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Air Gondwana: Using ICT to create an authentic learning environment to teach basic negotiation skills

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In recent years greater emphasis has been placed by many Law Schools on teaching not only the substantive content of the law but also the skills needed for the practice of the law. Negotiation is one such skill. However, effective teaching of negotiation may be problematic in the context of large numbers of students studying in a variety of modes and often juggling other time commitments. This paper examines the *Air Gondwana* program, a blended learning environment designed to address these challenges. The program demonstrates that ICT can be used to create an authentic learning experience which engages and stimulates students.

Keywords: authentic learning, computers, cognitive apprenticeship

Background

In the 1990s concerns were expressed both overseas (ABA, 1992) and in Australia (McInnis & Marginson, 1994; ALRC, 1999) about the quality of legal education being provided in law schools. Specifically, it was thought that law schools were overly focused on teaching legal content without paying sufficient attention to the teaching of legal skills. Instead, it was suggested that there should be greater focus on “what lawyers need to be able to do, [rather than being] anchored around outmoded notions of what lawyers need to know.” (ALRC, 1999, para. [2.21]) Many schools have since responded to this call by including in their curricula programs aimed at developing the skills of their students. The Queensland University of Technology Law School introduced an integrated program of graduate capabilities under which particular skills are developed to different degrees of attainment according to the stage in the degree (Christensen & Kift, 2000). The skill of negotiation is taught at a basic level in the first-year subjects *Contracts A* and *Contracts B*, and then developed to a higher level in later subjects.

For several years *Contracts A* and *Contracts B* adopted a traditional approach to teaching negotiation skills at a basic level, which included a lecturer providing instruction in negotiation principles, print materials and role-plays. There were practical reasons for this approach. The subjects typically have enrolments of 450-600 students, and have large teaching teams consisting of both full-time and sessional staff with varying degrees of experience and comfort teaching negotiation. While on the whole this traditional approach was well received by students, it had deficiencies. as Williams (2004) observed:

Asking a new negotiation student to conduct a full negotiation is like asking a new violin student to play a complete musical piece on the violin – it calls for the performance of a large number of underlying skills, many of which have not yet been adequately developed.

The approach also offered no opportunity for students to reflect on the knowledge and understanding they had attained, or to obtain meaningful feedback on their progress. The traditional approach was replaced in 2008 by the *Air Gondwana* program, a blended learning experience (Graham, 2005) which utilises Information and Communication Technologies (ICT) in the form of five modules accessed via a learning management system (in this case Blackboard). These modules provide instruction and the opportunity for students to practise the principles of negotiation across a range of real-world fact scenarios. These also facilitate a face-to-face role-play negotiation.

Development of *Air Gondwana*

Challenges

Air Gondwana was designed to address a broad range of challenges posed by the task of teaching negotiation skills to a basic level of attainment in the QUT Law School context. The student cohorts were not only large, but also spread across different modes of study, including full-time, part-time and distance external. Many, if not most, of those students are so called ‘millennial students’, whose lives have been said to be “characterised by ubiquitous information, merged technologies, blurred social study work boundaries, multitasking and hyperlinked online interactions” (Nelson, Kift, & Harper, 2005, p. 510).

At the same time, the literature suggests that effective negotiation training includes instruction on the principles of negotiation, demonstration of negotiation in practice, a role-play conducted by the participants and a debriefing (Tyler & Cukier, 2005, p. 67). Ideally these elements require small group teaching. Nevertheless, there is growing recognition that ICT can play an important role in negotiation training, particularly as an effective means by which instruction may be given in negotiation skills and a positive model of negotiation practices demonstrated (Tyler & Cukier, 2005, pp. 83-84). However, a significant obstacle to introducing multimedia innovations to teaching can be the often prohibitive cost involved (Dunning, Rogers, Magjuka, Waite, Kropp, Gantz, et al, 2004, pp. 11-12). 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 to access grant funding that might otherwise meet the expense of multimedia content development and software programming. On this occasion the author was supported by a \$22,000 University Learning and Teaching Grant, this money mostly being expended on filming a video, some programming and teaching release. A large part of the project was completed using cost-effective measures, with implications for other educators wishing to use ICT to create engaging learning experiences.

***Air Gondwana* as a response**

Air Gondwana reflects elements of the ‘cognitive apprenticeship’ learning model developed by Collins and his colleagues (Collins, 1991; Brown, Collins, & Duguid, 1989). These elements include modelling, coaching, scaffolding, reflection, and exploration. The program consists of five modules which are linked by a common narrative concerning the fictional airline *Air Gondwana*.

Module 1 comprises two videos. One is a short introduction to the storyline, while the other is a 20 minute instructional real-life video. The latter provides a demonstration of a negotiation done poorly; provides instruction on negotiation theory and practice, illustrating points by

short vignettes; and then demonstrates the same negotiation done well. Such observational learning has been recognised as one of the most effective ways of teaching negotiation skills (Nadler, Thompson, & Van Boyen, 2003). This has been attributed to the fact that “observers are able to absorb beneath a conscious level and then apply by analogy to new situations” (Tyler & Cukier, 2005, pp. 77).



Figure 1: scenes from the instructional video

The program adopts the Harvard Negotiation Project as its basis for teaching the principles of negotiation (Fisher & Ury, 1999). In particular, for a basic level of instruction students are introduced to the notions of focusing on underlying interests rather than upfront positions, creating opportunities for mutual gain, using objective criteria, and BATNA (Best Alternative to a Negotiated Agreement) and WATNA (Worst Alternative to a Negotiated Agreement).

Modules 2-5 then engage the learner in carrying out tasks which lead to better comprehension of these principles (Duffy & Jonassen, 1992). Modules 2 and 3 utilise *Authorware* software to present a range of real-world fact scenarios involving the airline, such as the commissioning of a new wardrobe for cabin staff, maintenance contracts and recovery of outstanding freight charges. The text of these scenarios is accompanied by images created either using the *Second Life* virtual environment or the Microsoft *Flight Simulator X* video game (which was used with the permission of Microsoft) to add to the realistic nature of the scenarios.



Figure 2: an example of *Flight Simulator X* aircraft in the *Air Gondwana* livery designed by the author, typical of the video and images used throughout the program.

Students are asked questions addressing the application of the various principles of negotiation and provided space in which to enter their answers. Feedback is then provided on the question against which students may compare their own answers.



Figure 3: examples of the scenarios in Modules 2 and 3 including images generated using the *Second Life* virtual environment and Microsoft *Flight Simulator X* game

Modules 1-3 are undertaken in *Contracts A*, at any time of the student's choosing before a deadline in Week 10 of semester. Modules 4-5 are undertaken in *Contracts B*, normally after the break between semesters. For this reason, and to promote student reflection on the principles of negotiation they have learnt, Module 4 allows students to review the instructional video from Module 1 and provides a refresher quiz. This quiz is a further opportunity for students to apply the principles that they have learnt in a practical situation and to obtain formative feedback by comparing their answers against a suggested answer. Whereas Modules 2 and 3 cover the application of negotiation theory across a range of scenarios, Module 4 takes the form of a single fact situation in which all of the negotiation principles that the students have learnt may be applied. It therefore serves as useful preparation for the role-play, in which the students are similarly expected to apply what they have learnt to a single fact situation.

Module 4 utilises a similar interface to that utilised for Modules 2 and 3. However, rather than depicting a scenario by text accompanied by still image, Module 4 features a window which plays *machinima*, that is video using computer graphics produced without the expense of professional software. Vision from the *Second Life* and *Flight Simulator X* programs is used to portray the storyline of the purchase of an aircraft from a foreign owner. At various points the video stops and the student is asked a question concerning the application of negotiation theory. The student is required to enter an answer to the question and is provided feedback against which he or she may compare his or her answer. In this way the student works his or her way through the story.



Figure 4: Module 4 interface including a scene from the video depicting an aircraft purchase storyline.

The storyline in Module 4 is linear in nature, unfolding in the same way irrespective of the answers that a particular student may enter. Providing feedback on the question against which the students may compare their answers enables all students to obtain the same directed learning experience without requiring a more complex multi-branched story that depends upon individual student responses.

Module 5 includes a face-to-face role-play that students undertake during one of their regular tutorial classes (in the case of external students, during their compulsory attendance school). The role-plays in previous years involved providing students with single page, double sided briefing sheets that described the problem to be negotiated and the perspectives of the two sides to the negotiation. The students were therefore unaware of the content of the negotiation until they attended class and then had only five minutes to absorb the facts of the scenario. This in turn meant that there was a limit to the kind of facts that could be portrayed and the detail that could be provided. Better students sometimes found this frustrating because their negotiation may have moved in a direction requiring further detail, about which they could only guess.

By contrast, the *Air Gondwana* role-play involves briefing sheets and a ‘corporate video’ – once again machinima created using *Second Life* – distributed in advance via the on-line program, to provide general background detail for the fact scenario that is the subject of the negotiation. The *Air Gondwana* role-play concerns an island which the airline wishes to turn into a tropical holiday resort but which an environmental group wishes to keep as an undisturbed nature sanctuary. By utilising general background briefing sheets and the corporate video, *Air Gondwana* provides detail on the island, such as the fauna that inhabits it and the family trust that owns it. The video portrays the island in its present state and enlarges upon the type of developments that the airline is planning. These materials more closely resemble the advance research that would be undertaken in a real world negotiation. The single page double sided briefing sheet provided at the beginning of the role-play now is utilised more effectively to provide greater focus on specific issues to be addressed in the negotiation, and to provide more specific information concerning the motivations and perspectives of the particular party being represented by the student.

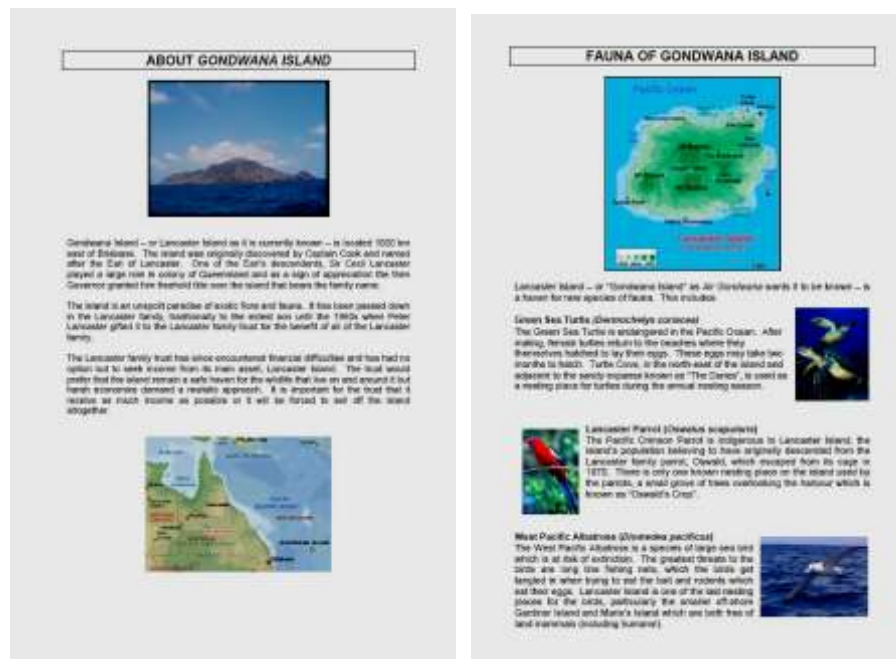


Figure 5: examples of the advance briefing material providing background information concerning the subject of the negotiation



Figure 6: excerpts from 'corporate video' providing further background information

This has enabled a more detailed and more authentic problem to be set. It has addressed the previous problem posed by the limited amount of space available in the single page double sided briefing sheets handed out at the beginning of the role-play and the limited time available for students to digest the information in those sheets. Better students have more background detail to work with, and students enjoy a richer learning exercise which reflects real life experience (Tyler & Cukier, 2005, p. 73).

In previous years a debriefing was conducted by tutors reading out the types of issues that ought to have been addressed by students in their negotiations. Individual comments were also made on the negotiated agreements, which were marked and then returned to students. The debriefing in *Air Gondwana* is done by machinima, featuring the head of the airline speaking to the students from various locations on the island. This video has been burned to CD and is displayed at the beginning of the class held in the week following the role-play. In addition, individual feedback is still provided on the marked negotiated agreements.

The opportunity for further reflection is provided in the form of a subsequent tutorial class which is designed to make a link between the skill of negotiation and the law governing negotiation. This includes, for example, the legal position in relation to facts known by one party (the airline) but not disclosed during the course of negotiation. In addition to re-

examining the possible effect on the contract, it also provides an avenue for discussion of the ethical issues raised and encourages reflective practice for deeper learning (Ramsden, 1992). In addition to demonstrating an application of the cognitive apprenticeship module, *Air Gondwana* reflects the five phase model for the successful learning of law suggested by Laurillard (2002).

Table 1: Mapping of *Air Gondwana* against the Laurillard (2002) model

Laurillard model	<i>Air Gondwana</i>
Phase 1 – become familiar with key ideas and information and how they are organised and structured	Module 1
Phase 2 – relate the principles to the underlying meaning	Modules 1-5
Phase 3 – act on simulated and realistic situations	Modules 2-5
Phase 4 – use feedback to modify understanding and adjust actions	Modules 2-4 (on-line feedback) Module 5 (debriefing video and individualised feedback on negotiated agreements)
Phase 5 – reflect on actions and feedback	Modules 2-5 Subsequent tutorial class

The Laurillard model is commonly cited in connection with the learning of the substantive content of law. *Air Gondwana* demonstrates that it may equally be applied to the learning of skills needed in practice.

***Air Gondwana* as an authentic learning experience**

The thinking required of students by *Air Gondwana* is consistent with the cognitive demands in the environment for which they are being prepared (Honebein, Duffy, & Fishman, 1993). It has been accepted that computers can provide an alternative to a real-life setting, without sacrificing the critical authentic context (Herrington & Oliver, 2000). Further, it has been recognised that the authentic context can be 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, p.8).

Air Gondwana motivates and engages students by using a realistic storyline of the fictitious airline to provide a meaningful context to the learning tasks they are undertaking. It has been recognised that “narrative-centered (sic) learning environments [can] provide engaging worlds in which students are actively involved in ‘story-centric’ problem-solving activities.” (Mott, Callaway, Zettlemoyer, Lee, & Lester, 1999). An important means of portraying this realistic storyline is the use of the *Flight Simulator X* and the *Second Life* virtual environments to depict authentic scenarios. The use of characters to present tasks and critical information in a simulated environment has been advocated as a useful strategy in the creation of more authentic learning environments online (Agostino, 2006). In so doing it has a high probability for enhancing learning and promoting knowledge construction (Herrington, Oliver, & Reeves, 2003).

A formal paper based survey was conducted in class at the conclusion of the program. The survey comprised five quantitative questions together with open ended questions which allowed students to anonymously comment on any aspects of the program they liked, any aspects needing improvement and any other comments. The survey had an 87.6% response rate.

Real world relevance was one of the main features identified by students as among the best aspects of the program. A total of 85.3% of respondents agreed or strongly agreed that *Air Gondwana* provided a realistic setting to understand the principles of negotiation, with only eight students in the year group disagreeing (Table 2).

Table 2: “*Air Gondwana* provided a realistic setting for me to understand the principles of negotiation

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Total (367)	2	6	46	197	116
	0.5%	1.6%	12.5%	53.7%	31.6%

As one student remarked: “I find it difficult to be enthusiastic about a subject when I can't see the relevance of the assessment – [but] I could see the application of what we were taught here for real-life.”

The formative feedback provided in the on-line modules emphasises that the answers provided are not exhaustive, and encourage creativity. Creativity is also encouraged in the role-play in Module 5, where students work in pairs (or occasionally in threes if required by the number of students in a class), to collaboratively develop opportunities for mutual gain and thereby produce a win-win outcome. This reflects the aim of the negotiation task in practice, and is again an aspect of the program rated highly by students. A total of 90.5% of students agreed or strongly agreed that *Air Gondwana* helped them to understand the application of the principles of negotiation in practice, with only four students disagreeing (Table 3).

Table 3: “*Air Gondwana* helped me to understand the application of the principles of negotiation in practice.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
Total (367)	2	2	31	219	113
	0.5%	0.5%	8.4%	59.7%	30.8%

Typical comments were: “It was realistic and practical and enabled me to think outside the problem and apply basic common sense to reach an effective solution.”

“I liked the use of the scenario, especially an environmental conflict, it allowed me to apply negotiation theory in a way that challenged my creative thinking.”

Assessment of the tasks was designed in the context of the program being an adjunct to two subjects whose primary purpose is the learning and teaching of substantive content. A further consideration was that the material being learnt was different in nature from anything many or most students had encountered before. Accordingly, rather than assessing individual answers 5% was awarded for completion of each of Modules 2 and 3 (in *Contracts A*), and Module 4

(in *Contracts B*), a process for verification of completion being built into the design. The focus of these modules was therefore on formative learning. The negotiated agreement produced at the end of the Module 5 role-play was then summatively assessed at 10%, with creativity of solutions rewarded in particular. Assessment therefore operated seamlessly with the tasks set, with 95.9% of students approving of the regime. Students commented:

“I really learned a lot from Air Gondwana. Having a percentage allocated to this exercise meant that we had to learn the principles thoroughly, and because we still got marks regardless of what we wrote made me more willing and able to learn because I wasn’t anxious about what I was writing.”

“I like the format of answers not being marked, it removed pressure so you could be more creative.”

“It was as if it wasn't an assessment piece.”

As an overall assessment of the program, a total of 94.8% of respondents agreed, or strongly agreed, that *Air Gondwana* enabled them to gain an understanding of basic negotiation theory and practice; only three students disagreed (Table 4).

Table 4: “*Air Gondwana* enabled me to gain an understanding of basic negotiation theory and practice”

	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
Total (367)	0	3	16	204	144
	0%	0.8%	4%	55.6%	39.2%

Among the features of *Air Gondwana* highlighted as being liked by most students was the convenience of being able to attempt the program at a time, in a place, and at a pace of their choosing. This enabled students to obtain the same learning experience irrespective of their study mode. As one student commented: “Thanks for putting in such a lot of work to make learning interesting (and for finding ways of achieving equity in learning experiences for external students).”

Students could also tailor their learning experience according to the other time commitments in their lives: “I liked how it could be undertaken in our own time - I felt that I could learn better in an environment of my choice at a time which was convenient to me. The quality of the program was great.”

Implications for other educators

The overwhelming endorsement of *Air Gondwana* by students has implications for other educators. The aspect of the program that was most emphasised by students in qualitative comments was that they found it to be an engaging, interesting and/or entertaining learning experience. One student said: “I like the idea and concept. I felt as if I was ‘learning’ but it wasn't obvious that I was learning. I felt completely involved in the process. Great, user friendly and hands-on.”

A total of 92.7% of students agreed or strongly agreed (57.8% strongly agreeing) that they preferred this form of instruction to one involving a lecture and role-plays. Eight students

indicated a preference for a traditional form of instruction. The question involves a degree of artificiality, since the same cohort did not actually experience negotiation taught by the traditional approach. Further research would be needed to establish more strongly a comparison of the effectiveness of such approaches. Nevertheless, it was clear that students found *Air Gondwana* to be relevant and valued the contextualised and interactive learning experience.

Air Gondwana also demonstrates that an authentic learning experience can be achieved through the use of ICT. While *Air Gondwana* focused on teaching negotiation skills to law students, its framework is readily transferable to other disciplines. Moreover, while this particular program was able to be supported by funding, much of it was produced by the author using freely available software such as Microsoft *MovieMaker* and *Powerpoint* and the *Second Life* virtual world. Those aspects of the program that were funded, such as the instructional video in Module 1 and *Authorware* programming, could be replaced, if need be, by resources produced at an academic's desktop using other freely available or low cost equipment and software; such as podcasts created with a camcorder or webcam and the University of Nottingham's *Xerte* web interface. Creation of such authentic learning environments using ICT still requires some imagination, a measure of comfort in using the available resources and time to produce the program. However, the benefit lies in the rich learning experience that can be achieved. As a student said regarding *Air Gondwana*: "One of the finest units I have done where I feel the material has been concreted into my understanding/memory."

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