<http://www.secondlife.com>) was developed by Linden Lab and first launched in 2003. The program is hosted on servers located in San Francisco and is streamed to users who access the program using a client viewer installed on their own computer. Accordingly, one disadvantage of the program is the user's lack of control over the program. If, for example, Linden Lab conducts maintenance of its servers or otherwise experiences difficulties then service may be disrupted. Further, if filming in virtual areas open to other users, machinima makers may find proceedings interrupted by interlopers wandering into shot or deliberately causing disruption. These challenges aside, once filming has been completed, the footage endures. This is one advantage that this use of *Second Life* has over other uses — such as synchronous interactions in the virtual world, which are dependent on the program being available: see Butler and White, above n 39.

[41]   Called 'SL Marketplace' at <https://marketplace.secondlife.com/>.

by the author on 'QUT Island', the region in *Second Life* owned by the Queensland University of Technology and, with permission, locations owned and created by other *Second Life* users.

The machinima scenarios in the modules each follow the format of a legal practitioner in a fictional law firm approaching the male and female senior partners for advice concerning an ethical dilemma which the practitioner is confronting in the course of his or her work. Each scenario ends with the practitioner positing the question 'What do you think?', or a variation thereof, to facilitate in-class discussions in which students role-play as either the male or female partner in providing advice that recognises and attempts to resolve the ethical dilemmas. Two of the machinima scenarios (concerning *Admission* and *Discipline*) are capable of facilitating a different form of role-play, their design allowing one student to argue in favour of admission/discipline,[42] one opposing admission/discipline,[43] and another playing the role of the arbiter.[44]

The machinima scenarios combine both video and still images, the latter used mostly to depict the particular dilemma in flashback, as recounted by the practitioner. *Second Life* includes an inbuilt snapshot capability, but a previous inbuilt video capture feature has now been removed from the program due to its unreliability. Instead, a program like *FRAPS* video capture can be acquired for a small fee[45] and will enable effective video recording.

Second Life features a voice chat and basic lip-sync animation. This means that the user is able to speak into a microphone and make his or her avatar's lips move in synchronisation with his or her speech. In addition, a variety of facial expressions and animations are available to assist with the portrayal of a story.

After determining the concept and course material to be addressed in the project, the first stage was writing all scripts and other content, followed by storyboarding of video components. After the scripts and quizzes were completed, they were settled in conjunction with members of the project's reference group. The machinima scenarios were then filmed with the author speaking all dialogue, the *FRAPS* capture program being configured to record only vision and not audio. Dialogue using the voice talents of Faculty colleagues and students was later recorded using the *Audacity* program.[46] Video and

---

[42] That is, the representative of the applicant (in the *Admission* scenario) or the Law Society (in the *Discipline* scenario).

[43] That is, the Law Society (in the *Admission* scenario) or the representative of the respondent (in the *Discipline* scenario).

[44] That is, the Court of Appeal (in the *Admission* scenario) or the Civil and Administrative Tribunal/Legal Practice Tribunal (in the *Discipline* scenario).

[45] *FRAPS* may be downloaded from <http://www.fraps.com>. *FRAPS* may be used for free but will place a small *FRAPS* watermark at the top of the screen. For a small fee — which at the time of writing was only A$47 — a licensed version may be purchased which will record without a watermark.

[46] *Audacity* may be downloaded from <http://audacity.sourceforge.net/>.

audio were then mixed and edited using *Microsoft Movie Maker 2.1*, a video-editing program that is part of the Windows XP package.[47] This process allowed the actors' voices to be synchronised with their corresponding avatars' lip movements. *Movie Maker* was also used to edit the introductory videos, which were filmed on locations around the Faculty using a camcorder and tripod. Videos were given an additional professional finish by using music obtained via Creative Commons Search.[48]

The resulting videos were then packaged using the *Xerte eLearning* system, a template program developed by the University of Nottingham and free for download.[49] *Xerte* is an easy-to-use development environment for creating interactivity and is aimed at both learning designers and academics working at their desktops. It enables a wide range of multimedia content to be packaged together, including videos, photographs, quizzes of various types and charts, as well as links to other resources such as YouTube, Google Earth, Wikipedia and RSS feeds (see Figure 1).

Figure 1 Examples of *Xerte* Pages Featured in *Entry into Valhalla*, Featuring an Introductory Video and Prescribed Readings, and Machinima Scenario

---
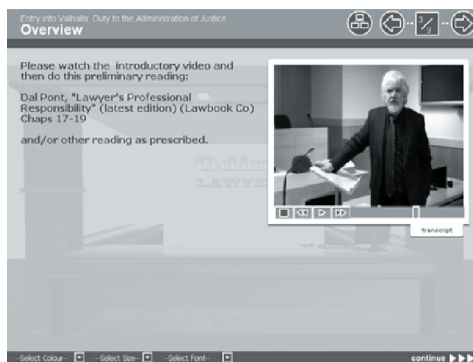
[47] Apple users might use the *iMovie* program — which in many ways is superior to *Movie Maker* — that is provided for free on Mac computers. Microsoft has now developed *Windows Live Movie Maker* as a replacement for the Windows XP version of *Movie Maker*; in the process, removing many of that program's most useful features for machinima making. Nevertheless, *Movie Maker 2.6*, the version designed for Vista systems and similar to the Windows XP iteration, will reportedly also work in Windows 7.

[48] The Creative Commons metasearch engine is available at <http://search. creativecommons.org/>. The specific music search engines in the site are *Jamendo* and *SpinExpress*. Other Creative Commons music can be found at sites including <http://www.artistserver.com>, <http://ccmixter.org> and <http://free-loops. com>.

[49] *Xerte* and its page templates may be downloaded from <http://www.nottingham. ac.uk/xerte/>.

The final step in the process involved uploading the *Xerte* modules to a Blackboard Learning Management System site. An image map was 'hotspotted' so that when hotspots were clicked they would launch the various *Xerte* modules (see Figure 2).

Figure 2 The *Entry into Valhalla* Blackboard Site
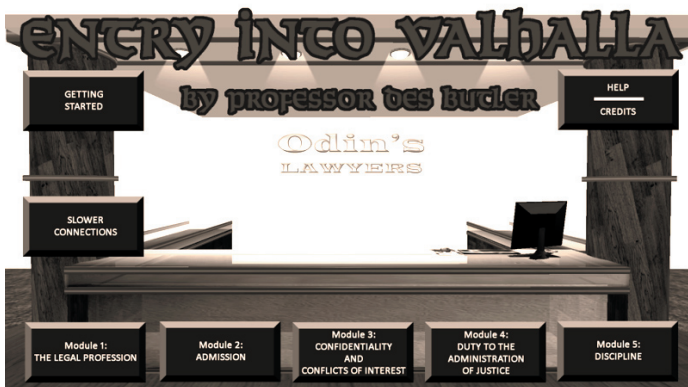
In addition, a separate folder within the Blackboard site was added and linked to the image map, which contained 340kbps broadband and dial-up versions of all videos forming part of *Entry into Valhalla*, and the relevant questions. These video versions were designed to cater for students who had slower connections or other limitations on their Internet usage, for whom streaming video via the *Xerte* modules may not be suitable. Transcripts of all video components were also provided to enable ease of later reference in class.

B *Machinima Scenarios: A Rich Tapestry*

Even where the approach to learning and teaching legal ethics includes small class discussions, these areas are often examined on

the basis of theory questions or text-based problems. For example, in the area of legal ethics concerning the duty to the administration of justice, students learn about a lawyer's paramount duty to the court and the possible conflict with the wishes of a client, or what the client thinks are his or her interests, and the duty to act with competence, frankness and candour. These issues might be addressed by short theory questions, such as:

> 'The role of the Crown Prosecutor is not to secure a conviction at all costs.' Discuss.

or:

> What is the appropriate response when a client confesses that he or she is guilty of the crime with which he or she has been charged?

Alternatively, a set of facts might be described in which, for example, one person is said to have committed a crime and at some later time confesses his or her guilt to a lawyer. Typically, students are then asked for their advice in the circumstances.

By contrast, the machinima scenarios in *Entry into Valhalla* enable the same material to be covered in a rich, multi-layered real-world context that is more engaging and which more closely resembles situations students may encounter when they enter legal practice. Each machinima scenario only lasts for between four and seven minutes, but within that short time presents complex situations that, as often occurs in practice, do not yield to simple or peremptory answers.

For example, in one of the machinima scenarios in the *Duty to the Administration of Justice* module, Forseti, the junior partner in the fictional law firm, approaches the two senior partners for advice concerning a client who is accused of stabbing a man in a public toilet block. The crime is depicted in a flashback series of still and video images. The senior partners are shown quizzing Forseti on the client's defence, which leads to a depiction of Forseti's meeting with the client's alibi witness, his girlfriend. Forseti then tells in flashback how the investigating police officer testified that he had found the murder weapon hidden under a nearby bus shelter, the client's angry outburst in court that he had been 'fitted up' and his subsequent irate protestations in an interview room that the tendered knife could not be the murder weapon because he threw the murder weapon off a pier after he 'stuck that dude' (see Figure 3).

Figure 3 Screen Captures of an Entry into Valhalla Machinima Scenario Depicting Ethical Issues Concerning the Duty to the Administration of Justice

This sequence, which lasts only 4 minutes and 33 seconds, facilitates discussion on the following questions:

- Should a lawyer ask a client whether he or she committed the offence with which he or she is charged?
- Should a lawyer withdraw from representing a client when the practitioner forms a low opinion of the client and does not think he or she deserves to win his or her case?
- Should a lawyer follow a client's instructions to present an alibi witness when the practitioner does not think that witness is credible?
- What, if anything, should a lawyer do when the client confesses that he or she is guilty of the crime with which he or she is charged?
- What, if anything, should a lawyer do when the lawyer knows from the client's confession that witnesses (in this case the police sergeant, for the prosecution, and the client's girlfriend, for the defence) are committing perjury?
- What, if anything, should a lawyer do when the lawyer knows from the client's confession where a crucial piece of evidence (in this case the murder weapon) can be found?
- Should the prosecutor have led the police officer's evidence concerning his miraculous discovery of the knife and allowed the jury to make a judgement?

- What were the prosecutor's obligations in relation to advising the defence that the knife would be adduced as evidence and the circumstances of its discovery?
- If the client is convicted and the prosecution later receives an anonymous tip concerning the true location of the murder weapon, what should the prosecutor do in relation to both the accused and the police officer?

The use of machinima means that, instead of considering such complex questions on the basis of disembodied names and broadly described locations in a text-based problem, they may be addressed in a more realistic milieu. Names have faces, and their words have accompanying gestures and facial expressions. Locations have colour and unspoken detail. The learning experience more closely resembles real life.

C *Pre-Implementation Evaluation*

Evaluation was a critical element embedded throughout the project cycle. *Entry into Valhalla* went online from semester two, 2010 at the Queensland University of Technology and should be available to other Australian universities before the end of 2010 under Creative Commons Licence. Prior to its implementation, the program was evaluated by three key groups of stakeholders: prospective students, academics and members of the legal profession. All three groups enthusiastically endorsed the program. The students highlighted the ease of use, the visuals, the transcripts that accompany all videos in the program and the summary of issues by one or other of the two senior partners at the end of each machinima scenario. They also liked the realism of the machinima scenarios.[50]

Academics saw greater potential for enhanced engagement of their students than current approaches involving theory questions and text-based problems discussed in small groups. They thought that text-based problems gave many students the impression that ethics was a 'soft touch' subject without the rigour of other substantive subjects. They liked the great detail and multiple layers in *Entry into Valhalla* and believed that the scenarios would be a better reflection of real-world dilemmas than single-issue theory and text-based problems.

The third stakeholder group, which included officers from the ethics department of the Queensland Law Society, liked the modelling of junior practitioners who were confronting ethical dilemmas seeking advice from more senior members in the firm, which was implicit in the program. They also expressed approval of

───────────────

[50] As one student stated: 'Probably the best way to pose legal ethics questions to students. Theory is one thing but applying theory to a real, personal question is entirely another.'

the multilayered nature of the dilemmas presented in the machinima scenarios, noting that real-world ethical dilemmas rarely if ever involved single issues. One remarked:

> One of the side effects of moving away from a private tutelage by a master [in articles of clerkship][51] is the separation of a young practitioner from senior practitioners … and the exposure through the office of seeing things. [*Entry into Valhalla*] is very good … they will be feeling like they are living it rather than looking at it in a text format.

D *Post-Implementation Evaluation*

Student response to *Entry into Valhalla* was evaluated by way of a paper survey rendered in class after completion of the program. The survey asked students to rate their responses to a number of statements on a 5–1 Likert scale (with 5 representing 'strongly agree' and 1 representing 'strongly disagree') and a number of open-ended questions. Responses were received from 106 students out of a total enrolment of 346 in the subject, representing a 31 per cent response rate.

Two statements related to whether the students felt that they had gained benefit from the approach adopted in *Entry into Valhalla* of using narratives based on real-world-type scenarios involving dilemmas faced by members of a law firm. The first statement was:

> The *Entry into Valhalla* computer program helped me to relate my understanding of legal ethics to real world situations.

Students responded as follows:

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
5	4	3	2	1
21	66	12	4	3
20%	62%	11%	4%	3%

A total of 82 per cent of students agreed or strongly agreed that the program helped them to understand ethics in a real world context. Indeed the relating of legal ethics to the real world was identified as being the best aspect of the program by the greatest number of students.

---

[51] Rules for admission currently vary between different states in Australia. In the past, Queensland law graduates were required to serve two years (full-time) or five years (part-time) of articles of clerkship or a period of college-based professional legal training (PLT) before qualifying for admission to the legal profession. Changes to admission rules in Queensland now mean that most law graduates will now choose PLT rather than articles of clerkship as the prerequisite.

The second statement was:

The law firm storyline in the *Entry into Valhalla* computer program helped my learning of legal ethics.

Students responded as follows:

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
5	4	3	2	1
19	67	12	4	4
18%	63%	11%	4%	4%

A total of 81 per cent of students agreed or strongly agreed that the law firm storyline assisted their learning. This is reflected by the fact that the characters/storylines in the program received the second-highest number of votes as the best aspect of the program. For some, it helped to put ethical issues into a real-world context when they had difficulty connecting theory to practical examples on their own.

A real-world storyline based in the context of a law firm also facilitated a greater degree of discussion in class than may have been possible with simple text-based problems.[52] In addition, they also helped students to realise that ethical dilemmas are not always as easy to resolve as the text-based problems they may be familiar with from their studies of other substantive law subjects:

Valhalla was good but so grey at times, hard to find answers — but this may just be a reflection of the area of study. It was definitely something different and was stimulating mentally.

Students who found multimedia difficult to use or who have trouble navigating a multimedia program may be distracted from the content of the program and instead became fixated on their difficulties.[53] Research has also identified that a small proportion of students (and academics) will resist technology, in particular game-based design, for a complex mix of personal and societal ideologies around play and learning.[54]

The survey included two statements in this regard. The first of these was:

I found the *Entry into Valhalla* computer program easy to use.

---

[52] As one student observed: 'The interesting storylines — it was left quite open, so encouraging discussion was not all that difficult.'
[53] See, eg, Tisha Bender, *Discussion-Based Online Teaching to Enhance Student Learning: Theory, Practice and Assessment* (Stylus Publishing, 2003) 31.
[54] deWinter et al, above n 26; Gee, above n 31.

Students provided the following responses:

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
5	4	3	2	1
40	50	13	1	3
38%	47%	12%	1%	2%

A total of 85 per cent of respondents thought that the program was easy to use. Ease of use was another factor identified by students as one of the best aspects of the program. This may be taken as a reflection of the design and capability of the *Xerte eLearning* environment. Ease of use is also an important consideration when teaching a cohort of students with varying degrees of comfort using technology.

Students were also asked to respond to the statement:

I enjoyed using the *Entry into Valhalla* computer program as part of my study of legal ethics.

Having fun when studying has been recognised as a motivator for being engaged and as a powerful stimulus for effective learning.[55] The following responses were received:

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
5	4	3	2	1
15	61	18	9	3
14%	58%	17%	8%	3%

A total of 72 per cent of students agreed or strongly agreed they enjoyed using *Entry into Valhalla*. Students variously described the program and its storylines as 'fun', 'engaging', 'enjoyable', 'entertaining', 'amusing' and 'easy to watch'.

Since the ethics course constituted a blended learning environment, combining the online *Entry into Valhalla* program and text-based questions, students were also asked to evaluate the learning resources. Their preferences were as follows:

---

[55] See, eg, Jerome Bruner, *The Process of Education* (Harvard University Press, 1960) 14.

Both	*Entry into Valhalla*	Text-based questions	Neither
51	31	20	4
48%	29%	19%	4%

The blending of an online component, with its various elements including the machinima scenarios and self-test quizzes, with traditional text-based questions focusing on theoretical and philosophical issues was preferred by the largest number of students. Their supporting comments were remarkably similar in nature, expressing the view that the computer program and text-based questions 'represent different sides of the learning experience' and complemented each other.

Those who preferred the online *Entry into Valhalla* program gave a variety of reasons. These included their view that it was more engaging, interesting, entertaining, practical, real-world and/or memorable than traditional text-based questions. Others emphasised the interactivity and flexibility of the program, since they were able to access it at their own convenience.

By contrast, those who preferred the text-based component did so either because they preferred text-based rather than visual learning or it was 'what we are used to'; because 'our exam [will be] questions based [on] text'; because text was quicker to read; or because the text-based questions were easier to answer. Part of this group of students were the students who indicated that they did not enjoy using the *Entry into Valhalla* program as part of their studies, did not think it helped them to relate legal ethics to real-world situations, and were not assisted by the law firm storyline. At the same time, a notable number of this group indicated that, while they preferred text-based questions, they nonetheless valued and enjoyed having the program as an element of their studies.

IV REFLECTIONS AND DIRECTIONS

The *Entry into Valhalla* project yields several lessons for similar projects and interested academics.

A *Curriculum Issues*

Legal ethics taught without a coherent philosophical and theoretical basis and with an emphasis only on practical ethical problem-solving is likely to lead students to believe that legal ethics is no more than a gloss on the substantive law. Instead, ethics training should inculcate an understanding that ethics involves a pervasive set of values that underpin the practice of law, and is an integral part of learning the law as a social phenomenon. Consequently, students

should be presented with the opportunity to confront the many facets of ethical decision-making.[56]

At the Queensland University of Technology Law School, *Entry into Valhalla* forms an important component of a blended learning program in a final-year core subject on professional responsibility, which also includes instruction on, and discussion of, theories underpinning legal ethics. Such understandings provide an essential foundation for addressing the challenges posed by the complex real-world-type scenarios. These scenarios are discussed in small group classes adopting a workshop approach, with participation in these discussions forming part of the assessment for the subject.

B   *An Investment in Time*

The production process for programs like *Entry into Valhalla* can be a learning exercise. Typically, such programs represent the confluence of a number of elements including the concept and the resources required to bring that concept to its fruition. Those resources include the necessary hardware and software; the knowledge, skill and confidence to use them; and time to do so.

Effective and engaging learning experiences no longer require substantial budgets. Machinima and other cost-effective multimedia now enable such programs to be created at little or no cost at an academic's desktop. Programs such as *Second Life*, *Audacity*, *Movie Maker* and *Xerte* do not require specialist programming or learning design expertise. Resources such as Creative Commons Search allow projects to be enhanced by music and sound effects for added realism and a professional-looking product for no additional cost. Measured in terms of the tools used in its production, the total cost of the entire *Entry into Valhalla* project was less than $50.

The more an academic uses such programs and becomes familiar with their features, the more confident and adventurous he or she is likely to become in their use. That increased confidence should in turn mean greater potential for creating engaging and effective learning experiences.

Time, however, remains perhaps the greatest challenge in the process. Indeed, academics may not be prepared to risk hours of their time in developing technology on the mere chance that it will enhance their students' learning.[57] Working alone, the author took between one and two weeks to create each of the seven machinima scenarios, this time including the writing of scripts, storyboarding, filming of machinima sequences, recording of the voice tracks and

---

[56]   Margaret Castles, 'Challenges to the Academy: Reflections on the Teaching of Legal Ethics in Australia' (2001) 12 *Legal Education Review* 81, 92.

[57]   See, eg, Middleton and Mather, above n 20, 208; Kerry Shephard 'Questioning, Promoting and Evaluating the Use of Streaming Video to Support Student Learning' (2003) 34 *British Journal of Educational Technology* 295, 303.

video-editing. Writing the scripts and filming for the real video introductions took no more than two days with a further day spent editing the footage. Compiling all the material in *Xerte* was done relatively quickly, and is a testament to its designers. This process took no more than one day to complete all five modules. Constructing the Blackboard website occupied no more than two or three days.

However, these 15 or so weeks were complemented by other time commitments that are more difficult to quantify accurately. The machinima sequences in *Entry into Valhalla* were filmed either on sets created on QUT Island or in locations owned by others. Time was required to design and build these sets and to scout the other locations and to contact their owners for permission to film on their land. Time was required to design and create the avatars that were to play the various characters in the machinima sequences. Time was also required to refine ideas and storylines even before scripts were written. Each of these time commitments were mitigated by the author's previous experience and familiarity with *Second Life* and machinima making. For a less experienced academic, they could require substantial time. Moreover, while music adds a professional touch, and Creative Commons Search provides an accessible source of music, it can sometimes be a time-consuming process to match the right music with a particular program, or particular aspect of the program.[58]

The author was also assisted by the funding associated with an Australian Learning and Teaching Council Teaching Fellowship. Much of this funding was devoted to the professional development aspect of the Fellowship program; however, when combined with Faculty Professional Development (sabbatical) leave it did enable the author to obtain one semester of teaching relief. Other academics may not be as fortunate. However, *Entry into Valhalla* is the work of the author alone — from concept design, scripting, creation of machinima sequences, directing the real-life videos, editing all videos and packaging. For other projects, the time burden posed by such tasks can be lightened by sharing the load through collaboration. Further, even if an academic wishes to work alone, not all programs need be as ambitious in scope as *Entry into Valhalla* nor work to the same kind of deadlines.

Moreover, the time commitment costs cannot be considered in isolation. Instead they must be balanced against the benefits that such programs produce in terms of richer, more engaging learning environments to motivate and better educate students. Such programs are capable of providing the same learning experience for all students

---

[58]   This investment in time is nevertheless worthwhile. In identifying the best aspects of *Entry into Valhalla*, some students referred to the music chosen, including one who remarked: 'Can't forget the amazing score'. Others referred to the music by name, itself a reflection of the interest they took in this aspect of the program.

in even large cohorts, no matter whether the mode of study is full-time, part-time or at a distance. They facilitate flexible learning, enabling students to undertake them at their own convenience in a place and at a time of their choosing. They are also sustainable: the machinima scenarios in *Entry into Valhalla* contain no law per se, only fact situations. These fact situations are not time-specific: they could arise today in practice or in 5, 10 or even 20 years' time. The responses to the situations might change — for example, due to a change in Professional Rules — but this is a matter for discussion in the small group classes. Even where change may be needed, such as in the pretest multiple choice quizzes, this can be done quickly and easily with the *Xerte* program. Measured against such benefits, the time required to produce programs like *Entry into Valhalla* is an investment worth making.

C *Machinima-Facilitated Narratives in Legal Education*

In the 'story-shaped world'[59] in which we live, we are surrounded by narratives of all kinds that reflect our cultural values, from myths and folklore to modern films and television. These narratives provide 'libraries of plots ... [which] help us interpret our own and other people's experience'.[60] As Linde explained, narratives are constructed by utilising cultural elements such as normal events, reasonable causes, and plausible explanations, all of which provide legitimacy for the narrative.[61] Narrative-based learning is nothing new: it has been utilised as an effective approach to learning in many disciplines.[62] In law, it is the basis of the 'law and literature' field of study in which connections are drawn between legal theory and literature.[63] In a limited sense, it is also used in the short problem-type questions commonly used by law schools in small group tutorials to enable students to discuss the application of legal principles and rules in the context of fact scenarios. However, these are generally relatively light in detail and disconnected.

---

[59] Theodore Sarbin, 'The Narrative as the Root Metaphor for Contextualism' in Steven Hayes et al (eds), *Varieties of Scientific Contextualism* (Context Press, 1993) 51, 63.

[60] Ibid 59.

[61] Charlotte Linde, *Life Stories* (Oxford University Press, 1993).

[62] See, eg, Carolyn Clark and Marsha Rossiter, 'Narrative Learning in Adulthood' (2008) 119 *New Directions for Adult & Continuing Education* 61.

[63] See, eg, Richard Posner, *Law and Literature* (Harvard University Press, 3rd ed, 2009).

Narrative-centred learning environments leverage the cognitive and instructional power of stories.[64] As Ferguson et al observed:

> An appropriate story told in an appropriate setting not only conveys important information, but provides contextual cues that facilitate recall of that information in situations in which it is likely to be applicable.[65]

Such environments have significant potential for enhancing students' learning experiences, potentially reinforcing learning objectives and ingraining subject matter.[66] Rowe et al submitted that:

> Stories are unique in providing the ability to draw audiences into plots and settings, thereby opening perceptual, emotional, and motivational opportunities for learning.

They added that:

> Narratives can facilitate students' [sic] semantically encoding new information and making commitments to long-term memory in the form of episodic memories.[67]

When students are engaged in a task for which a story offers appropriate advice, they are more likely to understand the point of the story and make useful connections between information contained in the story and their prior memory structures.[68] A narrative may help learners to 'create meaning, reduce cognitive load involved in navigating through information, and support cognitive and imaginative engagement'.[69]

Second Life machinima adds an exciting new dimension to a narrative-centred approach to learning. A virtual environment like *Second Life* borrows assumptions from real life.[70] In this sense,

---

[64]   Trena Paulus, Brian Horvitz and Min Shi, '"Isn't It Just Like Our Situation?" Engagement and Learning in an Online Story-Based Environment' (2006) 54(4) *Educational Technology Research & Development* 355, 356.

[65]   William Ferguson et al, 'ASK Systems: An Approach to the Realization of Story-Based Teachers' (1992) 2(1) *Journal of the Learning Sciences* 95, 99, also citing works concerning situated cognition and cognitive apprenticeships: see, eg, Brown, Collins and Duguid, above n 37; Allan Collins, John Brown and Susan Newman, 'Cognitive Apprenticeship: Teaching the Crafts of Reading, Writing and Mathematics' in Lauren Resnick (ed), *Knowing, Learning, and Instruction: Essays in Honor of Robert Glaser* (Lawrence Erlbaum, 1989).

[66]   Jonathan Rowe, Scott McQuiggan and James Lester, 'Narrative Presence in Intelligent Learning Environments' (Paper presented at AAAI Symposium on Intelligent Narrative Technologies, Vancouver, 22–26 July 2007) <http://www.aaai.org/Papers/Symposia/Fall/2007/FS-07-05/FS07-05-021.pdf>.

[67]   Ibid 1, citing Jeanne Ormrod, *Human Learning* (Pearson, 4th ed, 2004).

[68]   Ferguson et al, above n 65, 99.

[69]   Paulus, Horvitz and Shi, above n 64, 356, citing Bride Mallon and Brian Webb, 'Structure, Causality, Visibility and Interaction: Propositions for Evaluating Engagement in Narrative Multimedia' (2002) 53 *International Journal of Human–Computer Studies* 269.

[70]   Tom Boellstorff, *Coming of Age in Second Life: An Anthropologist Explores the Virtually Human* (Princeton University Press, 2008) 5.

'"virtual" connotes something approaching the actual without arriving there'.[71] Virtual characters can contribute to a larger narrative context which has the potential to establish solid links with pedagogical subject matter, thereby supporting assimilation of new concepts in young learners.[72] Machinima created using the virtual environment can be used 'as a means of facilitating and accelerating the creative story development and storytelling process'.[73]

Such simulations, created in an immersive, abstracted space, offer students the opportunity to synchronously encounter authentic experiences involving other people, objects and environments. The experiential learning environment plays a significant role in engaging students.[74] Research suggests that simulations enhance learning because greater engagement means improved attention spans. This in turn results in accelerated absorption of key learning outcomes and longer retention.[75] The use of machinima and narrative-centred learning environments is also inclusive of a range of student learning styles and teaching strategies, providing students with the opportunity to visualise ideas and concepts.[76]

V Conclusion

Knowledge must be acquired in context, but that context can be a virtual surrogate of the actual work environment. It can also be an anchoring context such as a video or multimedia program within which authentic problem-solving and critical thinking can be practised and applied.[77] *Entry into Valhalla*, as a component of a blended learning environment that also includes a focus on the philosophical and theoretical underpinnings of legal ethics, enables

---

[71]   Ibid 19.
[72]   Scott McQuiggan, Jonathan Rowe and James Lester, 'The Effects of Empathetic Virtual Characters on Presence in Narrative-Centered Learning Environments' (Paper presented at SIGCHI Conference on Human Factors in Computing Systems, Florence, Italy, 10 April 2008) <http://research.csc.ncsu.edu/intellimedia/papers/empathy-chi-2008.pdf>, citing Gordon Wells, *The Meaning Makers: Children Learning Language and Using Language to Learn* (Heinemann, 1986).
[73]   Berkeley, above n 38, 75.
[74]   John Biggs and Catherine Tang, *Teaching for Quality Learning at University* (Open University Press, 3rd ed, 2007); Clark Aldrich, *Learning by Doing: A Comprehensive Guide to Simulations, Computer Games, and Pedagogy in E-Learning and Other Educational Experiences* (John Wiley, 2005); Michele Dickey, 'Three-Dimensional Virtual Worlds and Distance Learning: Two Case Studies of Active Worlds as a Medium for Distance Education' (2005) 36(3) *British Journal of Educational Technology* 439.
[75]   Sarah de Freitas, 'Using Games and Simulations for Supporting Learning' (2005) 31(4) *Learning, Media and Technology* 343, 353–4.
[76]   Nicholas Burbules, 'Technology in Education: Who, Where, When, What & Why?' (1999) 1 *International Journal of Educational Technology* 1 <http://www.ed.uiuc.edu/ijet/v1n1/v1n1feature.html>.
[77]   Hilary McLellan, *Situated Learning Perspectives* (Educational Technology Publications, 1996).

students to obtain an appreciation of ethical responsibility in a real-world context. The program offers a motivating and challenging learning environment where all stakeholders can see the usefulness of what they are learning. It facilitates a smoother transition of students from their familiar university environment to a work environment by requiring them to synthesise their understanding of ethical issues, providing an understanding of the practical experiences that may be predicted[78] and linking their learning with real world problems.[79]

Entry into Valhalla is an innovative use of cost-effective technology, including *Second Life* machinima, to facilitate a problem-solving approach based on real-world-type contexts. It validates the proposition that technology can have a central role in facilitating authentic learning and provide motivating contexts for apprenticeship-like interactions in the legal area.

[78] Lisa Perrone and Margaret Vickers, 'Life after Graduation as a "Very Uncomfortable World": An Australian Case Study' (2003) 45(2) *Education & Training* 69.
[79] Randy Brooks, Jodi Benton-Kupper and Deborah Slayton, 'Curricular Aims: Assessment of a University Capstone Course' (2004) 53(3) *Journal of General Education* 275.