

Final Report

Using cost-effective multimedia to create engaging learning experiences in law and other disciplines

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1.0 Executive summary

A proper appreciation of ethics and professional responsibility is a fundamental lawyering skill and a pre-requisite for legal practice. Despite criticism on pedagogical and discipline-specific grounds, many Australian law schools teach legal ethics using traditional approaches including lectures which focus on the content of professional rules, like any area of substantive law. Instead a practical rather than theoretical approach is required in order to infuse students with a proper appreciation of ethical practice. Ideally this would be done by way of a clinical program. However such programs are expensive to run and can only be offered to a fortunate few.

Multimedia can provide an effective alternative to real-life settings such as clinical exercises, without sacrificing the critical authentic context. Multimedia involving the use of virtual characters to present tasks and critical information in a simulated environment has been recognised as a useful strategy in the creation of more authentic online learning environments. However, for many academics a significant obstacle to introducing multimedia innovations into their curricula is the prohibitive cost of computer software programming that is normally required. By contrast, 'machinima' – computer graphics imagery created without the cost of professional software or professional programming – can be an economical means of creating effective learning environments. One outcome of the Fellowship was the creation of *Entry into Valhalla*, an online suite of modules which include self-test quizzes and machinima scenarios depicting legal dilemmas confronting the members of a fictional law firm. These modules are best used as part of a blended learning program that also includes instruction on the theoretical and philosophical underpinnings of legal ethics, so that students obtain an essential foundation for addressing the challenges posed by the complex real-world type scenarios. Students undertaking *Entry into Valhalla* at the Queensland University of Technology in semester 2, 2010 and summer semester 2011 reported that the modules helped them to relate their understanding of legal ethics to real-world situations and that the law firm storyline helped their learning of legal ethics. They found the modules easy to use and thought that they were engaging and enjoyable, and for that reason were motivated to learn.

A second outcome of the Fellowship was knowledge construction for other academics who were interested in using multimedia in their teaching but lacking the resources, knowledge skills and/or confidence to do so. A number of professional development activities were undertaken which focused on the use of cost-effective multimedia resources, as were used in the production of *Entry into Valhalla*, to create engaging learning experiences. A series of workshops were held in Sydney, Perth and Brisbane with participants reporting that the strategy of combining information and hands-on segments increased their knowledge of multimedia resources that are suitable for use in their teaching contexts, improved their ability to adapt and develop multimedia resources for their curricula and boosted their confidence in the use of multimedia resources. Overall, they found the workshop process and materials, including the *Entry into Valhalla* case exemplar, extremely effective in developing their understanding of cost-effective multimedia development and application in educational contexts. The Fellowship also resulted in the creation of a website that includes a detailed resources manual and instructional videos specifically designed for those academics who were unable to attend the workshops. It also resulted in other forms of dissemination including a journal article, conference presentations and other university and Faculty-based activities.



2.0 Introduction

The Fellowship addressed the needs of two separate groups of learners: (1) final year law students studying ethics and (2) law academics and other interested educators in higher education wishing to use information and communication technologies (ICT) to create engaging learning environments for their students but lacking the capacity to do so.

The Fellowship has resulted in final year law students being infused with an improved appreciation of ethical practice than they receive from traditional lecture/tutorial means by the development of an integrated program of blended learning including an online program entitled *Entry into Valhalla*. This 'ethics capstone' utilises multimedia produced using cost-effective resources (including the *Second Life* virtual environment) to create engaging, contextualised learning experiences.

The Fellowship also constructed the knowledge of producing cost-effective multimedia projects in other law academics and other educators in higher education by staff development activities comprising workshops, conference presentations and an interactive website using the *Entry into Valhalla* program as a case study exemplar.

3.0 Educational issues addressed

3.1 The need for improved ethical awareness

Seminal reports 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 requiring greater attention was ethical awareness and responsibility (ALRC 1999; ABA 1992). The Australian report recommended 'recognising and resolving ethical dilemmas' as one of the ten fundamental lawyering skills.

Nevertheless, the track record of ethics learning in Australian legal education has been described as generally less than impressive (Robertson n.d.). A 2003 study found that the commitment to ethics learning in Australian law schools was far from uniform (Johnstone and Vignaendra 2003). It has been suggested that the immediate reason is not difficult to identify (Robertson n.d.). The 'Priestley 11' list of areas of law required to be taught by law schools in order to qualify their students for practice refers only to the teaching of the formal rules of professional responsibility. This obligation is easily discharged by a series of traditional lectures focusing on the content of these rules, like any other area of substantive law such as contract law or criminal law. While this may be thought to be cost-effective in terms of law school budgets, its value is dubious. Traditional forms of instruction, including lectures, also no longer meet expectations of involvement of today's students, who prefer to access their study materials at their own convenience and in their own way (McGarr 2009).

A practical rather than a theoretical approach to the teaching of legal ethics is required if students are to acquire a proper appreciation of professional responsibility (Griffiths-Baker 2007; NSWLRC 1993). 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. A social constructivist approach, utilising technology, offers significant potential for providing new avenues of student engagement in this respect (Krause 2005).

3.2 Building capacity

Law academics and other interested educators in higher education may lack the capacity to use technology to create engaging learning environments by reason of a lack of resources in the sense of funding and/or the necessary knowledge and skills. For many academics a significant obstacle to introducing multimedia innovations into their curricula is the prohibitive cost of computer software programming that is normally required (Dunning 2004).

This issue is accentuated in the present climate of most if not all universities having limited discretionary funding, which may translate to limited or no opportunities for academics to access grant funding that might otherwise meet the expense of multimedia content



development and software programming. The relatively low government funding for Australian law schools in particular 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 (LCA 2009).

A cost-effective approach to producing multimedia addresses this obstacle. While work has been previously done promoting models of re-usable technology-based learning designs (Chesterton et al 2007), there has been limited uptake of these methods in the teaching of law. A targeted approach designed to develop the knowledge and skills of law academics to produce multimedia in a cost-effective fashion was needed to address this lacuna.

4.0 Outcomes

The Fellowship had two types of outcome:

- The development of a blended learning environment that includes an online computer program called *Entry into Valhalla* as its central element; and
- Several professional development activities including a series of workshops, a website and other forms of dissemination.

Entry into Valhalla was created using cost-effective multimedia and drew upon knowledge, skills and techniques that the Fellow had developed over some twenty years of creating information and communication technology (ICT) programs to enhance learning in law.

The second set of outcomes were designed to build capacity in other law academics and other educators in higher education in the production of cost-effective multimedia projects and utilised the *Entry into Valhalla* program as an exemplar case study.

The Fellowship aligned with the ALTC's objectives. The discipline of law, like many other disciplines, is challenged by the need to effectively engage students whose lives today are 'characterised by ubiquitous information, merged technologies, blurred social-study-work boundaries, multitasking and hyperlinked online interactions' (Nelson, Kift and Harper 2005). All disciplines need to reconsider the effectiveness of their educational programs in supporting the development of these so-called 'digital natives' (Prensky 2001). At the same time, all disciplines across the higher education system need to address the challenges of properly preparing their students for practice by providing an effective means of transition of their students from the final year of their studies to the commencement of their working lives, and to effectively teach prospective professionals an awareness of the importance of ethical behaviour. The Fellowship developed an approach utilising multimedia in a cost-effective fashion to infuse ethical awareness in final year law students in a manner which is engaging and more realistic than traditional approaches, which largely involve a lecture format. It also included a program of activities designed to disseminate and demonstrate the outcomes of this work and constructing the skills, techniques and knowledge utilised in its development in others.

The Fellowship therefore involved development of a case study example of an approach that contextualises ethical issues for professionals so that they may be better prepared for the demands of practice, but also did so in a manner which 'millennial students' find engaging and relevant. It also provided other educators with the capabilities needed to produce cost-effective multimedia projects of their own design. The approach to learning and construction of skills, techniques and knowledge to produce cost-effective ICT resources therefore benefited not only those academics in the law discipline but also those in other disciplines, and not only those academics concerned with ethics instruction but other areas of knowledge as well. The Fellowship aimed to engender in law educators, in particular, an appreciation that traditional approaches to legal education by more engaging approaches utilising ICT to provide contextualised, interactive learning environments can be achieved using cost-effective methods. It therefore *stimulates strategic change in higher education institutions*, particularly in the discipline of law and *shows leadership in promoting and enhancing learning and teaching in higher education and exploring new possibilities*. As a consequence it *raises the profile of learning and teaching in higher education and the prestige associated with the pursuit of excellence in teaching*. (ALTC Fellowships Guidelines 2009)



5.0 Evaluation framework

Dr Clair Hughes from the Teaching and Educational Development Institute, The University of Queensland was appointed as the Fellowship Evaluator in July 2009. Immediately following the appointment the Fellow met with Dr Hughes to settle a framework for evaluation which included:

- Pre-implementation evaluation by way of separate focus groups comprising students, academics and members of the legal profession to provide feedback in relation to the beta version of the *Entry into Valhalla* program
- Post implementation evaluation by way of a paper-based survey of students at the Queensland University of Technology Law School using the *Entry into Valhalla* program in semester 2, 2010
- Post implementation evaluation by way of a paper-based survey of staff at the Queensland University of Technology Law School using the *Entry into Valhalla* program in their teaching in semester 2, 2010
- Paper-based surveys of participants before and after the workshops
- Provision for comments on the Fellowship website

Ethics approval for this data collection was obtained from the home institution on 26 November 2009, which confirmed that the application met the requirements of the National Statement on Ethical Conduct in Human Research.

The Fellow thereafter met with the Evaluator on numerous occasions throughout the Fellowship. Dr Hughes' Evaluation Report appears as the Appendix to this report.

In July and August 2009, a reference group was established comprising:

- Mark Thomas, Faculty of Law, Queensland University of Technology, lecturer and co-ordinator of the legal ethics unit Professional Responsibility
- Dr Carol Quadrelli, Learning and Teaching Developer, Office of Teaching Quality, Queensland University of Technology
- Associate Professor Nick James, Law School Associate Dean (Academic), The University of Queensland

The Fellow made contact with members of the reference group throughout the Fellowship.

6.0 Outcome A: Improved appreciation of ethical practice

6.1 Why use multimedia?

The most effective means of inculcating an appreciation of ethical practice is by the use of clinical programs, in which students have the opportunity to deal with the problems of real people (Boon 2002, Stuckey 2007). However, such programs are normally expensive to operate (LCA 2009) and by their nature can only be offered to a limited number of students (Castles 2001).

By contrast, technology can provide an effective alternative to real-life settings such as clinical exercises, without sacrificing the critical authentic context (Herrington and Oliver 2000). 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 (McLellan 1994).

Multimedia involving the use of virtual characters to present tasks and critical information in a simulated environment has been recognised as a useful strategy in the creation of more authentic online learning environments (Agostino). 'Machinima', that is computer graphics imagery created without the cost of professional software or professional programming, can be an economical means of creating effective learning environments (Muldoon et al 2008). Machinima has been described as involving '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.’ (AMAS 2005).

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’ (Mott et al 1999). Narrative-centred learning environments take advantage of the cognitive and instructional power of stories (Paulus, Horvitz and Shi 2006). A story can convey information and provide contextual cues that assist later recall of that information in situations in which it may be applied (Ferguson et al 1992).

Machinima offers a broad canvas for story telling for little or no cost, enabling narratives to span everything from office scenes to cars on the road to tropical islands (Butler 2008), something that is unlikely to be achieved filming in the real-world without a substantial budget. Machinima has the ability to teach curriculum both overtly and covertly (de Winter et al 2010; Gee 2003). Moreover, as a visual medium, machinima created using a virtual environment like *Second Life* can facilitate and accelerate the creative story development and storytelling process (Berkeley 2006). Machinima-facilitated narrative learning environments are inclusive of a range of student learning styles and teaching strategies, and provide students with the chance to visualise ideas and concepts (Burbules 1999). Machinima scenarios such as those in *Entry into Valhalla* enhance learning through greater engagement and improved attention spans, leading to acceleration in absorption of key learning outcomes (de Freitas 2005).

6.2 Methodology

Entry into Valhalla was created using a combination of freely available or low-cost resources including:

- Microsoft Word;
- Microsoft PowerPoint;
- Audacity audio recording and editing (available from <<http://audacity.sourceforge.net/>>);
- *Second Life* virtual environment (available from <<http://www.secondlife.com>>);
- FRAPS screen capture software (available from <<http://www.fraps.com>>);
- Freesound sound effects (available from <<http://www.freesound.org/>>);
- Creative Commons music (available from <<http://www.jamendo.com/en/>>);
- Movie Maker video editing;
- Xerte eLearning development software (available from <<http://www.nottingham.ac.uk/xerte/>>); and
- A video camcorder.

The camcorder was borrowed from the home institution. The FRAPS program was licensed for \$47. All other software was either already installed on the computers being used or was downloaded or accessed for no charge.

Second Life machinima was chosen as the medium for presenting the fact scenarios, following the Fellow’s previous successful use of machinima in a project designed to teach negotiation skills (Butler 2008). *Second Life* is an attractive platform for machinima-making. Avatars, that is the virtual characters in *Second Life*, are able to be customised, with the ability to change an avatar’s shape, skin colour and texture, hair, clothes and accessories. In addition, users are able to custom-build structures and to acquire objects ranging from chairs and desks to cars and vehicles, meaning that realistic locations can be created. *Second Life* allows both free and premium (that is, 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 only be purchased if the user has a premium account (Butler and White 2008). *Entry into Valhalla* utilised both sets designed and created by the Fellow 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 (under the *Second Life* End User Agreement copyright in objects created in the virtual world subsists in the user creator, rather than the owner of *Second Life*, Linden Lab).

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. Video sequences in *Entry into Valhalla* were filmed with the Fellow speaking all dialogue, the FRAPS screen capture software being configured to only record vision and not audio. Dialogue using the voice talents of the Fellow's Faculty colleagues was later recorded using the Audacity program. Video and audio were then mixed and edited using Microsoft Movie Maker. 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 the borrowed camcorder and a tripod. Videos were given an additional professional finish by using music obtained via Creative Commons search.

The resulting videos were then packaged using the Xerte eLearning system, a template program developed by The University of Nottingham. Xerte is a development environment for creating online 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

The final step in the process involved uploading the Xerte modules to a Blackboard Learning Management System site. An image map was hot-spotted so that when clicked the various Xerte modules are launched (see Figure 2).



Figure 2: the Blackboard website



6.3 The Entry into Valhalla program

From the outset it was decided that the program would comprise several modules, each of which would include:

- an introductory video in which an academic would provide an overview of the topic to be covered;
- prescribed readings;
- self-test questions based on those readings which provide formative feedback on both correct and incorrect responses;
- fact scenarios in which real-world-type ethical dilemmas are depicted;
- questions based on those fact scenarios, which would facilitate discussion in class; and
- further readings.

The blended learning approach – which comprised instruction on the theoretical and philosophical underpinnings of legal ethics, the *Entry into Valhalla* program and the class discussions – therefore adopts elements of a ‘cognitive apprenticeship’ approach to learning, including modelling, coaching, scaffolding, reflection, and exploration (Collins 1991; Brown, Collins and Duguid 1989).

The five modules of *Entry into Valhalla* address the areas of the *Legal Profession*, *Admission to the Profession*, *Confidentiality and Conflicts of Interest*, the *Duty to the Administration of Justice* and *Discipline*. 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 posing the question ‘What do you think?’ or a variation thereof, with the purpose of facilitating in-class discussions in which students role play as either partner in providing advice that recognises and attempts to resolve the ethical dilemmas. Other scenarios are capable of facilitating a different form of role play. For example, the *Discipline* scenario allows one student to role play the Law Society arguing in favour of discipline, one to take the role of the representative of the respondent opposing discipline and one acting as the Civil and Administrative Tribunal/Legal Practice Tribunal determining the matter.

In law schools that use a traditional approach to learning and teaching legal ethics that includes tutorials, topics are usually 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 booth. The crime is depicted in a flashback series of still 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 stabbed the victim (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 only lasts four 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 judgment?
- 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 is more engaging than words written on the page and more closely resembles real life.

6.4 Evaluation

6.4.1 Pre-implementation: focus groups

Prior to being used for the first time in semester 2, 2010 at the Queensland University of Technology Law School, *Entry into Valhalla* underwent evaluation by three different groups of stakeholders: prospective students, academics and members of the profession, including officers of the ethics division of the Queensland Law Society. 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. One commented:

It is very easy to wrap your head around the information when you see how it applies in reality.

Another observed:

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.

Academics saw great potential for greater 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.

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 for the multi-layered 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]¹ 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.

6.4.2 Post implementation: student response

Students at the Queensland University of Technology Law School who used *Entry into Valhalla* in semester 2, 2010 and in the summer semester in 2011 were surveyed by means of a paper-based instrument comprising both statements requiring responses measured on a 5-point Likert scale (with 5 representing 'Strongly agree' and 1 representing 'Strongly disagree') and several open-ended questions. The survey was rendered at the end of the penultimate class for both cohorts. Responses were received from 156 students out of a total enrolment of 466 in two offerings of the subject, representing a 33 per cent response rate.

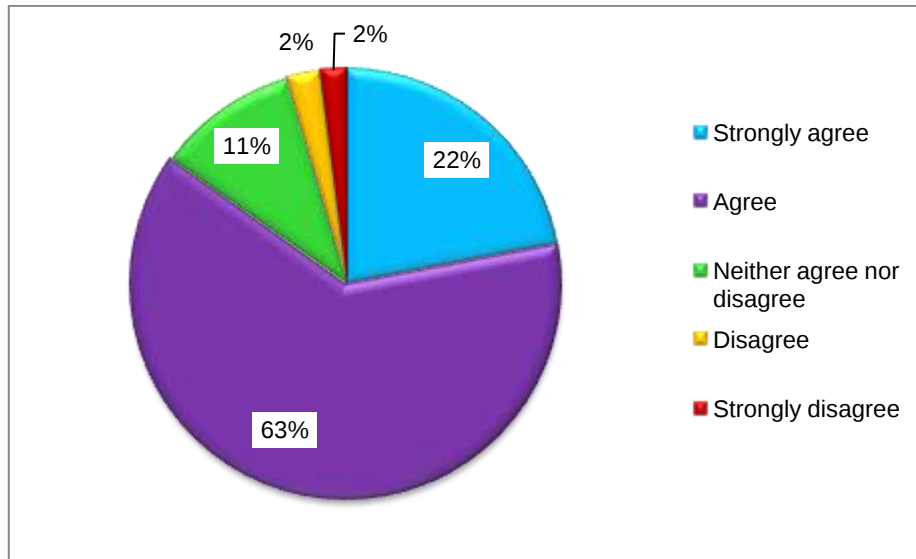
Two statements tested whether the students felt that they obtained benefit from the approach adopted in *Entry into Valhalla* of using narratives based on real-world type scenarios involving dilemmas faced by members of a law firm. The first statement was:

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

The student response was as follows:

¹ In the past, law graduates in Queensland, at least, 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 now mean that most law graduates will now choose PLT rather than articles of clerkship as the prerequisite.



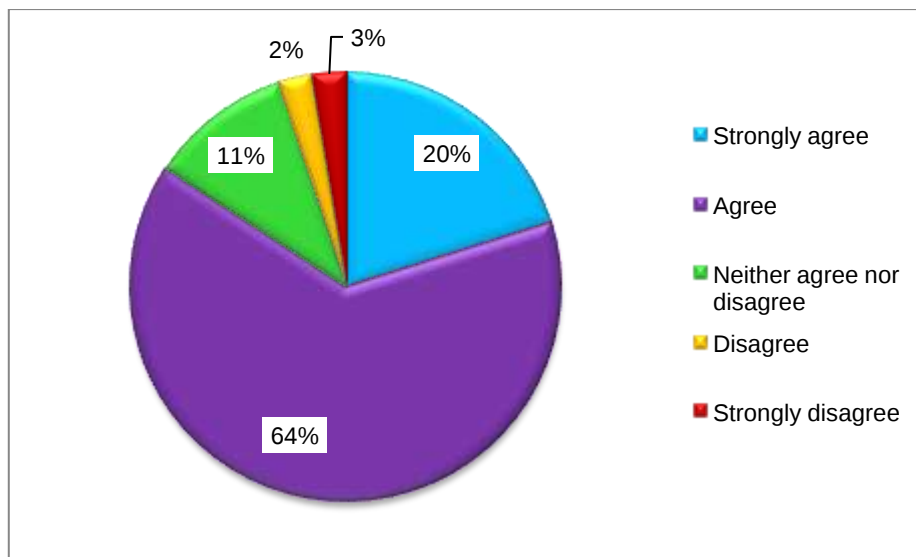


A total of 85 per cent of students agreed or strongly agreed that the program helped them to understand ethics in a real-world context. Indeed the relating of legal ethics to the real-world was identified as being the best aspect of the program by the greatest number of students.

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:



A total of 84 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.

As one student remarked:

I think it provides a greater dimension to learning the theory in a practical way because the context/plots/characters give it a 'life' dimension. Visually it is also amusing! It suits my learning style. I find it really easy to retain the information and apply to the questions that are part of the program.

Another stated:

It seemed easier to understand concepts when it was put into scenarios.



while a third remarked:

[The] storyline make it more interesting to follow. Stories made the questions easier to answer as could apply to real-life situations

The storylines helped students in relating theory to more familiar understanding:

Putting the ethical issues into a real-world context was very helpful for me. I found the reading of [the theory] difficult to connect to practical examples on my own.

A real-world storylines based in the context of a law firm also facilitated a greater degree of discussion in class than may be possible with simple text-based problems. One student observed:

The interesting storylines - it was left quite open, so encouraging discussion was not all that difficult.

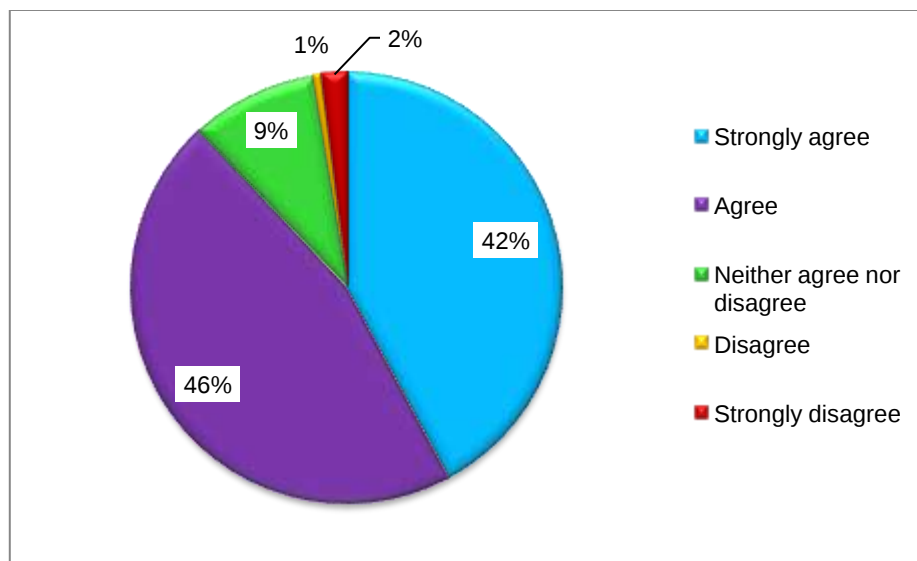
They also helped others to realise that ethical dilemmas are not always as easy to resolve as the text-based problems they may be familiar with from their studies of other substantive law subjects:

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.

A third statement was directed to whether students had any difficulty navigating the program. Research has shown that students who find multimedia difficult to use or who have trouble navigating a multimedia program tend to be distracted from the content of the program and instead may become fixated on their difficulties (Bender 2003). The third statement was:

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

Students responded as follows:



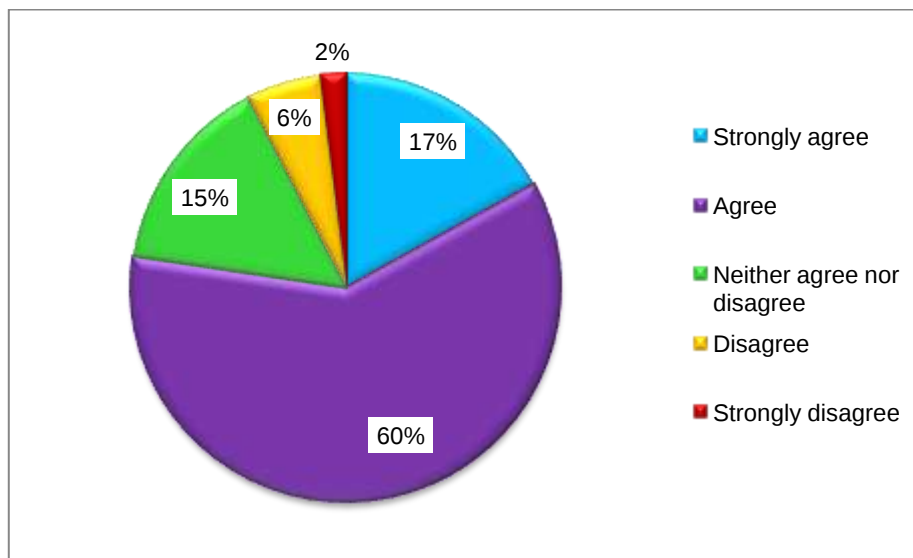
A total of 88 per cent of respondents thought that the program was easy to use. Indeed, ease of use was another factor identified by students as one of the best aspects of the program. This may be taken as a reflection of the design and capability of the Xerte eLearning environment. Ease of use is also an important consideration when teaching a cohort of students with varying degrees of comfort using technology:

Ease of use of the program [was the best aspect]. I'm not terribly computer literate so I appreciated that.

Students were also asked to respond to the statement:

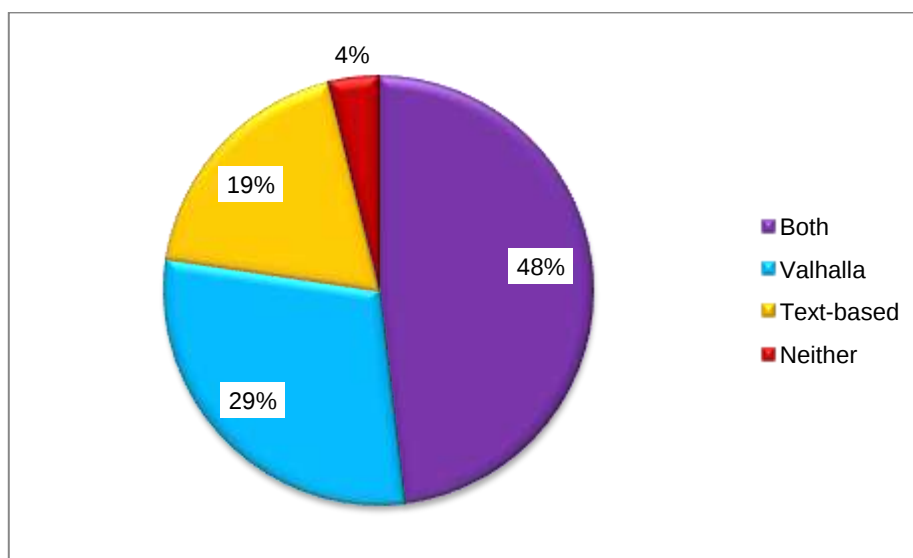
I enjoyed using the *Entry into Valhalla* computer program as part of my study of legal ethics.

The following responses were received:



A total of 77 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.' Having fun when studying has been recognised as a motivator for being engaged and as a powerful stimulus for effective learning (Bruner 1960).

Since the ethics course was redesigned as a blended-learning environment, combining the online *Entry into Valhalla* program and text-based questions, were also asked which learning resource they preferred. The results were as follows:



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. The following two comments were typical of the reasons given by students for valuing both forms of learning resource:

The Valhalla questions were very practical while the text-based required more critical consideration of concepts and cases. I think a mixture is helpful and provides a better overall understanding.

To me both approaches to learning are equally good as it provides me with a different kind of learning experience. Traditional text-based questions help me to understand the



subject whereas Entry into Valhalla helps you relate what I have learned to real-life experience.

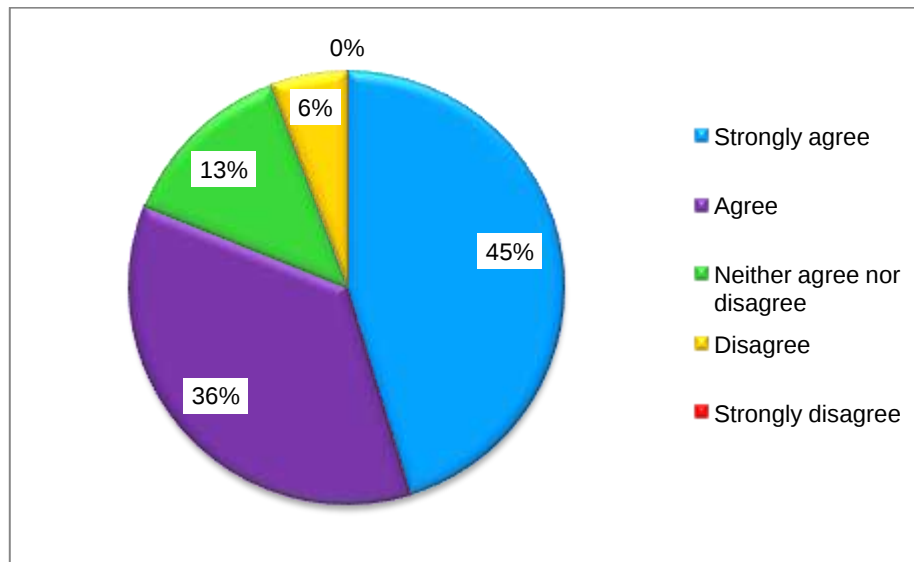
Those who preferred the online *Entry into Valhalla* program on its own gave a variety of reasons, including that it was more engaging, interesting, entertaining, practical, real-world and/or memorable than traditional text-based questions. Others emphasised the interactivity and flexibility of the program, 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 to visual learning; because 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 represented the group of 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.

A more specific follow-up statement was posed to the summer semester 2011 cohort, who were asked to respond to the following:

The scenario videos in *Entry into Valhalla* were a more effective way to depict ethical dilemmas arising in legal practice than if the same scenarios had been described in words alone.

The responses from the 53 students who completed the survey were as follows:



A total of 81 per cent agreed or strongly agreed – 45% strongly agreeing – that the machinima scenarios were a more effective way to depict ethical dilemmas than the more traditional approach of text-based problems that is currently used in most Australian law schools. The following comments are representative of the reasons behind the students' responses:

It was easier when there were a lot of different characters to have a physical representation and different voices. Sometimes many parties/characters in written format become confusing.

It puts into real-world perspective, putting faces to names, seeing the people, makes it easier to relate to the situation.

(a) more interesting (b) easier to differentiate the characters (c) nuances of tone, body language more accurately portrayed, so easier to understand

The video can depict more easily the non-verbal cues amongst parties and make it easier to understanding how ethical dilemmas can arise and continue.



Many of the students indicated that they preferred the machinima videos in *Entry into Valhalla* because they were visual learners, in contrast to the six percent – or 3 students – who disagreed with the proposition because they learnt better from text. As one observed:

I can re-read details easily read but re-watching videos is more annoying.

6.4.3 Post implementation: staff response

Staff at the Queensland University of Technology Law School who used *Entry into Valhalla* in their teaching of the *Professional Responsibility* unit in semester 2, 2010 reported that they enjoyed using *Entry into Valhalla* in their teaching and that their students enjoyed using the program as part of their learning of legal ethics. They thought that law firm storyline in the *Entry into Valhalla* computer program helped their students in their learning of legal ethics and that the program engaged their students in relevant discussion. They did not think that text based questions would have been as effective in developing their students' understanding of legal ethics.

Mark Thomas, the unit co-ordinator of *Professional Responsibility*, commented as follows:

My observations (albeit anecdotal) are that the stories set out in Entry into Valhalla prompted a higher level of engagement by students than compared with, say, less lively materials such as written scenarios (which often served as the basis for tutorial questions in the past).

Students seem to show a higher level of understanding of the dynamics of a situation having seen it 'acted' out in Second Life, as opposed to written descriptions, which would need to be laboriously long and correspondingly dull to convey the same depth and richness of information.

As a result, students were more creative in looking behind the bare facts, and recognised the scenarios presented via Second Life as more connected with what actually happens in the world. A number of students have commented informally about the realistic nature of ethical problems when they are seen in some kind of active context, rather than simply set out in words.

On the whole, students – or at least mine – have turned up to those tutes which are Valhalla-based better prepared (at least in terms of being familiar with the material). Running tutorials which explored the scenarios from Entry into Valhalla has been less of a struggle in terms of getting students themselves to suggest how situations might be dealt with – not least, I suspect, because they have at least familiarised themselves with the factual situation. For comparable tutorial questions which are based solely on text supplied in the Study Guide, it was often apparent that students were reading that text for the first time.

The continuity factor, also, played some part in engaging with students. Rather than a disconnected set of scenarios (which is the usual formula for text-based tutorial questions), the consistent setting produced, I suspect, a sense of familiarity and authenticity because each week represented a step back into a (pseudo)world where students had already established some sort of intellectual beachhead. Authenticity because the characters and law-firm closely model real world situations, and being presented in AV format, achieved a certain plausibility not matched by text only presentation.

7.0 Outcome B: Knowledge construction

7.1 Workshops

7.1.1 Participants

A prototype workshop was conducted in Brisbane in September 2009. This workshop was used to trial content, delivery and technical details with a small number of participants from the home Faculty in advance of the workshops being offered to a broader audience.

Subsequently workshops were conducted in Sydney (February 2010), Perth (April 2010) and Brisbane (May 2010 and August 2010). The Sydney workshop was hosted by the Faculty of



Law, University of Technology, Sydney, the Perth workshop by the School of Business Law and Taxation, Curtin University and the two Brisbane workshops by the Faculty of Law, Queensland University of Technology. Workshops were advertised widely with particular emphasis on law schools. Attendances at the four workshops were as follows:

Workshop	Participants
Sydney	24
Perth	22
Brisbane (May)	14
Brisbane (August)	23



Figure 4: the Brisbane workshop in August at QUT

Universities and disciplines or areas represented in the workshops were as follows:

Universities	Disciplines/areas included
Queensland University of Technology	Law
Bond University	Education
University of Queensland	Nursing
Griffith University	Accounting
University of Southern Queensland	Communication studies
University of Technology, Sydney	Health
Curtin University of Technology	Science
University of Western Australia	Public relations
Edith Cowan University	Library
University of Notre Dame	Learning Design

7.1.2 Methodology

The workshops were of five hours duration, with a 40 minute break for lunch. They were divided into five separate parts:

- design questions, case studies including *Entry into Valhalla*, and an introduction to the available resources;
- basic graphic editing using PowerPoint;
- audio recording, editing and mixing using Audacity;
- video editing and moviemaking using Movie Maker; and
- multimedia packaging for the Web using Xerte.



Each participant sat at a different computer station. In advance of the workshop, the software and practice resources were installed (PowerPoint and Movie Maker are preinstalled on all Windows XP machines). The quality of these resources was expressly recognised by some participants:

This was an excellent workshop which inspired participants to experiment with resources for their teaching. The preparation of resources [for the workshop] – which must have taken hours – was a key factor in its success.

Prior to participants becoming settled at their stations, novices were asked to identify themselves and were seated next to those who felt more confident with computers. This was a simple measure designed to both boost the confidence of novices and of avoiding the progress of the workshop from being slowed through some participants becoming lost and feeling isolated through their lack of adeptness with computers. These issues were further addressed by designing the workshop so that it progressed from software familiar to everyone to that less familiar. These measures help to contribute to the success of the workshops:

The person next to me who claimed to be a complete novice realised she wasn't when we started with PowerPoint. I think this gave her more confidence right away. Fabulous.

Sessions followed a format of instruction, demonstration and hands-on practice. Each participant was also provided with a detailed resources manual, which provided information on each of the resources covered in the workshop including where they could be found, what they might be used for, and basic instructions for their use. Time constraints meant that it was not possible to include a session on the *Second Life* virtual environment in the workshop. However, the resources manual included a lengthy section providing instructions in the use of *Second Life*.

7.1.3 Evaluation

Participants were surveyed both before and after the workshop using separate paper-based instrument comprising statements requiring responses measured on a five-point Likert scale to assess their level of knowledge, attitude, ability and confidence regarding the use of multimedia resources in their teaching context. An open-ended question in the first survey asked them to state their expectations of the workshop, while open-ended questions in the second survey asked them to comment on whether their expectations had been fulfilled and to identify the best aspects of the workshop and any aspects that were in need of improvement. The second survey also included statements requiring responses measured on a five-point Likert scale to assess the effectiveness of the workshop process and the workshop resources in developing an understanding of multimedia development and application in teaching contexts, as well as an overall assessment of the workshop.

Pre-workshop expectations

Common themes that emerged in the expectations of participants were a desire to:

- learn what was available
- learn what was possible
- know what may be easy to adapt to Blackboard
- learn new ways to enhance PowerPoint presentations
- gain a better understanding of *production* of resources as opposed to *using* them
- learn new skills
- improve ability and confidence to use multimedia resources
- obtain an estimate of the amount of time involved in creating, updating and maintaining multimedia teaching tools
- introduce new methods of teaching that are innovative and engaging for students
- gain a greater understanding of the potential for multimedia use in large group teaching
- see examples and case studies from other universities

Many participants saw the workshop as aiding their professional development. For example, the expectation of one was:



To increase awareness and confidence in use of multimedia; to increase my skill level and competency in the use of multimedia; to increase my 'marketability' as an employee in the academic setting

Others hoped the workshop would be practical. This was expressed by a Perth participant as wanting:

Specific techniques for using particular resources such that I can go away and start producing useful resources for my own teaching

Several expressed the desire to be innovative. One typical expectation was:

To understand more about what is out there that may not be well-known/mainstream yet

Others saw the workshop as a means of helping their workloads while still providing engaging leading experience. One expressed this hope as:

To learn how to use online resources in teaching so they decrease not increase my workload while also being engaging for students.

or, as another succinctly observed:

Something new, time efficient and effective.

An unexpected outcome was the number of learning designers that were attracted to the workshops. One learning designer expressed his/her expectation in these terms:

I am looking for ideas to use free tools, streamlining their use, support required from a learning design perspective

while another stated:

I work in the production of teaching and learning video resources for the university and I would like to learn about other forms of multimedia and the needs of our clients in relation to video resources.

Expectations realised?

In the absence of identifying details, it was not possible to link post workshop comments with particular participants and their specific expectations. However, participants in all four workshops were universal in the view that their expectations have either been met or exceeded. Many commented that they found the workshop to be a revelation and that they were inspired and empowered by it to make their own multimedia resources. As a Brisbane participant stated:

Expectations exceeded! Who knew it was so easy.

while a Perth participant thought that his/her expectations were:

Surpassed - this was inspirational and very practical.

Another Perth participant remarked:

Wonderful. I feel so much more empowered and confident to try new media. Can't wait to make my first movie at my desk. Thank you!

A Brisbane participant stated:

Fantastic introduction to all the multimedia opportunities out there. I'll definitely try to use them in the future.

A participant in the second Brisbane workshop was eager to learn even more:

Wow – loved it! So good – so many possibilities! I want more – is there a user group or community of practice to continue my learning?

Other participants, while stating that their expectations have been met, felt that they would need to practise before they could feel confident enough to create their own resources. As one stated:

Yes, but still need to play with the multimedia to be comfortable with its use.

Some saw the workshop as a stepping stone to their own further investigations:

I learnt how to do some things but more importantly got inspired to explore more. Thanks!

Still others saw immediate uses in their teaching:

I feel that I know a whole lot more in terms of what's out there but don't feel at all confident that I can remember how to do it! I will have to play around and see if I can at least jazz up my PowerPoint and online materials.



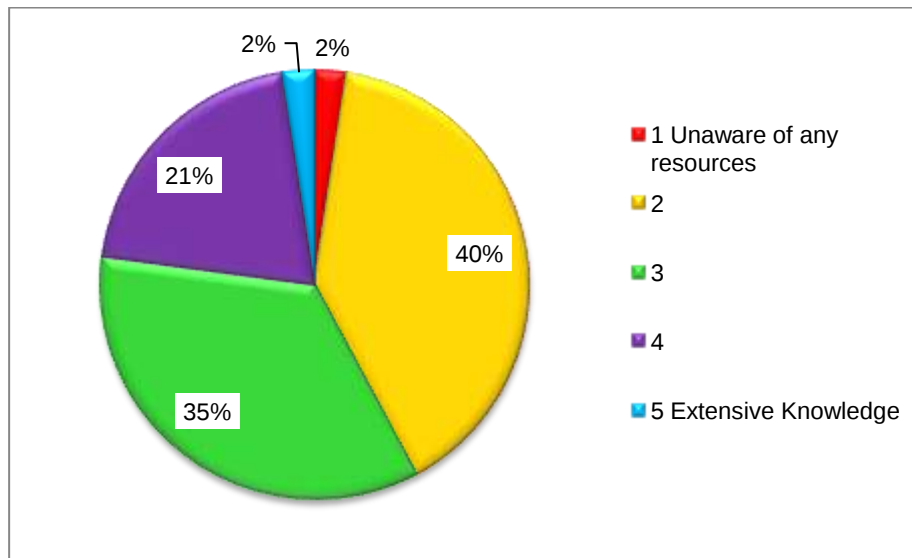
*I now can see how to make my case studies previously used as text as multimedia.
There can now be depth for students who I believe will interact more enthusiastically.*

An important achievement for several was the realisation that making engaging and effective multimedia is easily achievable:

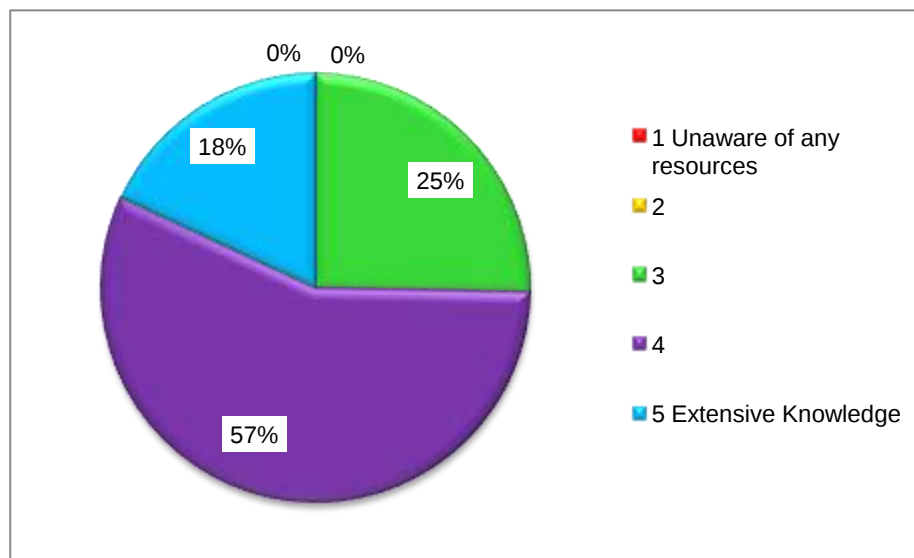
Yes, was great. [It] has helped [me] to understand that I might be able to do some activities to enhance my teaching. It is definitely a possibility – prior to today I thought it was beyond my capabilities.

The workshop's impact on knowledge, attitude, ability and confidence

Participants were asked to rate their level of **knowledge** of multimedia resources suitable for use in their particular teaching context on a 1-5 scale, with 1 representing being unaware of any resources and 5 representing an extensive knowledge. The cumulative results from the four workshops were as follows:

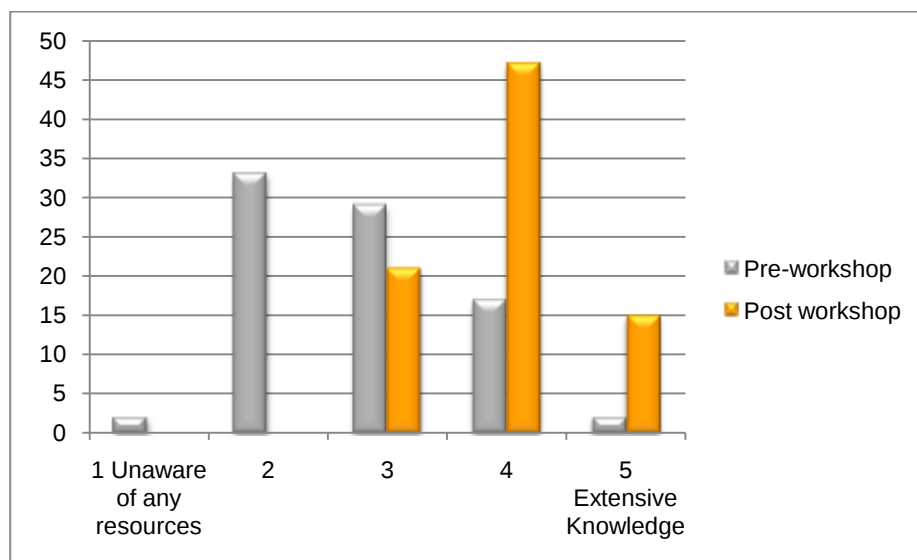


Pre-workshop



Post workshop

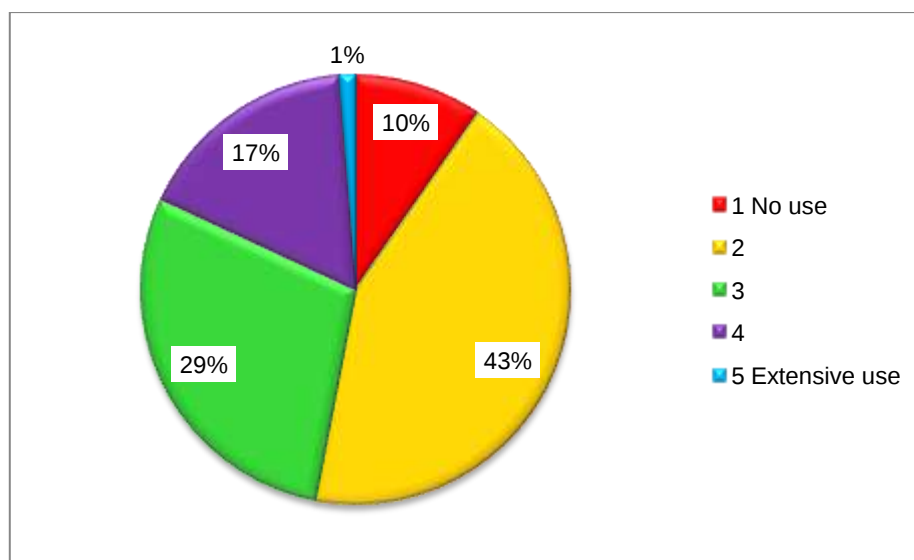




Comparison

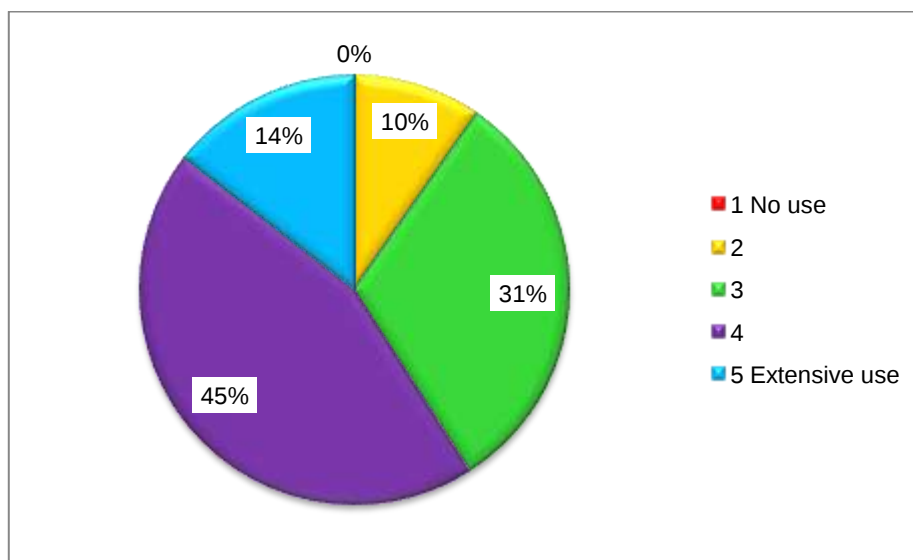
There was a significant shift in the level of knowledge of available resources as a result of the workshop, the average result pre-workshop of 2.7 on a 5 point scale increasing to 3.9 post workshop. This result included 75 per cent of respondents who rated their knowledge in the highest two levels after the workshop compared to a mere 23 per cent before the workshop.

When asked to rate their **use** of multimedia resources in their teaching context, on a 1-5 scale, with 1 representing no use and 5 representing extensive use, the results were as follows:

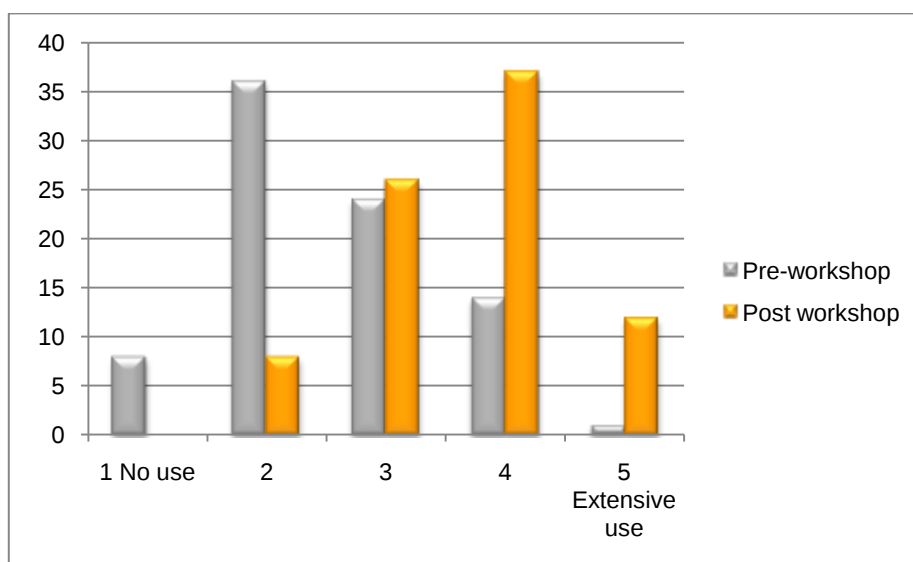


Pre-workshop





Post workshop

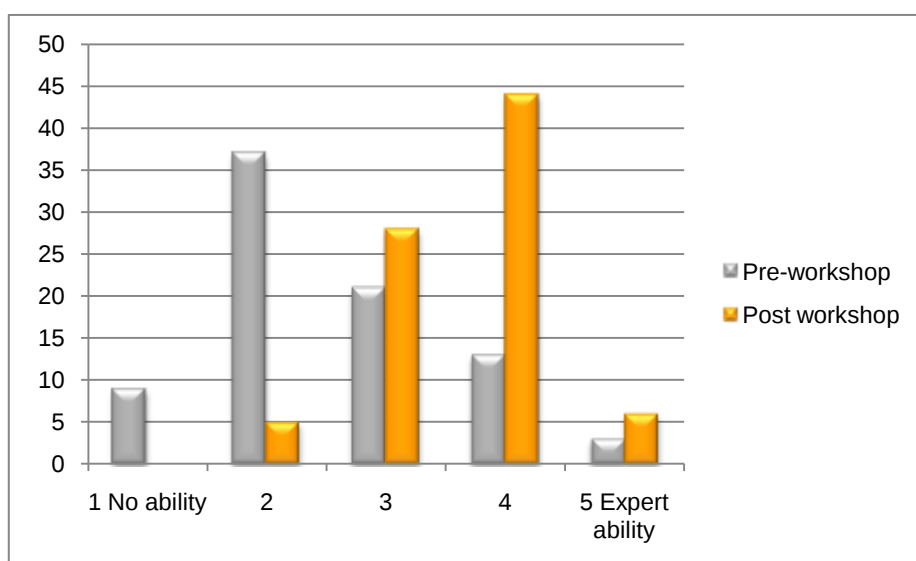
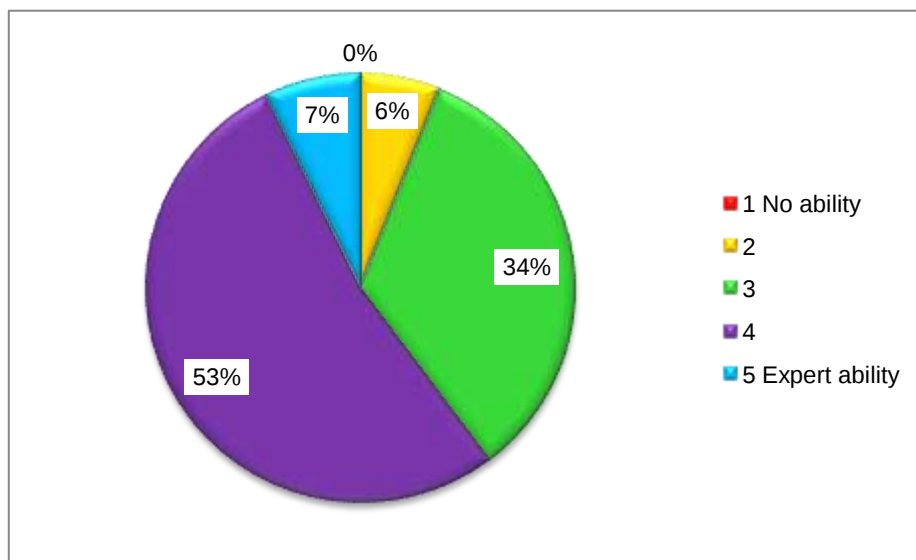
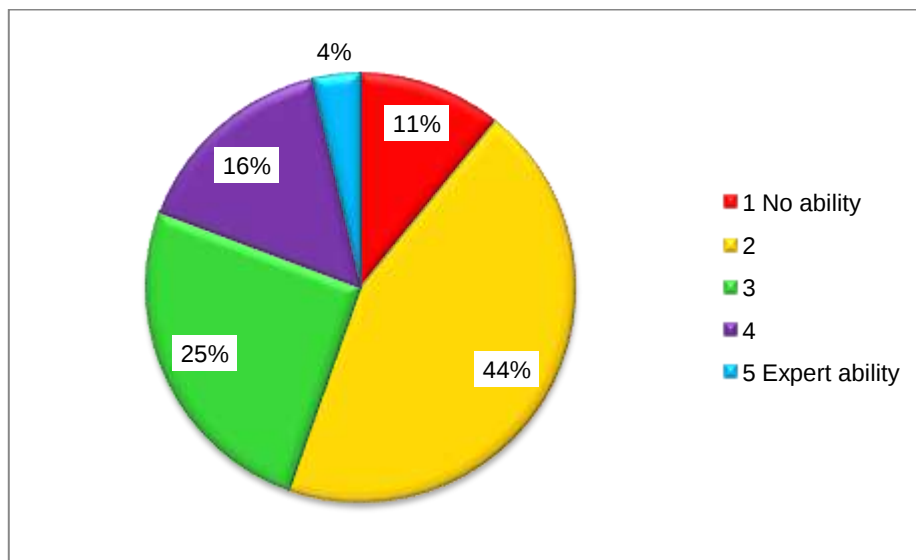


Comparison

In as much as participants could not have changed their actual use of multimedia over the time of the workshop, this question may be regarded as a comparison between participants' actual use pre-workshop and potential use post workshop. As such it may reflect the degree to which the workshop inspired participants in seeing how they could use multimedia in their teaching. The average response of 2.5 pre-workshop increased to an average of 3.5 post workshop. Nearly 60 per cent (49 respondents) rated themselves at the highest two levels on this scale after the workshop compared to only 18 per cent (15 respondents) before the workshop.

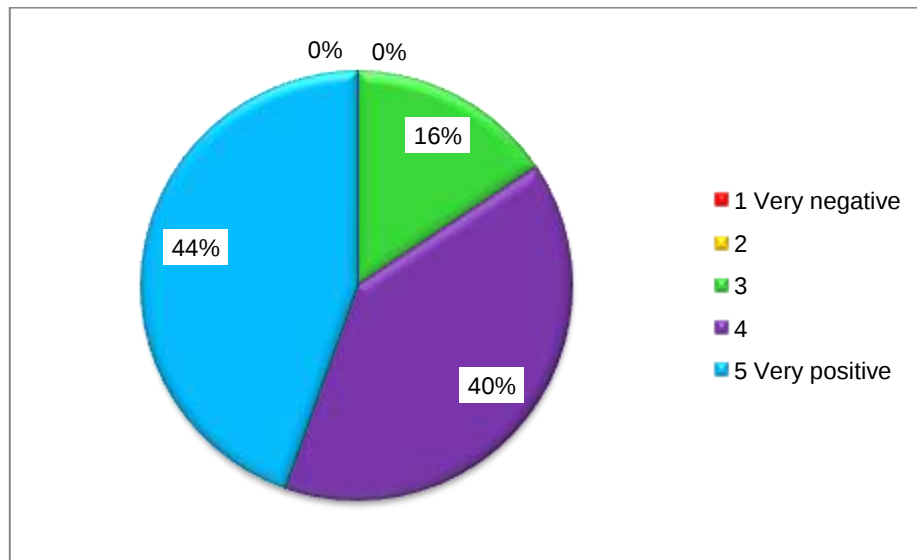
In response to a request to rate their **ability** to adapt or develop multimedia resources for their own teaching contexts both before and after the workshop on a 1-5 scale, with 1 representing no ability and 5 representing expert ability, the participants answered as follows:



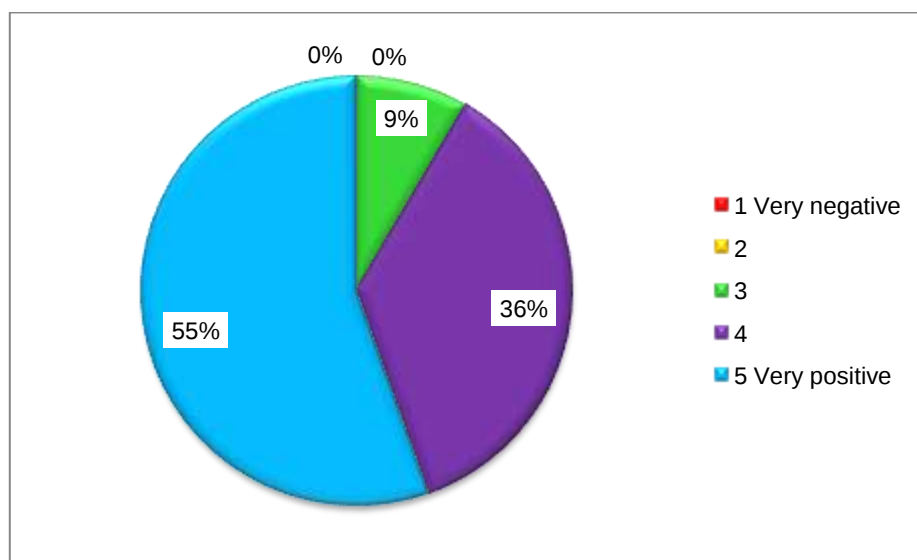


This question provides an indication of the extent to which the workshop was successful in equipping participants with the techniques and skills of producing multimedia at their desktops. Prior to the workshop, only 20 per cent of participants – including learning designers – rated themselves in the highest two levels with 55 per cent in the lowest two levels (average 2.5). After the workshop 60 per cent rated themselves in the highest two levels with only 6 per cent in the lowest two levels (average 3.6).

Participants were then asked to rate their **attitude** to the use of multimedia resources on a 1-5 scale, with 1 representing very negative and 5 representing very positive. The results were as follows:

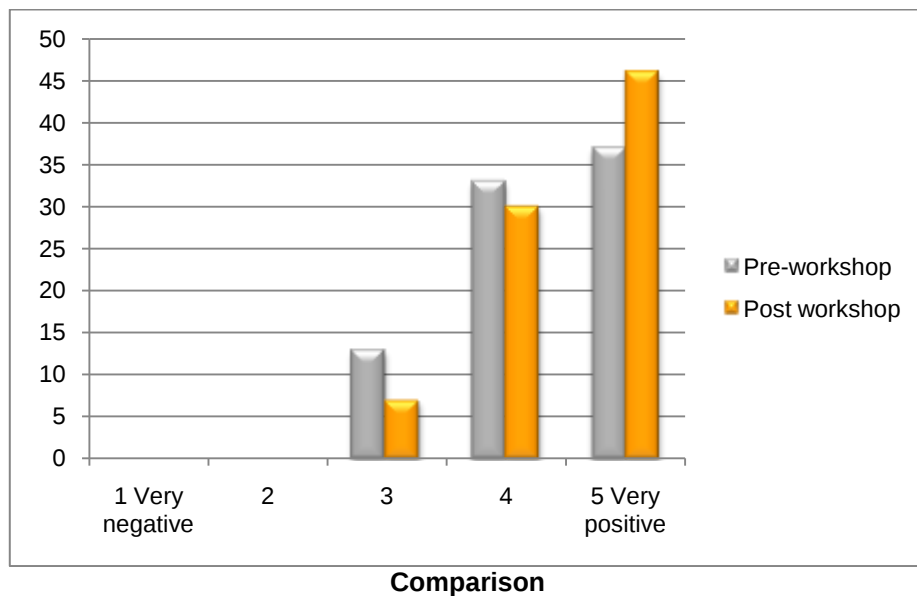


Pre-workshop



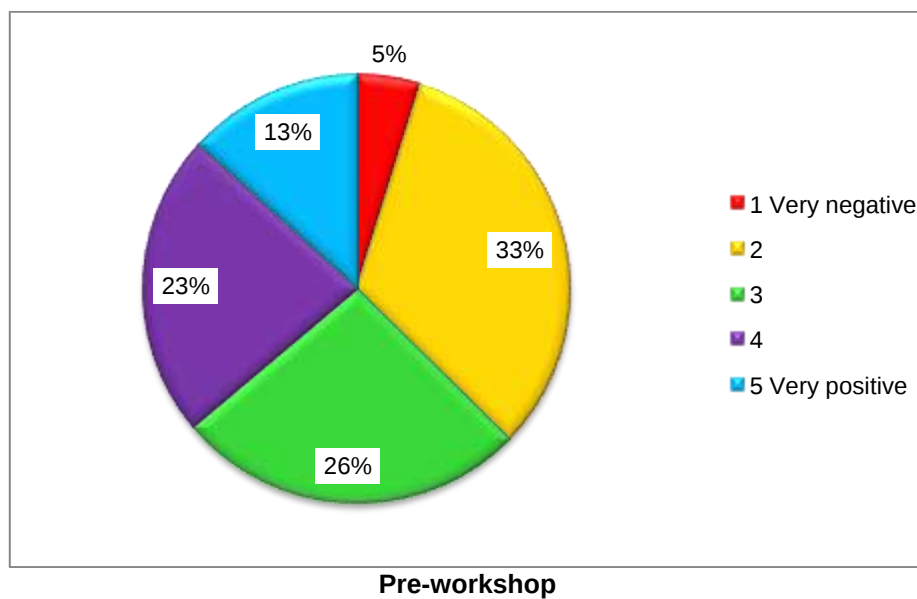
Post workshop

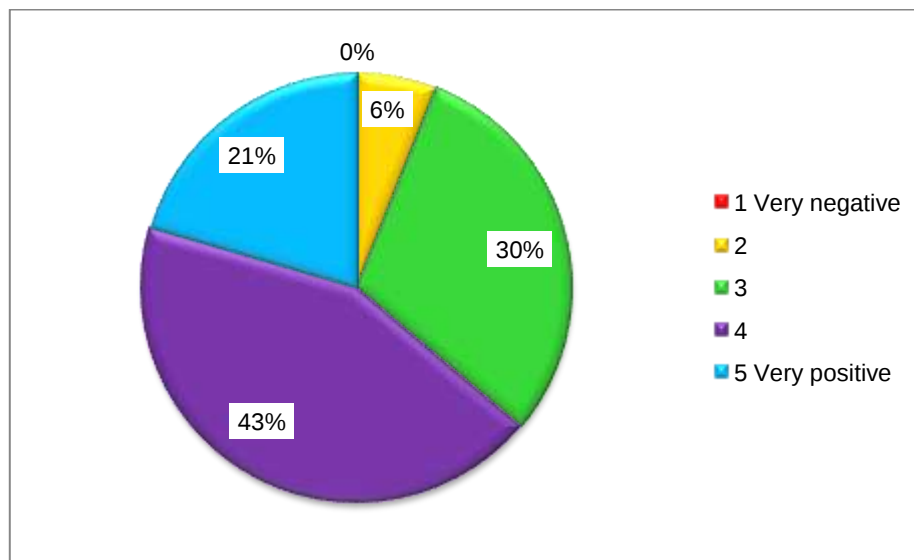




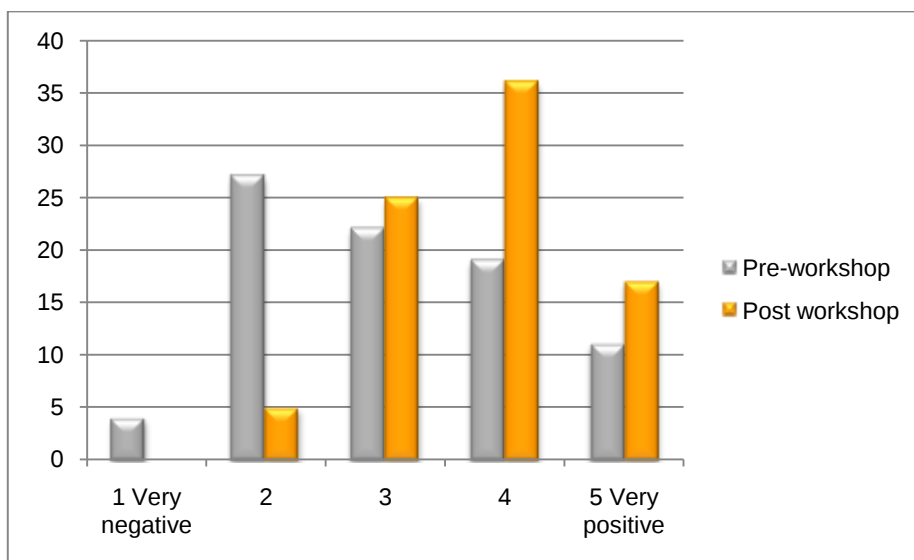
Not surprisingly, there was a very high rating of attitude towards the use of multimedia both before and after the workshop (4.3 average increasing to 4.5 average). The largest shift was an increase of 9 participants regarding themselves as very positive about the use of multimedia.

Asked to rate their **confidence** in the use of multimedia resources on a 1-5 scale, with 1 representing very negative and 5 representing very positive, participants responded thus:





Post workshop



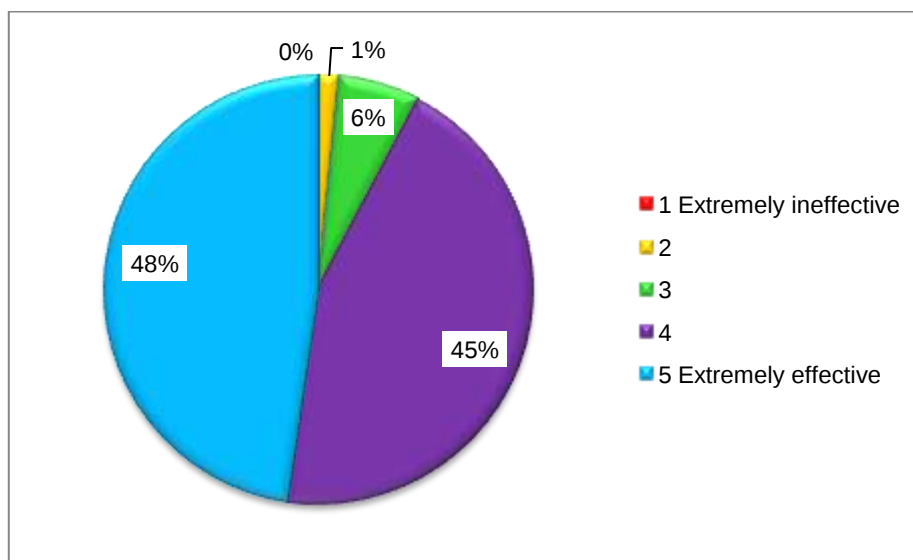
Comparison

Whilst participants might feel that the workshop was successful in equipping them with the techniques and skills of producing multimedia at their desktops, it is a different question whether as a result they feel confident about using those techniques and skills. Only 36 per cent, including the learning designers, rated themselves at the highest two levels of confidence prior to the workshop, with 38 per cent at the lowest levels (average 3.0). The workshop was also successful in raising participants' confidence levels, with 64 per cent rating themselves at the highest two levels and only 6 per cent placing themselves at the lowest two levels (average 3.9).

The final three questions on the survey measured participants' thoughts regarding the structure of the workshop and the way it was conducted.

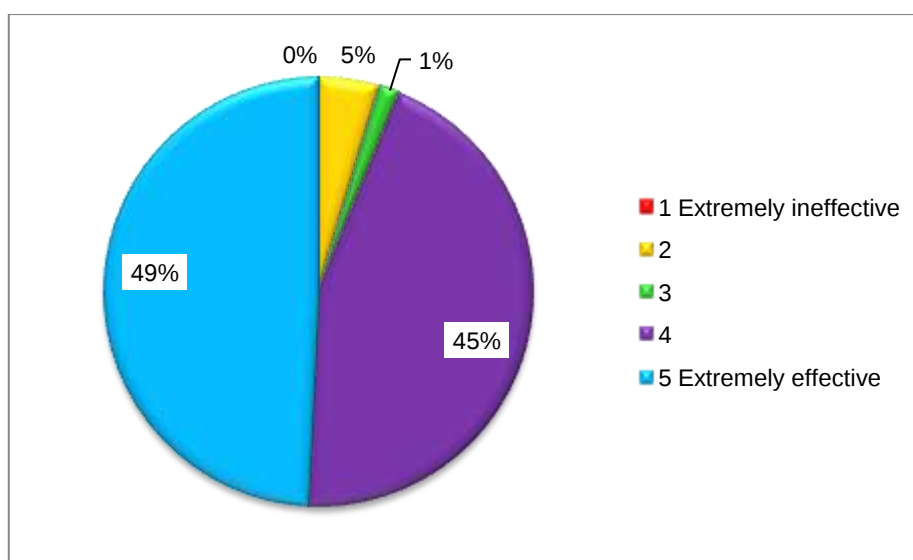
Participants were asked how effective the workshop **process** was in developing their understanding of cost-effective multimedia development and application in educational contexts. On a 1-5 scale, with 1 representing extremely ineffective and 5 representing extremely effective, the results were as follows:





A total of 93 per cent of respondents rated the process adopted for the workshop at the highest two levels of effectiveness, including 45 per cent who regarded it as 'extremely effective' (average 4.4).

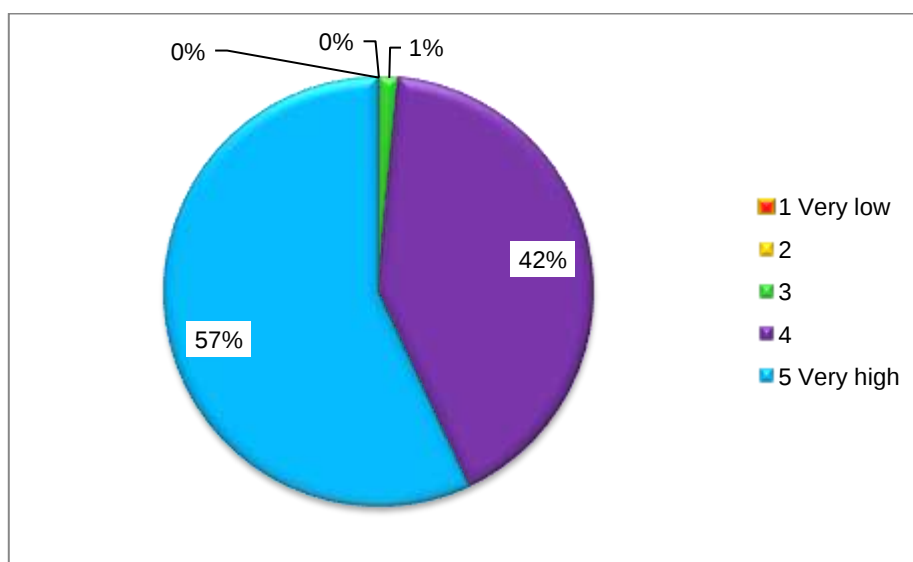
Participants were also asked to rate how effective the workshop **resources** (eg the Resources Manual and *Entry into Valhalla*) were in developing their understanding of cost-effective multimedia development and application in educational contexts. The results were:



A similar total of 94 per cent thought that the resources including the resources manual and *Entry into Valhalla* were at the two levels of effectiveness in developing their understanding of multimedia development and application, nearly half rating it 'extremely effective' (average 4.4).

Finally, participants were asked for their overall opinion of the workshop.





A total of 99 per cent of participants rated the workshop at the highest two levels including 57 per cent who rated it 'very high.'

The aspects of the workshop most liked by participants included the hands-on approach, the style of instruction, the resources, being able to make their first movie using Movie Maker and learning about the Xerte program. Typical comments included:

Being a novice the content is very new. Elements I found helpful: (1) Des is not professionally trained [in the software] (2) the resources [are] fairly readily available (3) instant gratification at making my first movie (4) written guide to use at my own pace. Already thinking of some applications for work.

To know that an academic can also develop such impressive multimedia resources on his/her own!

The hands-on activity allowed everyone to have a play and gain confidence. Some great tips and the emphasis on free tools and that anyone can do it!

Des' wonderful delivery of knowledge he has obtained through experience and at a pace that lost no one.

Hands-on experience and actually creating something.

The interactive aspect – how we did things step by step. Plus Des's presentation style is very entertaining.

Des' presentation and style. Des made it really easy to engage in the resources and follow his guidance.

Beautifully presented resources – clear directions

It is hands-on! Des is an excellent teacher and presenter - and very generous in sharing his knowledge and experience!

The aspects of the workshop identified as needing improvement reflected the diversity of the participants. Some thought the workshop was too long while others would have liked it to have gone longer, particularly in relation to the amount of time spent on Xerte. For that reason some participants suggested the workshop being split into two separate workshops on different days, perhaps one focusing the more basic application such as PowerPoint and Audacity and the other the more advanced applications Movie Maker and Xerte. Others would have liked to have had instruction in relation to *Second Life*

7.2 Website

The professional development needs of academics have also been addressed by the development of a website containing instructional videos, together with the workshop Resources Manual.

The instructional videos cover the use of cost-effective multimedia in five parts:

- Sources of Content
- Graphics manipulation using PowerPoint
- Audio recording and mixing using Audacity
- Video editing using Movie Maker
- Creating eLearning environments using Xerte

The videos were themselves created using cost-effective multimedia, and thus by their own form provide examples of the potential use of such resources.

The website, which forms part of the ALTC Exchange, is found at:

<http://www.altcexchange.edu.au/book/using-cost-effective-multimedia-create-engaging-learning-experiences-0>

It has been advertised in the electronic newsletters of the Australian Law Teachers Association, the Higher Education Research and Development Society of Australasia and the Australian Society for Computers in Learning in Tertiary Education, which together represent the associations most relevant to the Fellowship's targeted audience.

The website invites visitors to post a comment or to email the Fellow directly with their thoughts. At the time of writing few comments have been received. However, one visitor to the site remarked:

These resources will be a great help to us all Des - thank you for inspiring us!

while another stated:

Thank you for the resources Des. Great project!

An email from a visitor was in the following terms:

Thank you for kindly sharing your knowledge with the Australian academic community. I have logged in to the ALTC Exchange website and looked at a couple of your videos – I'm impressed by your creativity! ... I would like to share your findings with my colleagues in our School Teaching and Learning Committee.

The manager of a learning design department wrote in the following terms:

One of our ... staff recently attended and reported back on your forum about multimedia resources to engage learners. After her briefing, it occurred to me that the Resources Manual handout would be very valuable for us to provide to the clients who we are unable to service due to cost and scheduling issues. I've had a look at the hard copy, and I think it's a great, up-to-date snapshot of the resources and activities that are currently available.

This manager is now commending the website to his staff as a resource that would be 'very valuable for those clients that [his department] cannot provide service to.'

8.0 Other dissemination

The results of the Fellowship have been and will continue to be disseminated to the academic community in a variety of other fora. As at the time of writing the following dissemination has taken place:

Refereed journal article

Butler, D. (2010) *Entry Into Valhalla: Contextualising the Learning of Legal Ethics through the Use of Second Life Machinima* *Legal Education Review* 20, 87-110.

Conference presentations

Butler, D. (2010). *Entry into Valhalla: Transforming Traditional Legal Ethics Curricula through Cost effective Multimedia*. In C. Steel, M.J. Keppell & P. Gerbic, *Curriculum, technology & transformation for an unknown future. Proceedings ascilite Sydney 2010*.

Butler, D. (2010) *Entry Into Valhalla: Contextualising the Learning of Legal Ethics through the Use of Second Life Machinima*. In *Proceedings ALTA Conference Auckland 2010*.

Butler, D. (2009). SL @ QUT. *CreateWorld09 Conference*. Brisbane



University-wide presentations

Butler, D. (2010) Using Cost-Effective Multimedia to Create Engaging Learning Experiences. *QUT Teaching Fellows forum*. (41 registrants)

Butler, D. (2010) Using Xerte and Multimedia for Active Learning. *Learning Design Live (via illuminate)* (46 downloads, as at time of writing).

Butler, D. (2010) Contextualising the Law by Using Machinima-Facilitated Narrative-Centred Learning. *Making Connections – Innovation in Learning and Teaching at QUT Conference*

Butler, D. (2009). Technology Enhancing Learning in Law. *QUT Assistant Deans of Learning and Teaching Forum*.

Faculty-wide presentations

Butler, D. (2010). Making your Teaching Effective – innovation, lectures and damp squibs. *QUT Faculty of Law Teaching Interest Group*

Butler, D. (2009). Hot Potatoes and Xerte: Template Programs for Creating Enhanced Learning Experiences. *QUT Faculty of Law Teaching Interest Group*

9.0 Lessons learnt

The two aspects of the Fellowship yielded lessons in relation to the use of machinima-facilitated narrative learning environments and staff development.

9.1 Machinima-facilitated narrative learning environments

The use of narratives to facilitate discussion of legal principles is not new in legal education in Australia. Law schools in Australia commonly use short problem-type questions in small group tutorials to enable students to discuss the application of legal principles and rules in the context of fact scenarios. However, such problem questions are usually text-based, limited in terms of detail and have no common theme to connect them. For this reason, the extent to which students make connections between such problem questions and real-world practice is open to question.

By contrast, machinima-based programs like *Entry into Valhalla* can provide a connected storyline that enables a subject to be dealt with in a more realistic manner than if presented in a decontextualised fashion. The experience with *Entry into Valhalla* in the context of an infusion of an improved appreciation of legal ethics reflected research into the use of machinima in other contexts. Students can appreciate the usefulness of what they are learning, enabling a smoother transition from a university environment to a work environment by linking their learning with real-world problems.

However, *Entry into Valhalla* also demonstrated that in an area such as legal ethics the multimedia should form a component of a blended learning program that also includes instruction on, and discussion of, the philosophical and theoretical basis of legal ethics. Without an understanding of the theories underpinning legal ethics, students may be inclined to believe that legal ethics is no more than a gloss on the substantive law and lack the essential foundation for addressing the challenges posed by the complex real-world type scenarios.

Multimedia productions such as *Entry into Valhalla* require careful design and an investment in time. From a design point of view, care must be taken to strike a balance between providing a narrative that is rich in detail but not so heavily burdened by unnecessary detail that it leads to excessive workload which may distract some students from the main purpose of the program.

Working alone, production of the program (including the writing of scripts, storyboarding, filming of machinima sequences, recording of voice tracks, filming of real life video introductions, video editing and constructing the Blackboard website) took the Fellow approximately 15 weeks. Similar projects need not require the same time commitment. For example, collaboration can reduce the amount of time needed from any one person. In addition, not all projects need to be as ambitious in terms of scope as *Entry into Valhalla*. In



any event, the time commitment should not be considered in isolation but should be viewed in the light of the benefits that such programs produce in terms of the richer, more engaging learning environments which can better motivate and educate students. The programs are scalable, providing the same learning experience for all students in a cohort regardless of their study mode. They may be accessed by students at their own convenience and at a time and in a place of their own choosing, thereby enabling flexible learning. Further, they are sustainable: the fact scenarios depicted in *Entry into Valhalla* are not time-specific and reflect the types of situations that could arise in practice now or 5, 10 or 20 years hence. Since the application of the relevant professional rules and court decisions is left to the small-group sessions, the content of *Entry into Valhalla* will not date. In any event, should anything in the program require changing this can be easily achieved using the Xerte eLearning system.

While the student response was overwhelmingly positive, it did not attract universal acclaim. A handful of students claimed to have had technical issues which inhibited their enjoyment of the program. It is an unfortunate reality that with the wide variety of personal computers being used in a big student cohort, it is not possible to ensure that a multimedia program is compatible with every machine. Instead, it is necessary to anticipate potential problems and to provide the best accommodation possible. This may include providing videos in different formats and file sizes or providing print-friendly versions of transcripts to cater for slower Internet connections. Providing transcripts also allows the program to be accessed by sight- or hearing-impaired students. In addition, in the case of *Entry into Valhalla* colour schemes were checked against the Hewlett-Packard contrast verification tool to ensure conformity with accepted accessibility standards.

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 in relation to play and learning (de Winter et al 2010, Gee 2004). *Entry into Valhalla* was no different. A small number of students criticised the program on the grounds that they preferred text-based learning, that it took longer to watch the videos (which were all between four and seven minutes long) than to read text, that text-based questions were what they were used to, and that the exam would be text-based so all of their tutorial questions should be text-based. A single student expressed a more fundamental objection that he/she viewed the use of computer graphics as more appropriate to gameplay in primary school rather than university study. Whatever the legitimacy of these various criticisms, the provision of print-friendly versions of transcripts as an alternative means of providing access to the content of the narratives that form the basis of discussion in class may be a simple measure to placate the concerns of these students.

9.2 Staff development

It has been said that the main barriers for academics to introduce multimedia innovations into their curricula are the prohibitive cost of production often required (Dunning 2004, de Winter et al 2010), the lack of academics' technical literacy and commitment to learn new technology, a perceived threat to academic freedom and autonomy and general 'academic inertia' (Middleton & Mather 2008).

Creation of programs such as *Entry into Valhalla* typically represent the confluence of a number of elements: (1) the imagination and creativity to conceive the idea; (2) the necessary resources; (3) the funding to obtain those resources; (4) the knowledge and confidence to use those resources; and (5) the time to use those resources. The purpose of the staff development activities was to alert academics to the cost-effective resources available and the uses to which they could be applied, and to address the lack of academic technical literacy by constructing the knowledge of other academics and sharing the techniques and skills required to produce programs like *Entry into Valhalla*.

The strategy adopted in the workshops proved to be a successful means of achieving this purpose. The initial budding of novices with other participants who were more experienced with computers – a lesson which was derived from the prototype workshop – was a simple but effective tactic. The design of the workshops was also a critical factor in their success. This included progressing the workshop from more familiar software to that less known. The workshops also involved the participants using media they created in one segment (ie a mixed audio track they created using Audacity) in the following segment (ie creating a movie in Movie Maker) which they then packaged in the final session using the Xerte eLearning



system, giving them a sense of completion and achievement. Other critical factors were the design of the segments (which followed the pattern of instruction, demonstration and hands-on practice) and the provision of a comprehensive manual. This manual included step-by-step instructions for the resources the participants were using in the workshops, thereby helping to reduce any anxiety that participants may have felt that once the workshop was over they would not be able to remember how to use the various resources, and hopefully enhancing the chances that they will use their newly acquired knowledge and skills for their own projects.

Nevertheless, some impediments are difficult to overcome, even with the best designed activity. Attitude and confidence are such personal considerations that, no matter how comprehensive the instruction that is provided, some academics will still feel reluctant to innovate for themselves. Practical considerations such as the time commitment required for participants to attend the workshop placed constraints on the amount of material that could be covered. The workshops were generally run from 10.00am to 3.30pm, which was sufficient time to cover the resources used in *Entry into Valhalla* and other resources that academics could utilise in their general teaching. However, there was not sufficient time to cover a resource such as *Second Life* and machinima making, which were of interest to a large number of participants but which would have easily required another day or more to cover properly. Even when a segment on the Hot Potatoes quiz program was added to the second Brisbane workshop at the request of the home institution, some participants found the workshop to be a little too intense.

The website will be an enduring resource on the ALTC Exchange. However, without a means of reminding academics of its existence it will be a forgotten resource.

10.0 Impact to date

To my knowledge, the knowledge construction and other dissemination activities have already resulted in the following developments:

- *Entry into Valhalla* will form part of the legal ethics curriculum at the University of Technology, Sydney Faculty of Law from 2011
- *Xerte* modules including other cost-effective multimedia now or will shortly form part of the curriculum in the following courses at the Queensland University of Technology:
 - Foundations of Law (Faculty of Law)
 - English Language education
 - Biomedical Science
- *Second Life* machinima scenarios depicting real-world problems, inspired by *Entry into Valhalla*, are currently in production for the School of Learning and Professional Studies in the Faculty of Education at the Queensland University of Technology and are now being considered in the School of Social Work and Health Services in the Faculty of Health at the Queensland University of Technology.

Naturally there may be other resulting developments which have not come to my notice.



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Appendix: Evaluation report

Introduction

At Professor Butler's request I undertook to collaborate with him on the evaluation of his fellowship activities from the perspective of a critical friend. Between July 2009 and the completion of the project at the end of 2010 we had eight face-to-face meetings and frequent email exchanges. My contributions took the form of questioning, making suggestions, documenting the outcomes of our discussions where appropriate, providing feedback on draft evaluation materials prepared by Des as an outcome of our conversations and collaborating on the interpretation of evaluation data he had collected and the identification of implications for his fellowship processes and outcomes. The evaluation plan we developed and implemented was guided by key questions drawn from the online resource provided on the ALTC website (Chesterton, Cummings 2007). Questions drawn from this report are addressed in the summary of evaluation considerations, activities and outcomes reported below.

Evaluation report

The fellowship proposal clearly conveyed the nature, focus, scope, outcomes and processes of the project. The literature cited provided a convincing conceptual framework in support of the values underpinning the approach taken and its relevance to the educational context for fellowship activities. The clarity of the proposal therefore provided a clear direction for fellowship activities.

Our purpose in finalising the evaluation plan was two-fold - to inform fellowship activities (formative) and to gauge the extent to which project outcomes had been achieved (summative).

Those with an interest in the outcomes of fellowship activities were identified as QUT Law Faculty academics, QUT Law Faculty students and academic staff and students from other institutions, the Queensland Law Society, Council of Australian Law Deans and ALTC fellows and staff. Key stakeholders also served as sources of data where appropriate through their involvement in fellowship activities. An internal reference group was established comprising QUT academics and later expanded to include a representative from the UQ School of Law.

Key evaluation questions, data sources and data collection methods used are listed in the table below. These were drafted in the early stages of the fellowship and progressively refined as needed. The timing of data collection was determined by the scheduling of key fellowship events.

	Evaluator	Reference Group	Students	Academics – workshop participants	Academics – course teachers	Legal profession
How appropriate are the proposed processes for achieving project objectives?	Document review					
How appropriate is the proposed design of “Entry into Valhalla” resource for developing student appreciation of ethical practice?			Focus group 1 (prospective students)		Focus group 1	Focus group 1
How effective is the “Entry into Valhalla” resource in developing student understanding and application of ethical practice?		Invited response	Survey 1 (current students)		Survey 3	



How easy is it to use “Entry into Valhalla”?			Survey 1 (current students)	Focus group 1	Survey 3	Focus group 1
How effective are workshops in developing academic’s appreciation of multimedia resources?				Survey 2 (pre and post)		
How effective are workshops (1) processes and (2) resources in developing academic’s abilities to develop their own multimedia resources?				Survey 2 (pre and post)		
How effective is the interactive website in developing academic’s abilities to develop their own multimedia resources?	Website review				Online posting	

The aims of the fellowship served as constant reference points when making judgments about findings with respect to intended outcomes for both staff and students. Qualitative data were scrutinized by Des to identify strengths and areas in need of modification and illustrated through participant comments in relevant sections of the fellowship report. In addition, quantitative data from survey questions are represented in appropriate graphical form where relevant.

I observed that the fellowship activities closely followed the plan outlined in the proposal and that the evaluation plan generated convincing evidence that the fellowship had been successful in achieving its stated objectives.

Entry into Valhalla and the resources manual developed for use in the workshops had an impact on academics’ appreciation of how relatively easy to develop multi-media resources could be used to enhance teaching and curriculum and that workshops had developed participants’ skill in their creation and application. The location of resources (manual and instructional video) on the fellowship website has received a positive response but is still too recent to evaluate take-up. From my perspective however, the web material is accessible and easy to follow and I would certainly recommend its use myself.

From the perspective of teaching staff and students, *Entry into Valhalla* enhanced both interest and motivation as well as desirable learning outcomes related to the development of ethical practice. Feedback indicated that *Entry into Valhalla* was most useful when integrated into a course design along with other components such as text books.

Entry into Valhalla received strong approval as a teaching resource from members of the legal profession who were consulted. In particular, the authenticity of the scenarios used delivered additional outcomes identified as demonstration of the complexity of legal practice and promotion of the desirability of junior practitioners seeking advice from experienced professionals.

In his reflection on *Lessons learned* Des has identified the particular qualities of *Entry into Valhalla* that enabled students to make the links between coursework and legal practice that are likely to ease their transition into the profession. He has also highlighted the importance of balanced programs incorporating a range of objectives, learning experiences and resources; the need for story lines with an appropriate level of detail to promote productive discussion; and the need to ensure a return (student learning) commensurate with investment (time required for multi-media development). The reflection section also acknowledges less positive responses from students and identifies implications such as catering for student diversity by providing learning resources in a variety of alternative formats.

Similarly Des has identified both the strengths of his workshop approach to staff development in multi-media creation and use and the limiting factors that characterise many aspects of academic life, particularly lack of time for staff or resource development.



He concludes with a timely caution that even worthwhile resources such as the guidelines located on his fellowship website need ongoing dissemination to avoid undue neglect. However, there is always the possibility that impacts such as the formal incorporation of his resources into the curriculum of law courses at QUT and the crossing of discipline boundaries through the take-up of an approach modeled on *Entry into Valhalla* in the QUT Faculty of Education may yet prove to be more effective approaches to dissemination than more traditional forms such as publication and presentations.

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