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DEVELOPING AN INTERACTIVE WRITING TOOL FOR BUSINESS LAW STUDENTS

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Abstract
Students' performance in assessment tasks requiring logical written answers to case study problems can be adversely affected by difficulties in constructing a full length, logical written argument that demonstrates understanding to the level expected. This paper describes a teaching and learning tool developed to assist students in constructing logical full-length answers to given problems, using individual understanding of underlying concepts and their application. The tool allows students to see their thoughts and reasoning written into full-length answers of different styles. Developed initially for Business law students, this Answer Styles tool has scope to assist students' writing in many disciplines.

Keywords
Writing skills, learning objects, business law

The context

Demands on today's learners go beyond simple content acquisition, and require them to develop a range of longer lasting transferable and generic skills. In the discipline of law, knowledge alone is insufficient as laws are revised frequently, and often only hold meaning when *applied* to different situations. The ability to analyse and structure a logical written argument is a crucial skill students need to acquire and utilise throughout their career. Higher education courses can accommodate this requirement, using developments in technology innovatively to engage students and to support the development of this skill in a pedagogically appropriate way.

Teachers often use model answers as a means of demonstrating good examples of the standard expected of learners. Traditionally, model answers have been standard answers distributed to all students. The goal of this project was to provide learners with an innovative 'model answer' which was interactive and, most importantly, included aspects of the learners' own views, making it individual and unique to each learner.

The tool was designed for undergraduate business students at Monash University, undertaking a mandatory business law unit. The unit runs for 13 weeks using a textbook, supporting print materials and a site on the university's chosen learning management system, WebCT. It is offered on-campus and off-campus (via flexible delivery).

Many students find this unit complex, and assessment tasks (consisting mainly of problem based scenarios) challenging. Students' success is measured by their *understanding* of the legal principles, as shown by an ability to explain those principles and discuss their interrelationship and application to

problems set. In many situations raising legal problems, the facts do not involve a clear-cut application of the law, but instead require a logically argued prediction of the most likely legal outcome. Learners show their understanding of the relationships and links between alternative/competing arguments by describing, analysing and evaluating arguments and counter arguments. These higher levels of understanding (Biggs, 1999) or holistic learning outcomes (Svensson, 1997) are particularly important in analysing scenarios from a business law perspective, addressing possible multiple concurrent/alternative arguments.

Creating the kind of logical argument sought by examiners in this unit is often a difficult task for learners. They also frequently experience anxiety in understanding how their argument might be presented. A learning tool was needed to assist students develop skills in writing answers to case study problems, while allowing for individual differences in opinion and also encouraging individuality in styles of writing.

When using information communication technologies (ICT) and the World Wide Web (WWW), learning environments must be designed with care and 'must enable novice learners to gain knowledge within a supported framework' (Oliver & McLoughlin, 2001 p.149). Constructivist learning theories advise that successful learning frameworks offer a context of support for the learner (Jonassen, 1998). Instructors and educational designers can use available technology innovatively to support and guide learners effectively towards achieving the learning goal. Novice learners are particularly dependent on good initial support.

This project aimed to develop a supported learning environment providing a framework to structure a reasoned response to a problem. Students needed a learning tool to guide them in analysing the key issues and to demonstrate different styles of written answers to them. Therefore, the tool needed to:
    (a) explore all issues that were relevant to the given problem
    (b) allow students to use their own words to describe the legal principle(s)
    (c) allow students to use their personal views on the way those principles applied to the given facts
    (d) provide the students with alternative ways in which their views could be written as a full answer.

Development

The development of this learning tool was supported by the university's Global Online Learning Development (GOLD) project. It was decided that a prototype product of the tool would first be developed, trialled and evaluated prior to its full scale development.

Stage 1 - Prototype development
The initial prototype stage involved creating a working multimedia tool that achieved two tasks. Using a given problem, the first task was to step the learner through a series of questions eliciting understanding of relevant legal concepts and the learner's view on how those concepts applied to the given problem. The second task was to incorporate the learner's answers to those questions into two differently formatted full written 'answers' to the initial problem, using templates provided by academic teaching staff and showing the learner's input in a bold italic font. Providing different written answers reaching the same (learner-created) conclusions but, with different order and formality of arguments, style of expression etc, acknowledged individuality in writing style and supported learners seeking to develop their own style. Macromedia Flash was selected to develop this tool as it allowed for flexibility in design and easy integration within the WebCT environment. Design considerations also included end user's computer skills and the speed and capacity of an average home computer.

Overall, students' feedback (below) from Stage 1 warranted the continued development of the tool, with extra facilities such as printing and saving for returning later to complete the task.

Stage 2
The student feedback obtained in Stage 1 raised a series of extra facilities within the writing tool that could further increase its usability and impact for students' learning, including the ability to save answers, greater choices in terms of the final reports available for viewing/printing and improved navigation between the questions within the question set. In Stage 2, the main visual structure from Stage 1 was maintained, and additional buttons were included to provide access to the extra facilities.

Stage 1 also revealed the need for the text within the learning tool's questions and answer style templates to be editable by the academic staff. The goal here was to enable teaching academics to create a fresh set of questions (based on a new problem) and also new templates. Multimedia staff developed a prototype learning object utilising Extensible Markup Language (XML) to store HyperText Markup Language (HTML) content created by academic staff (question sets and answer style templates). From that prototype, the team identified that XML could also be used for other sections, including the content areas introducing and concluding the exercise. The final result was a truly re-usable learning object tool, allowing for academic staff to freely make textual changes in a format that provided rich textual markup.

Learning object development must be guided by a common standard in order to enable sharing and reusing (Polsani, 2003). The use of XML also allowed the separation of structure, content and presentation and greatly increased the flexibility and reusability of the learning object.

Impact of the interactive Answer Styles tool

Academic staff
Using the XML tool and an HTML editor, the teaching academic succeeded in creating three different Answer Style exercises for students to use in semester 1, 2003. The question set for each exercise varied between 18 and 22 questions. The answer style templates were written by three academics, for conversion to HTML and uploading to the tool by one academic. Use of XML allowed for tags and instruction assisting the academic in this task. This ability to edit the content was a key element of the tool's success.

As a teaching resource, the Answers Styles tool was extremely useful as students prepared to answer the case study/problem style assessment tasks. Students were referred to these Answer Styles exercises and encouraged to attempt the exercises to experience the range of issues and depth of understanding required to address the problem fully. They were also encouraged to compare their answers to the question sets with other students, and to compare the different answer styles for strengths/ weaknesses. The tool provided additional interactive, but structured, learning opportunities for students outside the classroom.

Student Evaluation
A two-stage iterative development approach was adopted with an initial trial of a prototype in Stage 1 that allowed for change or adjustments prior to development for large scale use. Prototyping provided end users the benefit of a product with which to experiment (Belanger & Jordan, 2000), and stakeholders a product to critique. Importantly, the prototype was used to run formative evaluation (Moonen, 1996).

Stage 1
Student feedback on Stage 1 was received through an anonymous online survey and telephone interviews were conducted with 10% (n = 15) of off-campus learners. In general, students' comments were positive and indicated the tool stimulated interest and motivation and had an impact on their approach to learning.

> It gave you a better aspect of things. When you read from the textbook, you only get one aspect. Here you see things visually, gave it a better interaction and made it easier to understand.

> Good to see how things are progressing in this area because when I started as a DE [Distance Education] student, all I had was printed lecture notes.

> Made things much more interesting. It's always fun to play on the computer.

> Helpful, motivating, interesting. Makes it more fun to study.

Although the comments from the students were generally positive, there were requests for print buttons to be included, and for an ability to save and return to the task at a later time. Comments by the development team also suggested improvements to contrast and readability and clearer visibility of student input in the final answers. These minor changes were addressed in Stage 2 of the developmental process.

Stage 2

A summative evaluation of the entire unit included information from an anonymous online survey and focus group interviews with learners from one off-shore and one local campus (Malaysia and Peninsula).

Again, students' response to the writing tool was positive and confirmed the information gained in the formative evaluation.

> That one big question with twenty sub-questions, that was really helpful. That was like an essay style as it's supposed to be like in an exam and you work through the twenty questions. That was really good.

> It shows the marking system. It's very different but basically you can give your key points in any sort of way making sure you get your points across.

> Because I'm used to writing bullet points one at a time, this was a bit difficult to try to do. But after a while with help from the textbooks, it was really helpful. And it helped a lot in my exam. In the essay type answers, I mean.

Further development

The use of XML to store HTML text has allowed easy creation of further exercises using different question sets and different answer style templates. This makes the tool re-usable by academics in other disciplines who wish their students to create a written reports, essays or similar documents addressing a given question, problem or context. This interactive learning tool is potentially useful in all those units with interested academics needing only to change the content of the tool. This would which only call for HTML editing software and a little time to insert the new content in the right places within the XML files.

Already an information technology unit is using the tool to assist students writing project management reports. Further development of the tool is planned to allow collaborative report writing. The project has resulted in the development of a learning object that is not only re-usable but also multidisciplinary. Tools such as this are a meaningful and efficient way of building learning resources for an e-learning world.

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