Using a Web-Based, Longitudinal Approach for Teaching Accounting Ethics Education

Nava Subramaniam

Department of Accounting, Economics and Finance, Deakin University, Australia

Lisa McManus and Robyn Cameron

Department of Accounting, Finance and Economics, Griffith University, Australia

Abstract. *Purpose:* The purpose of this paper is to provide a description of an innovative web-based ethics module that was designed to integrate ethics education across four accounting courses over two years (second and third year courses) in a large Australian tertiary institution. *Approach:* The approach taken in designing the ethics web-based module was to base the foundations of the module on Rest's (1976) ethical behavior model with the adoption of a longitudinal approach to the coverage of financial reporting ethical issues. *Practical Implications:* The key objectives of the module are to improve students' awareness and sensitivity to accounting ethics, and to foster student learning in an interesting and stimulating manner, leading to in-depth understanding of accounting ethics. *Originality/value of paper:* This paper provides a description of an original web-based approach to delivering ethics education to accounting students across four university courses. Its value lies in not only the innovative and interactive ethics education approach but also in providing feedback from students and the profession.

Keywords: technical paper, web-based, on-line learning, accounting ethics education, learning technology.

1. Introduction

Teaching ethics remains a significant challenge to accounting educators. Over the years, the need for greater integration of ethics into the accounting curriculum has been strongly advocated by various parties including the National Commission on Fraudulent Financial Reporting (Treadway Commission 1987), the American Accounting Association (AAA) (Albrecht & Sack 2000), and PricewaterhouseCoopers (2003). Ethics education at the tertiary level is seen to be vital, as the accounting students in time will ultimately progress to function as accounting professionals facing various real world ethical conflicts and dilemmas. As argued by Armstrong *et al.* (2003, p. 1) "one can hardly pick up a business publication today without noting some reference to an accounting scandal... the sheer number of accounting abuses serves as *prima facie* evidence that something

more is needed in terms of accounting ethics". However, given that ethical issues in the business environment have grown to be quite complex, accounting educators are increasingly challenged in raising the awareness of such issues among students, and in developing their ability to analyse and make ethical decisions. In particular, the integration of ethics education across a broad spectrum of accounting courses, the communication of the principles of ethical behavior from a broader theoretical framework, and the delivery of accounting-related ethical concepts in an interesting and stimulating manner remain key pedagogical issues.

Traditionally, some of the commonly used tools for teaching ethics in accounting include ethics cases and problems within the textbook, professional codes of conduct, instructional videos and educational novels (Berger and Pratt 1998, Druyd 1998, Madison 2001). Technological and multimedia developments in recent years facilitate blended learning approaches where there are significant opportunities to adopt more interactive and visually stimulating teaching tools in the classrooms that are potentially more efficient and effective (Byrne 2002, Huang and Cappel 2005, Liu *et al.* 2003) and can provide for different student learning styles and interactive student learning (Osgerby 2012). Multimedia is the use of different and multiple forms of information content and information processing such as text, graphics, audio, video and interactivity. The use of multimedia for accounting ethics education is appropriate for several reasons. Firstly, it is argued that the cases relating to ethical conflict need to be interesting as well as realistic. As noted by Gunz and McCutcheon (1998, p. 1149), "students should be able to understand the dimensions of a dilemma without the addition of somewhat artificial '*angst*'". Also, rather than ethics education in accounting revolving around studying the code of professional conduct (Karr 2004, Monsour 2007) we contend that ethics education ought to be based on a larger philosophical framework and develop students' abilities to analyse and resolve ethical conflicts in a morally appropriate manner taking into consideration the broader social responsibilities within the profession. Further, as Gunz and McCutcheon (1998) argue, unless materials for teaching ethics are readily available, it is unlikely that academics will integrate ethics in their courses because research productivity is often perceived to be more important than teaching for academic career progression. Finally, universities are also increasingly pressured to reconsider their traditional pedagogy and teaching approaches against more stimulating web-based approaches to enhance student learning (Ahadiat and Mackie 1993, James and Subramaniam 2005, Jonassen *et al.* 1999).

In this paper, we describe the development of an innovative web-based, interactive module that was specifically designed to help develop the awareness of accounting-related ethical issues and the decision-making ability of accounting students. To facilitate both depth and breadth in the content of ethics education the module was adopted to engage student learning of ethics in four separate

accounting courses over a two-year period in a large Australian university. A benefit in using a series of four accounting courses is that it provides not only a consistent method of introducing ethics into the accounting curriculum, it also provides linkages of course content across courses within a program for students. Through the deliberate continuity of the web-based module through sequential courses, course convenors are also brought together with a common strand of teaching even though they are convening their own stand-alone courses. This approach engenders teamwork and knowledge sharing as different convenors come together to reflect upon and share their ideas and understandings of ethics education.

The theoretical basis for the design of the module was guided by Rest's (1976) Four Component Model of Moral Behavior whereby ethical behavior is seen as a function of an individual's level of ethical awareness, ability to reason, and motivation to choose and act ethically. As such, the module adopts a systematic integration of the theory of ethics with ethical decision-making models and other decision aids such as the accounting code of professional conduct for demonstrating ethical conflict resolution. Students were also given various examples of real-life and hypothetical accounting ethical dilemmas to develop their ethical sensitivity and reasoning. In addition, students were provided with interactive quizzes and examples that were visually stimulating and attractive so as to encourage and reinforce their conceptual understanding of ethical decision-making.

The remainder of the paper is structured as follows. In the next section, an overview of teaching ethics in accounting curriculum is undertaken, followed by a full description of the design and structure of the present web-based ethics module. A delineation of the innovative characteristics of the model and its limitations are then provided in the subsequent sections. Finally, student and professional accountant responses to the website are also presented and discussed.

2. Background—Teaching Ethics in Accounting Curriculum

2.1. Stand-Alone or Integrated Approach

To date, ethics education in an undergraduate business curriculum has been undertaken in two main ways. The first approach involves the undertaking of a separate and distinct course or subject on ethics which usually is a semester-long program covering the foundations of ethics theory and the introduction to various ethical decision-making models. Procardio-Foley and McLaughlin (2003) in their survey of 24 American colleges and universities found that 29 percent of the institutions required a distinct business ethics course of their accounting/business

majors and of the remainder institutions, 42 percent offered a business ethics course that a student may undertake as an elective. Likewise, a study by the Institute for Business Ethics in London found about 24 percent of the business students had chosen ethics as an elective (Cummins 1999).

A key advantage of the adoption of a distinct ethics course is that it provides a fairly comprehensive and intensive period of ethics study by covering the theoretical foundations of ethics, the application of decision making models and ethical resolution techniques. However, given the increasing pressure on meeting professional accreditation requirements, accounting undergraduate programmes have difficulty in incorporating a distinct semester-long ethics course, particularly as accounting students tend to aim for specialisations in other areas as well (e.g. finance, information systems or management). Further, as noted by Procario-Foley and McLaughlin (2003, p. 281)

It is well known, though, that accounting professors and others in the business disciplines will routinely argue that there is no room for flexibility in their syllabi; the argument is not against ethics education in courses but a statement about the content-based nature of courses that must build upon each other sequentially. The real and difficult problem of finding time in an accounting course....to account for ethics must be acknowledged.

The second approach to teaching ethics is to incorporate or integrate ethics throughout the curriculum for accounting majors. For instance, for a given course, students are generally introduced to specific issues within a chapter of a textbook, or at the end of the chapter itself, and they are required to discuss these questions as part of their classroom activity (i.e. tutorials). This approach provides a clearer linkage of ethical issues with respect to a given accounting topic within the course structure. It also tries to avoid the problem of time by integrating and highlighting ethical issues specific to a given individual course as part of the course's teaching schedule. However, it is contended that this method tends to use a piece-meal approach to teaching ethics by highlighting solutions to various ethical conflicts rather than providing students a deeper theoretical understanding of ethical decision-making and the moral responsibilities of accountants as professionals. Madison and Schmidt (2006) however, report based on 122 accounting administrators (chairs) of the largest North American accountancy programs that nearly 70 percent of both AACSB, as well as non-AACSB accredited institutions, felt that ethics should be integrated throughout the curriculum for accountancy majors, as opposed to the remainder who favoured a stand-alone course.

2.2. Approaches to Content Delivery

Over the years, several methods of teaching or delivery approaches have been advocated for teaching ethics. Thomas (2004) for instance provides a review of the approaches and tools used in teaching ethics that include textbooks, cases of

unethical conduct, speeches and other web-linked resources available for use in an ethics course. He also discusses the availability of resources across a broad range of subject matter such as financial accounting, auditing, fraud, corporate governance, independence, management accounting, information systems and taxation. While early studies tended to debate on the use of role-playing and case study methods (Beets 1993, McNair and Milam 1993), more recent studies address the use of computer-aided delivery approaches.

For example, Smith *et al.* (2005) used a computerised PowerPoint slide show to teach ethics in ten upper-level business classes. According to Smith *et al.* (2005), ethics is an appropriate topic for a multimedia application for at least two reasons. First, even though recent corporate scandals have highlighted the importance of ethics, there is limited coverage of ethics topics in accounting textbooks. Second, “ethics lends itself to multimedia as there are many images (and music) that stimulate consideration of ethical issues” (Smith *et al.* 2005, p. 157). The study itself entailed 276 student participants in a pre-presentation and post-presentation survey. The results not only suggest that students’ attitudes towards the presentation slides were positive, but that their attitudes towards ethics in general had improved. For example, student responses in the post presentation survey indicated a significantly higher value for a presentation on ethics and there was also stronger agreement on the view that “when individuals lack ethics, that hurts society at large” when compared with student responses in the pre-presentation survey.

More recently, O’Leary (2009) conducted a pre and post-instructional study utilising 155 auditing students for whom the median age was 19-21 years and representative of Generation Y. Students were presented with five accounting-related ethical scenarios and then subjected to three different methods of ethical instruction, face-to-face instruction, interactive computer based education ethics-training case study and a group assignment. The results indicate that overall ethical instruction has a positive effect on ethical decision-making by accounting students.

In the following section, we provide a discussion of the conceptual framework guiding the development of the web-based module for accounting ethics education and a detailed explanation of the structure of the module and its implementation.

3. The “Web-Based Ethics Module”

3.1. Conceptual Foundation

According to Rest (1979), an individual is able to demonstrate ethical behavior only if he or she is able to first recognise that an ethical conflict or issue exists in

a given situation and upon this recognition the individual needs to be able to analyse the various implications of the available choices of action. Further, having an understanding of the choices of action, it is argued that the individual then ought to be motivated to act in the most ethical manner and finally to behave according to his or her intentions. These basic principles are based on Rest's (1976) Four Component Model of Moral Behavior, where the key dimensions include:

- Ethical sensitivity (identifying the issues or conflicts).
- Ethical reasoning (rationalising the situation).
- Ethical motivation (desire to act ethically).
- Ethical behavior (acting or carrying through).

Accounting educators can play a key role in enhancing the first three components, with the final outcome i.e., an accountant's actual ethical behavior remaining a function of his or her will. To begin with, a critical step for the accounting educator is to help students spot what are the ethical issues. For example, ethical sensitivity can be enhanced in accounting courses by discussing the issues germane to the technical issues being covered. For example, discussion of earnings management behavior can be undertaken as an ethical issue in an accounting theory course based on high profile real-life examples.

In relation to the second component of Rest's model, ethical reasoning, accounting educators may facilitate the development of students' ethical reasoning skills in several ways including building their theoretical understanding of the philosophy of ethics and promoting critical thinking on issues of morality and justice. Further, accounting educators may also facilitate developing students' analytical ability for identifying and diagnosing situations of ethical conflict. It is assumed that by promoting ethical reasoning skills an individual is more likely to cognitively evaluate and judge the implications of one's actions.

The third factor in Rest's model is ethical motivation i.e. the desire to act ethically. It is not a cognitive skill but one that relates to a student's intentions to act morally. Accounting educators can still play an important role in motivating students to act ethically i.e. "to do the right thing". It is argued that developing a sense of professionalism and enhancing pride in one's profession are powerful motivating factors. Apostolou and Apostolou (1997) for instance argue that one way to enhance pride in the profession is to tell stories about "accounting heroes". For instance, examples of heroes may include the Time Magazine's "Persons of the Year" (as per December 30 2002 issue): Cynthia Cooper of WorldCom, Coleen Rowley of the FBI and Sherron Watkins of Enron. Two of them were accountants. Exhortation can be a powerful tool for increasing students' desire to

act ethically and accounting educators thus may encourage their students to aspire to always to act in the public interest.

Overall, Rest's (1979) conceptual framework suggests that a multi-theory, multi-dimensional approach is likely to be more effective in communicating and enhancing student learning of the ways in which ethical issues may be framed and analysed. Thus, in this project, we adopt multiple tools to promote the importance of ethics to accounting students and to provide them with a comprehensive set of learning features. We developed a computerised, web-based module, as well as used face-to-face lecture and tutorial time to expose students to a variety of ethical theories, decision-making frameworks and practice application problems to enhance their understanding and ability to make ethical decisions from a financial reporting context. The module was then adopted in the following four financial reporting-related courses – financial accounting, company accounting, accounting theory and auditing.

3.2. Structure of the Web-Based Module

The web-based ethics teaching resource developed for our project was a computerised, interactive module. The module comprised the following five main sections:

1. **Introduction to Ethics:** This section provided an introduction to the concept of “business ethics” and highlighted the importance of ethics to accounting professionals including the use of numerous examples on common ethical issues encountered by accountants.
2. **Ethical theories:** The aim of this section was to introduce the theoretical foundations of ethics in general. Specifically, the students were provided the following three main approaches to ethics – teleological, deontological and virtues. Accounting examples were used in applying the various theories and interpreting the ethical rationale from each type of theoretical perspective.
3. **Ethical Decision Models:** Four types of ethical decision-making models were chosen for discussion – Rion, Laura Nash, Langenderfer and Rockness, and the American Accounting Association (AAA) model.
4. **Ethical Scenarios:** For each of the four courses, various ethical problems and case scenarios specific to the subject matter of the course were provided.

5. Code of Professional Conduct: We also made available the Professional Code of Conduct as promulgated by the two large Australian accounting bodies i.e. Certified Practising Accountants Australia (CPA Australia) and the Institute of Chartered Accountants.

Please see the Appendix A which depicts the opening page of the web module and how clicking on different icons progressively takes the student from basic to more advanced material. For example, after opening the “Main Menu” page (Appendix A1) and clicking on Part A, an introduction to the concept of ethics is provided (Appendix A2), followed by more sub-sections on “what is ethics”, “why study ethics”, “why is ethics important for accountants” and “can one accountant make a difference”. When a student thereon selects the sub-section titled “can one accountant make a difference”, the continuing page (Appendix A3) as shown in the Appendix is displayed.

Further, a separate section on additional resources and references was also provided. This involved links to related websites of professional accounting bodies and related regulatory organisations and media releases such as the websites of IFAC, CPA Australia, Australian Securities and Investment Commission, PriceWaterhouse Coopers, etc.

3.3. Institutional and Programme Background

The current project was undertaken in a large Australian university and involved students enrolled in an undergraduate business degree (i.e., Bachelor of Business). The students participating in the project were predominantly accounting majors who were undertaking second and third year financial reporting courses.¹ The ethical content ranged from basic to more advanced financial reporting issues, and a multi-course perspective was embraced whereby the module was adopted in the following four financial reporting-related courses within the accounting programme:

1. Financial Accounting (an introductory financial accounting course; second-year level)
2. Company Accounting (an intermediate financial accounting course; second year level)
3. Accounting Theory (an advanced financial reporting course; third year level)

1. Tertiary undergraduate business/accounting programmes in Australia usually span a three-year period, with two 13-week long semesters in each year. Students generally undertake 24 courses or subjects in the programme i.e. four courses per semester.

4. Auditing (an introductory auditing course; third year level)

On average, 110 students were enrolled in each course. The ethics module was introduced over four semesters in a two-year period. The module was first introduced in Financial Accounting in semester one of Year 1 of the project, followed by its re-introduction with additional material in the course in Company Accounting in semester two. Likewise, in Year 2 of the project, the module was utilised with further additional material progressing into Accounting Theory in semester one, and in Auditing in semester two as the fourth and final course in the project. Table 1 presents an overview of the project's framework including content coverage in each of the four courses.

Table 1: Overview of web-module content covered in the four accounting courses

	Introduction to Ethics	Ethical theories	Ethical Decision Model	Ethical Scenarios	Professional Code of Conduct
Financial Accounting	Basic concepts including definition	Introduction and Teleological perspective	Rion model	Basic financial measurement issues e.g. asset write-offs, depreciation allowances, etc.	Introduction to basic principles e.g. integrity, public interest, objectivity, confidentiality, etc.
Company Accounting	Advanced concepts with real-life commentaries	Deontology perspective	Laura Nash model	Company disclosure issues	More in-depth discussion of the basic principles
Accounting Theory	Moral reasoning and development theories	Virtue Ethics	Langenderfer and Rockness model	Earnings management and related accounting theory issues	Additional discussion on public interest
Auditing	Introduction to some empirical research on students ethical decision-making	Review of all three preceding perspectives	AAA model	Auditor independence and objectivity issues	Significant discussion on professional independence and objectivity

3.4. The Development Team

The project was developed and administered by a team of four senior academics who were also course convenors of each of the four related courses. As such, the convenors of the course were familiar with the design and content of the module.

A project advisory group was also formed to provide guidance and feedback on the design and content of the module. The advisory group comprised three accounting practitioners who were members of CPA Australia and a senior academic who specialised in teaching business ethics. A private multi-media firm that specialised in developing websites developed the computer graphics and interactive features.

3.5. Implementation Strategy

The overall strategy adopted in implementing the web-based ethical model was to progressively include more detailed and advanced issues in the various courses, starting with the introduction of more basic concepts of ethics in the first two second-year level financial reporting courses (i.e. Financial Accounting and Company Accounting). The module was made available to the students on the course website and as such only students formally enrolled in a course was provided access to the module. In terms of delivery of the material on a face-to-face basis, we introduced the respective ethics-related course material in a two-hour lecture followed by discussion of selected case problems in the tutorial. This delivery mode was adopted in each of the four courses. In this way, we aimed to first highlight the key financial reporting issues relevant to a given course in the lecture and thereon guide the student to the module where there were many opportunities for them to learn through various interactive questions. For example, in one of the courses, students were given a short case scenario of a situation where management was adopting an inappropriate revenue recognition accounting treatment. Students were then able to click on one of several multiple-choice answers in terms of the actions management could take. A system-generated response was then provided as to whether the management's actions were ethically appropriate or not, and if not – why not. Students were also encouraged to undertake additional self-study of material provided on the web-based module not covered in classes. Table 2 presents the overall structure of the web-based module and the linkages to Rest's (1976) model. Panel A displays how the components of the Web-based Module align with Rest's (1976) Ethical Behaviour Model. Panels B, C, D and E then display how the material of each individual course fits into the overall Web-Based Module.

Table 2: Linkage between the Web-Based Ethics Module and Rest's (1976) Ethical Behavior Model

Panel A: Alignment of the Web-based Module and Rest's (1976) Ethical Behavior Model	
<i>Rest's (1976) Ethical Behavior Model</i>	<i>Web-Based Module</i>
Ethical sensitivity	Introduction to Ethics Ethical Theories Code of Professional Conduct
Ethical reasoning	Ethical Decision Models
Ethical motivation	
Ethical behavior	Ethical Scenarios
Panel B: Financial Accounting	
<i>Web-based Module</i>	<i>Financial Accounting Course Requirements</i>
Introduction to Ethics	1. Initially the question of "what is ethics" was considered. 2. Following on, the question of "why study ethics?"
Ethical Theories	3. Students were introduced to the existence and role of ethical theories, namely as teleological ethics, deontology ethics and virtue ethics.
Code of Professional Conduct	4. The importance of ethics to accounting professionals was highlighted by an introduction to the Code of Professional Conduct.
Ethical Decision Models	5. An introduction to an ethical decision-making model by Rion was provided.
Ethical Scenarios	6. Students were then provided an ethical dilemma and were shown how to apply the five steps of the Rion ethical decision-making model. 7. A short video clip was also shown to students that discussed the "One-Tel" Australian case.
Panel C: Company Accounting	
<i>Web-based Module</i>	<i>Company Accounting Course Requirements</i>
Building on key ethical concepts	1. Additional examples of why business ethics is important using real-life examples.
Ethical Theories	2. Consideration of how a decision could differ using a deontological perspective versus a teleological approach.
Code of Professional Conduct	3. Consideration of how individual accountants could make an ethical stance.
Ethical Decision Models	4. An introduction to the Laura Nash ethical decision-making model was provided.
Ethical Scenarios	5. Real-life cases as reported on the Australian Securities Commission and Investment website used as examples.
Panel D: Accounting Theory	
<i>Web-based Module</i>	<i>Accounting Theory Course Requirements</i>
Building on key ethical concepts	1. Extension of how different ethical theories and reasoning lead to differing ethical decisions.
Ethical Theories	2. Students were introduced to the Langenderfer and Rockness ethical decision-making model.
Code of Professional Conduct	3. In-depth discussion of the Fundamental Principles of Professional Conduct.
Ethical Decision Models	4. An introduction to an ethical decision-making model by Langenderfer and Rockness was provided.
Ethical Scenarios	5. Students were given two ethical dilemmas and asked to apply the Langenderfer and Rockness ethical decision-making model to each scenario.
Panel E: Auditing	
<i>Web-based Module</i>	<i>Auditing Course Requirements</i>
Building on key ethical concepts	1. Ethical issues of auditor independence and professional obligations were focused on.
Ethical Theories	2. Ethical theories covered in the prior courses were reviewed.
Code of Professional Conduct	3. Access to the complete Code was provided to students.
Ethical Decision Models	4. An introduction to the American Accounting Association's (AAA) decision-making model was provided.
Ethical Scenarios	5. Students were given two audit-related scenarios and asked to apply the AAA ethical decision-making model to each scenario. 6. Discussion of empirical evidence on ethical decision-making behaviour

1. Financial Accounting

Financial Accounting is the first course where the module was introduced to students. This course is a basic financial accounting course undertaken by second-year students in the first semester of study. The topics relevant to the course include reporting issues faced by business structures other than sole proprietors; accounting treatments for partnerships; company formation, share capital and debt securities; acquisition of assets (including companies); leases; company income tax and cash flows. The ethics web module covered various key ethical concepts as follows:

1. Initially the question of “what is ethics?” was considered. A definition of ethics was provided and discussed in depth. Ethics was defined as originating from the Greek word “ethos” which means character and was defined as having four basic meanings: (1) the discipline dealing with what is good and what is bad and with moral duty and obligation; (2) a set of moral principles or values; (3) a theory or system of moral values; and (4) the principles of conduct governing an individual or group. Added discussion was undertaken on how the discipline of ethics seeks to establish rules by which the quality of one’s actions can be judged;
2. Following on, the question of “why study ethics?” was addressed, and the five points as shown below and as proposed by Duska and Duska (2003) were discussed:
 - The study of ethics can help a person sort out complex issues by seeing what principles operate in those cases;
 - The study of ethics can provide insights into how to adjudicate between conflicting principles and show why certain courses of action are more desirable than others;
 - The study of ethics can subject a person’s beliefs or values to ethical analysis and may show that some inadequate beliefs or values are held;
 - The study of ethics can give an understanding as to whether and why our opinions are worth holding on to; and,
 - The study of ethics can help develop the skill of determining what should be done and the understanding of why it should be done.
3. Students were introduced to the existence and role of ethical theories, namely as teleological ethics, deontology ethics and virtue ethics. The

theoretical underpinnings of teleological ethics were discussed in depth, focusing on how people could make moral decisions using the consequences of that decision as the yardstick e.g. choosing that which has minimal negative effects;

4. The importance of ethics to accounting professionals was highlighted by an introduction to the Code of Professional Conduct;
5. An introduction to an ethical decision-making model by Rion was provided. The basic components of the Rion model were elaborated upon, by examining each of the five steps of the model:
 - i. Why is this bothering me?
 - ii. Who else matters?
 - iii. Is it my problem?
 - iv. What do others think?
 - v. Am I being true to myself?
6. Students were then provided an ethical dilemma and were shown how to apply the five steps of the Rion ethical decision-making model. The ethical dilemma concerned an Australian Taxation Office taxation assessment error that was unlikely to be discovered and had resulted in an ongoing monetary gain to a client. A second ethical scenario involving a cash flow misstatement for managerial bonus gain was also posed in the lecture that was then discussed in the following week's tutorial; and,
7. A short video clip was also shown to students that discussed the "One-Tel" Australian case. This case involved the country's fourth largest telecommunications company where the Directors were charged of fraudulent behavior.

2. Company Accounting

Company Accounting formed the second accounting course for the project where the module was used. The topics of the course involve contemporary company accounting issues and information disclosure such as the preparation and consolidation of financial statements at various junctures in the life cycle of a group of related entities. The course describes and illustrates accounting and reporting issues from inception and acquisition to trading and termination. The

web-based module was adopted in this course with the view of building on key ethical concepts and issues covered in Financial Accounting as follows:

1. A summarised overview of the materials in the first section was undertaken;
2. Additional examples as to why “business ethics is important” were discussed based on more real-life examples such as Enron and World-Com. For example, newspaper articles and commentaries were used to generate greater awareness of real life consequences of unethical behavior;
3. An expanded discussion of the deontological perspective (in relation to examining the nature of ethical theory) was undertaken. It was made clear that ethical decisions based on deontology perspective related to moral obligations and a sense of what is right, just or fair. Once again the same hypothetical situation as adopted in Financial Accounting was used to show how a decision could differ if a deontological perspective is undertaken as opposed to a teleological approach;
4. Issues such as “Can one accountant make a difference” were discussed in relation to how an individual accountant could make an ethical stance and famous quotes and sayings were used as examples. This discussion aimed to reinforce and motivate students’ beliefs of the importance of ethical behavior;
5. Students were then introduced to the Laura Nash model where the following steps were to be considered in decision-making:
 - Have you defined the problem accurately?
 - How would you define the problem if you stood on the other side of the fence?
 - How did this situation occur in the first place?
 - To whom and to what do you give your loyalty as a person and as a member of the corporation?
 - What is your intention in making this decision?
 - How does this intention compare with the probable results?

- Whom could your decision or action injure?
 - Can you discuss the problem with the affected parties before you make your decision?
 - Are you confident that your position will be as valid over a long period of time as it seems now?
 - Could you disclose without qualm your decision or action to your boss, your CEO, the board of directors, your family, or society as a whole?
 - What is the symbolic potential of your action if understood? If misunderstood?
 - The appropriate course of action is the course that protects the interests of all parties,
 - Under what conditions would you allow exceptions to your stand?
6. Further real-life cases as reported on the Australian Securities Commission and Investment (ASIC) website were used as examples to discuss disclosure improprieties and their regulatory consequences.

3. Accounting Theory

Accounting Theory is the third course of the project and is a third year level course taught in semester one. This course critically examines the conceptual frameworks for explaining the demand for accounting, the development of the accounting profession and its relevance to society and empirical research on accounting measurement and valuation. In Accounting Theory the web-based module addressed the following:

1. A summarised overview of the materials in the first two previous sections was undertaken;
2. The discussion of different ethical theories and reasonings leading to different ethical decisions was extended by inclusion of the character-based ethical theory of virtue ethics (i.e. where actions were to be in accordance with virtues);
3. A brief discussion of the moral development theories including Rest's model was undertaken. This provided students a wider perspective on the development of ethical decision-making behavior;

4. Building on students' exposure to ethical decision-making models, an introduction to the Langenderfer and Rockness ethical decision-making model was provided. Students were exposed to the basic components of the Langenderfer and Rockness model which are as follows:

Applying the Langenderfer and Rockness Model

- i. What are the facts of the case?
 - ii. What are the ethical issues in the case?
 - iii. What are the norms, principles and values related to the case?
 - iv. What are the alternative courses of action?
 - v. What is the best course of action that is consistent with the norms, principles and values identified in Step 3?
 - vi. What are the consequences of each possible course of action?
 - vii. What is the decision?
5. Students were given two different accounting-related scenarios on the web-site and were asked to apply the Langenderfer and Rockness ethical decision-making model to analyse each of the given situations. The first case required students to choose an appropriate action/ethical decision where the issue is the use of accounting estimates in the form of provisions for earnings management. The second case required students to apply the Langenderfer and Rockness Model where the issue pertained to claiming fraudulent expenses by an employee; and,
 6. Students undertook further in-depth discussion of the Code of Professional Conduct by way of the Fundamental Principles of Professional Conduct applicable to all members, which include the principles of:
 - The Public Interest
 - Integrity
 - Objectivity
 - Independence

- Confidentiality
- Technical & Professional Standards
- Competence and Due Care
- Ethical Behavior

4. Auditing

Auditing is the fourth and final course of this project. Within the accounting programme, Auditing is also usually the final course undertaken by third-year accounting students. The course topics mainly cover the basic theoretical concepts and methodologies of external auditing and assurance services, and some related issues such as internal auditing and public sector assurance procedures. In Auditing, the following issues were further included for discussion in relation to the course within the module:

1. A summarised overview of the materials in the first three sections were undertaken i.e. importance of ethics for accountants and ethical theories. In particular, ethical issues relating to auditor independence and the professional obligations of auditors were the focal discussion topics in relation to importance of ethics;
2. A more detailed discussion of the professional code of conduct was also taken and students had access to the full version of the Code. Particular emphasis was placed on the Code's guidelines as to professional objectivity and auditor independence. More specifically, considerable discussion was undertaken on issues relating to auditors' professional fee setting, non-audit services, auditor relationship with audit committees, etc.;
3. Under the ethical decision models section, an introduction to the American Accounting Association's (AAA) ethical decision-making model was provided, which involved:
 - Determining the facts.
 - Defining the ethical issue.
 - Identifying the major principles, rules and values.
 - Specifying the alternatives.

- Comparing values and alternatives.
- Assessing the consequences.
- Making a decision.

Students were given two different audit-related scenarios on the web-based module and were asked to adopt the AAA ethical decision-making model to analyse the situations;

4. In the ethical scenarios section, several case scenarios on the ability to choose an appropriate action/ethical decision in relation to auditor objectivity, audit fees and whistle blowing were also provided as additional material for students to review;
5. Web-links were used to access material or news items relating to a famous Australian case, HIH Insurance. The demise of HIH was the largest corporate failure in Australia's history. HIH liquidators estimated that the company collapsed with losses totalling up to \$5.3 billion. The former director Rodney Adler was sentenced to jail for 4 1/2 years in 2005 for criminal conduct including disseminating false information; and,
6. Empirical evidence on ethical decision-making behavior was also discussed using Thorne's (2001) article.

Please Note: interactive multiple-choice questions and colourful graphics were adopted throughout the web-module.

4. Innovative Characteristics of the Web-Based Module

The web-based module of our project is thus seen as distinct and innovative in at least three major aspects. First, the web-based module is seen to offer a more comprehensive and integrated framework linking ethical theories, decision models, the code of professional conduct and real-world cases. As such, a student not only becomes more exposed to potential ethical conflict situations, but is also equipped with tools for analysing an ethical situation and choosing an appropriate action. Thus, unlike a more traditional teaching approach where students may gain material in a piece-meal fashion, often largely through textbook guided ethical problems, the present module uses a more holistic approach based on Rest's (1976) framework of moral behavior. In doing so, the module is designed to enhance student awareness of the theoretical underpinnings in the resolution of

ethical conflicts, as well as adopt a variety of analytical tools to rationalise the situation in a more seamless and co-ordinated manner.

Second, the use of a web-based, computerised approach is also seen to provide an interactive and flexible delivery of ethics education. By using visually stimulating images and format including interactive multiple choice questions and video presentations, it would be easier to capture the students' interest in learning the material (Bay and Felton 2012, Keegan 2007). As argued by Haywood *et al.* (2004, 86), "coverage of ethics can often be dry and textbook exercises can fail to grab the students' attention". In addition, links to related websites where up-to-date information were available was also used for providing real-life commentaries and discussion.

Third, the longitudinal approach undertaken in the adoption of the module over four separate accounting courses within an accounting programme is also seen as an important development in facilitating formative and progressive student learning. By systematically adding new and advanced material as students progress from basic to more advanced accounting courses (second to third year courses), the design of this module encourages depth and breadth in the content of ethics education. Furthermore, this approach also reinforces student understanding over time. Empirical evidence on the extent of ethics coverage in accounting courses suggest that accounting ethics education needs to expand in both the length of coverage and the methodologies used in presenting and analysing ethical conflicts (Madison 2001, Thorne 2001, Gunz and McCutcheon 1998). For instance, Madison's (2001) survey of colleges and universities in Ohio, United States found that on average 9.5 hours of instruction was provided over a four-year business programme, and he questions the sufficiency of the curriculum time length to achieve ethics awareness. While the face-to-face teaching through this web-module involves approximately 12 hours, additional case scenarios and links to related websites encourage longer periods of self-study in an interesting and stimulating manner (Rich, Cherubini, and Zhu 2012, Wood and Ashfield 2008).

5. Feedback and Study Findings

Students provided both verbal and written feedback. Verbal feedback was received by the lecturers in both formal classes and at informal settings such as student events, while written feedback was received through the formal semester-end course evaluation system. The following comments are representative of the feedback received from students:

Found the ethics module to be really useful in understanding the different approaches to ethics theory and (ethical) decision-making modules.

The website facilitated the textbook and lectures. More detail and set out in a user friendly manner.

I found that it (the website) really helped to develop my understanding of why ethics is so important in business and why we need to study it.

It was really good how it has different parts that I can look at outside lecture time.

The ethics module was different to any other way of teaching I've experienced at uni so far. I liked how you can click on different sections on the page and it takes you to ethics theories or scenarios. I hope to use it in the future in other courses.

We also derived feedback from two accounting practitioners who were invited to provide comments on the project.² The following was written feedback (through email) from one of the practitioners:

As members of a profession, Accountants and Auditors will face various ethical dilemmas throughout their career. The choices, directions and decisions that the individual takes will define them as a professional and define the collective as a profession. I believe that in finding solutions to ethical dilemmas we draw from our past experiences of "normally" acceptable behavior. As a profession it is important to instil to all members and potential members a set of like values and principles.

The website will be of great value to students in that it gives practical guidance to ethical professional behavior and judgement. The practical real life scenarios are invaluable to the study of the theories and should assist students in the ethical decision making throughout their career".

Furthermore, in a recent study that examined improvements in students' ethical decision making due to the web-based ethics module, McManus, Subramaniam and James (2012) considered whether accounting students' propensity to whistle-blow differed between those instructed with this module and those exposed to a traditional in-class textbook focused approach. It was found that when presented with a whistle-blowing situation, students exposed to the web-based module were more likely to whistle-blow, and hence make a more ethical decision, than those students exposed to a traditional in-class textbook ethics instruction approach. While this study only examined one semester of ethics instruction, it could be suggested that greater improvements in ethical decision-making may occur over longer exposure to the web-based module.

2. The first practitioner was a self-employed practitioner who was actively involved in CPA Australia and also a regular speaker at professional seminars. He was also actively involved in the local chapter of the accounting association dealing with ethical and other professional compliance issues. The second practitioner was a senior manager in a large accounting practice with experience working in a Big-4 firm. She was involved in some tutorial teaching at the University for a brief period and was much interested in accounting curricula and graduate attributes.

6. Conclusion

Accounting academics have a professional obligation to enhance the quality of accounting graduates that includes engendering the formation of ethical attitudes and moral behavior. While resource constraints both in terms of time and financial support pose as key challenges for accounting academics to successfully integrate ethics in the curriculum, technology-based tools have the potential to help ease this burden. This paper provides an interesting and innovative web-based approach to delivering accounting ethics education. Further, the paper also delineates the use of a longitudinal, multi-course approach for enhancing student understanding of the various ethical dilemmas in financial reporting. The module, guided by Rest's (1976) ethical behavior model, utilised materials such as real-life cases and ethical theories to inform and motivate accounting students on what was "*acceptable*" and what was "*unacceptable*" behavior for an accounting professional. In addition, a variety of ethical decision-making models and the code of professional conduct were used to aid the ethical decision-making by the students. The key strengths of the current module include its interactive and web-based features that provide visually attractive material for learning many of the accounting ethical concepts, as well as the adoption of an integrated framework of ethics theory and models on a longitudinal basis that promote more in-depth learning and understanding. In addition, due to the modularity of the ethics module, instructors are able to split the material and only make the selected parts available. Furthermore, the current module is adaptable to other jurisdictions by using real-life cases as reported by the jurisdiction's regulators.

The module however entails several limitations. First, the initial investment in terms of financial cost and the time of academics to tailor build an integrated computerised module could deter the adoption of such an approach. In addition, any approach using a multi-course design will require buy-in from several course convenors. Thus, the development of such a module may require added incentives from the department level such as through teaching relief to encourage academics' participation. Further, the module dealt solely with financial reporting-related issues and courses. Future work in the area may expand on the application of such a module to a wider area of accounting e.g. management accounting and control issues, as well as improve on the design of the module itself e.g. the adoption of more sophisticated games-based interactive cases that encourage group work.

In closing, technological development provides many opportunities for ethics education to be interesting, stimulating and effective. It is vital that academics make the time and commitment to prepare meaningful course material and accounting departments need to support such initiatives through appropriate resources. There is no doubt that ethics coverage in the classroom is not just the right thing to do but is a challenge that clearly needs to be met.

References:

- Ahadiat, N. & Mackie, J. J. (1993), "Ethics Education in Accounting: An Investigation of the Importance of Ethics as a Factor in the Recruiting Decisions of Public Accounting Firms", *Journal of Accounting Education*, 11(2): pp. 243-257.
- Albrecht, W.S. & Sack, R.J. (2000), *Accounting Education: Charting the Course through a Perilous Future*, Sarasota, Fla: American Accounting Association.
- American Institute of Certified Public Accountants (1987), *The Report of the National Commission on Fraudulent Financial Reporting*, The Treadway Commission. New York, NY: AICPA.
- American Institute of Certified Public Accountants (2005), *The Supply of Accounting Graduates and the Demand for Public accounting Recruits – 2005 For Academic Year 2003 - 2004*, New York, NY: AICPA.
- Apostolou, B. & Apostolou, N. (1997), "Heroes as a Context for Teaching Ethics", *Journal of Education for Business*, 73(2): pp. 121-125.
- Armstrong, M. B., Ketz, J. E. & Owsen, D. (2003), "Ethics Education in Accounting: Moving Toward Ethical Motivation and Ethical Behavior", *Journal of Accounting Education*, 21(1): pp. 1-16.
- Bay, D. & Felton, S. (2012), "Using Popular Film as a Teaching Resource in Accounting Courses", *American Journal of Business Education*, 5(2): pp. 159-172.
- Beets, S.D. (1993), "Using Role-Playing Technique In Accounting Ethics Education", *The Accounting Educators' Journal*, 5(2): pp. 46.
- Byrne, R. (2002), "Web-Based Learning versus Traditional Management Development Methods", *Singapore Management Review*, 24(2): pp. 59-68.
- Cummins, J. (1999), "The Teaching of Business Ethics at Undergraduate, Postgraduate and Professional Levels in the UK : A Survey and Report", *Institute of Business Ethics*, London.
- Earley, C. E. & Kelly, P. T. (2004), "A Note on Ethics Educational Interventions in an Undergraduate Auditing Course: Is There an "Enron Effect"? *Issues in Accounting Education*, 19(1): pp. 53-71.
- Gunz, S. & McCutcheon, J. (1998), "Are Academics Committed to Accounting Ethics Education?" *Journal of Business Ethics*, 17(11): pp. 1145-1154.
- Haywood, M. E., McMullen, D. A., & Wygal, D. E. (2004), "Using Games to Enhance Student Understanding of Professional and Ethical Responsibilities", *Issues in Accounting Education*, 19(1): pp. 85-99.
- Huang, Z. & Cappel, J. J. (2005), "Assessment of a Web-Based Learning Game in an Information Systems Course", *The Journal of Computer Information Systems*, 45(4): pp. 42-49.
- James, W. & Subramaniam, N. (2005), "Course Websites, Computer Proficiency and Need for Achievement: Implications for MBA Student", *Australian Journal of Accounting Education*, 1(1): pp. 51-72.
- Jonassen, D. H., Peck, K. L., & Wilson, B. G. (1999), *Learning with Technology. A Constructivist Perspective*, Upper Saddle River, New Jersey: Merrill.
- Keegan, S. N. (2007), "Importance of Visual Images in Lectures: Case Study on Tourism Management Studies", *Journal of Hospitality, Leisure, Sport and Tourism Education*, 6(1): pp. 58-65.
- Langenderfer, H. Q. & Rockness, J. (1990), *Ethics in Accounting Curriculum: Cases and Readings*, American Accounting Association, Sarasota, Florida.
- Liu, Y., Lin, F., & Wang, X. (2003), "Education Practice and Analysing Behavior of Students in a Web-Based Learning Environment: An Exploratory Study from China", *Online Information Review*, 27(2): pp. 110-119.
- Madison, R. L. (2001), "To What Extent Is Ethics Taught in the Accounting Programs of Ohio's Colleges and Universities?" *Ohio CPA Journal*, 60(2): pp. 39-42.
- Madison, R. L. & Schimdt, J. J. (2006), "Survey of Time Devoted to Ethics in Accountancy Programs in North American Colleges and Universities", *Issues in Accounting Education*, 21(2): pp. 99-109.
- McManus, L., Subramaniam, N., & James, W. (2012), "A Comparative Study of the Effect of Web-Based Versus In-Class Textbook Ethics Instruction on Accounting Students' Propensity to Whistle-Blow", *Journal of Education for Business*, 8(6): pp. 134-159.

- Monsour, E. (2007), "Teaching Ethics to Accounting Majors", *The Tax Advisor*, May, 1-5.
- O'Leary, C. (2009), "An Empirical Analysis of the Positive Impact of Ethics Teaching on Accounting Students", *Accounting Education: An International Journal*, 18(4-5): pp. 505-520.
- Osgerby, J. (2012), "Students' Perceptions of the Introduction of a Blended Learning Environment: An Exploratory Case Study", *Accounting Education: An International Journal*, pp. 1-15.
- Procario-Foley, E. G. & McLaughlin, M. T. (2003), "A Propaedeutic for a Framework: Fostering Ethical Awareness in Undergraduate Business Students", *Teaching Business Ethics*, 7(3): pp. 279-301.
- Rest, J. (1976), "New Approaches in the Assessment of Moral Judgment". In *Moral Development and Behavior: Theory, Research, and Social Issues*, T. Lickona (ed.), New York: Holt, Rinehart & Winston.
- Rest, J. (1979), *Development in Judging Moral Issues*, Minneapolis, MN: University of Minnesota Press.
- Rich, K. T., Cherubini, J. C., & Zhu, Z. (2012), "IFRS in Introductory Financial Accounting: An Integrated Comparison-Based Approach". In Feldman, D. and Rupert, T.J. (eds.), *Advances in Accounting Education: Teaching and Curriculum Innovations*, USA: Emerald Group Publishing, 13, 349-381.
- Rion, M. (1990), *The Responsible Manager, Practical Strategies for Ethical Decision Making*, Harper and Row, San Francisco.
- Smith, L. M., Smith, K. T., & Mulig, E. V. (2005), "Application and Assessment of an Ethics Presentation for Accounting and Business Classes", *Journal of Business Ethics*, 61(2): pp. 153-164.
- Thomas, C.W. (2004), "An Inventory of Support Materials for Teaching Ethics in the Post-Enron Era", *Issues in Accounting Education*, 19(1): pp. 27-52.
- Thorne, L. (2001), "Refocusing Ethics Education in Accounting: An Examination of Accounting Students' Tendency to Use Their Cognitive Moral Capacity", *Journal of Accounting Education*, 19(2): pp. 103-117.
- Wood, R. & Ashfield, J. (2007), "The Use of the Interactive Whiteboard for Creative Teaching and Learning in Literacy and Mathematics: A Case Study", *British Journal of Educational Technology*, 39(1): pp. 84-96.

APPENDICES

APPENDIX A1

APPENDIX A2

Introduction to Ethics

The term ethics has many nuances. In general, an ethical issue or dilemma is a problem or situation which necessitates an individual or organisation to choose among several actions that must be judged as 'right' or 'wrong'. Ethical problems typically arise "because of conflicts between individuals' personal moral philosophies and values and the values and attitudes of the organizations in which they work and the society in which they live" (Ferrell et al., 2002, p.48).

The purpose of this website is to assist accounting students improve their ability to make ethical decisions. It aims to do so by providing a framework that students can use to identify, analyse and resolve issues in the accounting and financial reporting area. The website is designed to provide a balanced coverage of the theoretical perspectives that explain and guide ethical behaviour, as well as ethical dilemmas based on more practical, real life scenarios.

APPENDIX A3

Introduction to Ethics /

Can One Accountant Make a Difference?

Smith and Smith (2003) remind us that "the actions of one person have even changed the course of a nation."

- In 1923, Adolph Hitler gained control of the Nazi Party by a single vote.
- In 1645, one vote gave Oliver Cromwell control of England
- In 1776, one vote gave America the English language rather than German.
- In 1845, one vote brought the state of Texas into the United States.
- In 1941, one vote preserved the Selective Service System just 12 weeks before Pearl Harbor was attacked.

APPENDIX A4

Main Menu

Introduction to Ethics

Ethical Theories

Ethical Decision Models

Laura Nash model

Langenderfer and Rockness model

The AAA model

Rion model

Ethical Scenarios

Moral Reasoning and Developmental Theories

Professional Conduct

Additional Resources and References

Ethical Decision Models

Please select a decision model to continue:

Laura Nash Model

Langenderfer and Rockness Model

The AAA Model

Rion Model

APPENDIX A5

Main Menu	
Introduction to Ethics	
Ethical Theories	<p>Human behaviour is seen to be significantly influenced by an individual's values and beliefs. The primary influences on an individual's value development are first our parents, other family members and peers, followed by certain institutions as we grow older such as schools and community organisations (e.g. sporting clubs, churches, etc.). As we enter the workplace, our profession and the organisation in which we work in will also contribute to the range of values, beliefs and attitudes that we possess.</p>
Ethical Decision Models	
Ethical Scenarios	
Moral Reasoning and Developmental Theories	<p>In this section, we discuss the issue: how do human beings make ethical decisions? What is the rationale affecting what one considers is right and wrong? In doing so, we examine the taxonomy of moral development as presented by the following 3 models:</p>
<div data-bbox="217 860 261 869">Kohlberg's Three Levels of Moral Development</div> <div data-bbox="217 869 261 878">Rest's Four-Component Model of Ethical Behaviour</div> <div data-bbox="217 878 261 887">Thorne's Model of Ethical Decision Making</div> <div data-bbox="217 887 261 896">Key Research Studies</div>	<ol style="list-style-type: none"> 1) Kohlberg's (1958) Three Levels of Moral Development Model; 2) Rest's (1996) Four Component Model of Ethical Behaviour; and 3) Thorne's (1998) Integrated Model of Ethical Decision Making.
Professional Conduct	
Additional Resources and References	