

Is it Possible to Engage Undergraduate Information Technology Management Students in a Compulsory Course in Ethical Issues in IT in a Large Class Environment?

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Abstract

The inclusion of ethics in business school programs including those focusing on business and Information Technology is seen as an increasingly important issue in curriculum design. This paper describes the planning, development and delivery of such a course in a large Information Technology focused business school. It discusses both course content and teaching methods. The delivery experience clearly demonstrates that engaging students, especially in a large class format, needs attention in both course development and delivery. Key to the engagement of the students is relating the course material to their personal experiences; developing principles and frameworks that will be of value to them in their entry level jobs; and providing opportunities for discussion and debate to develop their own critical thinking skills and expose them to the divergent perspectives of others.

Key Words: Ethics, Information Technology, Pedagogy, Large Classes

1. INTRODUCTION

There is an increasing focus on providing ethics education to students in university business schools that is being driven by a number of factors. First, as a result of the reporting improprieties at companies such as Enron, WorldCom and Parmalat, government oversight bodies, boards of directors and shareholders are looking for ways to not only improve the awareness of unethical behaviour but also provide structures and guidance on what employees should do when it is discovered. (McDougall 2006).

Another key factor driving the need for ethics education is the increasing global environment in which companies operate. This not only means companies are expanding

into other countries with different expectations on what is acceptable ethical business practice, but that, even in home markets, the workforce is becoming sufficiently diverse that each employee's assumptions about ethical business practices may be different. (Kun Young Chung, Eichenseher et al. 2008)

Further, with the potential for increased litigation, professional bodies, beyond the long established professions, are articulating ethical business practices in the form of codes of conduct and codes of practice and some, such as PMP (the project management professionals) have disciplinary bodies responsible for the oversight and discipline of its members. (PMI 2007)

Ryerson University is a large downtown university in Canada's largest city. With some 25,000 full-time students who study in a wide range of faculties from Engineering to Community and Social Services to Radio and Television Arts to Journalism, it has a large multi-cultural base of students who are mainly from the Toronto area and travel to the campus daily, which is in the centre of the city.

The Ted Rogers School of Management (a business faculty) at Ryerson University, provides a Bachelor of Commerce degree in four schools: Business Management, Hospitality and Tourism Management, Retail Management, and Information Technology Management. This paper reports on the approach to providing Ethics education to the undergraduate students in the Ted Rogers School of Information Technology Management (TRSITM).

As Information Technology continues to become ever more pervasive and there is an increasing ease of digitization and dissemination of content, our graduates will have to deal with an increasing number of issues in the business world, not only as users of information technology themselves and in their professional disciplines, but in their management and support of users outside of IT who make use of the technology. As a result, the school has chosen to provide a separate compulsory course to deliver the content as well as embedding ethical discussions in many of the specialty courses, such as a final year elective in IT Consulting Skills and the two semester capstone experience.

This paper describes the author's experience in developing the new course, "Information Technology, Ethics and Society" as a compulsory course for 2nd year students to be delivered in the second term of their second year. It has been delivered once in the winter term (January to April 2008) to approximately 200 students - 160 full-time day students and 40 part-time evening students.

This paper addresses the challenges encountered in engaging a large number of relatively junior students in a compulsory course on the ethical challenges that confront IT professionals. The paper describes the approach to developing and delivering the

course. It includes an evaluation of what went well and the lessons learned and concludes with a summary of the changes to be considered before the course is delivered again in the winter 2009 term.

2. ETHICS IN BUSINESS EDUCATION

Identifying The Need

Increasing globalization, over the last 20 years, raises concerns on how to do business in a global environment based on different cultural perspectives. The book "Emerging Global Business Ethics" (Hoffman et al 1994) illustrates the wide range of topics that had already emerged more than 10 years ago, with sections on global variations in ethical behaviour, legal cases in international ethics, the behaviour of transnational corporations, and the emergence of transnational codes of conduct. More recently we are seeing major challenges arising from the different ways in which countries deal with intellectual property rights e.g.(Duong 2006).

The Project Management Institute, which governs a large number of IT professionals under their PMP designation, is concerned about the approach being considered to address unethical behaviour. There is an ongoing debate on whether to develop particular business ethics or to implement prescriptive governance rules and codes of conduct and the impact that these approaches will have on the members of their association. PMI has called for research proposals to investigate the impact this could have at the project delivery level and specifically on project management (Project Management Institute 2008).

University accreditation bodies such as the AACSB (the Association to Advance the Collegiate Schools of Business) in its Report of the Education Task Force to the AACSB's Board of Directors in 2004,(AACSB. 2004) stressed a need to address ethics in management education to better prepare graduates for the issues they will encounter in the workforce. The report says business schools "must encourage students to develop a deep understanding of the myriad challenges surrounding corporate responsibility

and corporate governance; provide them with tools for recognizing and responding to ethical issues, both personally and organizationally; and engage them at an individual level through analyses of both positive and negative examples of everyday conduct in business”.

AACSB reports that with respect to cognitive moral development most adults are at the level where they “look outside themselves, primarily to peers and leaders, for guidance in ethical dilemma situations”. Not only is there a need to develop managers who act ethically but perhaps more relevant to students is that supervisors need to be ethical role models as well. The report suggests that “increased ethical behaviour is developed by expanding awareness to include multiple stakeholders’ interests and by developing and applying personal ethical decision-making skills in ways that are transparent to their followers”.

The report provides a number of techniques that can support the development of ethical decision-making skills:

- 1) Develop an understanding of multiple frameworks that can be applied in the decision making process along with the ability to consider the interests and impacts to multiple stakeholders.
- 2) Make use of reflection to reflect on ethical decisions from the student’s own perspective.
- 3) Analyze case studies similar to situations students would encounter in the business world.
- 4) Understand one’s own values and be prepared to deal with other’s conflicting views.
- 5) Understand the challenges that impact moral courage in acting on one’s decision.

Developing The Content

A number of authors have provided information on their experiences in delivering ethics

education to IT students. The Lucerne School of Business teaches an elective Business Information Technology course as a one week seminar. They suggest that “the goal of the seminar is not to give answers to ethical problems but to provide an environment in which students learn to discuss ethical dilemmas and to make their own value judgments”. They have found case studies, discussions, student presentations, demonstrations and role-play to be effective techniques to engage the students and provide a good environment to raise issues. Their class size was about 15 (Class, Brischherz et al. 2004).

With respect to specific topics and techniques, Lazaretti investigated the content and approaches in the teaching of computer ethics at universities in Spain and Portugal and observed that discussion groups, use of press clippings, evaluation of class participation and term papers were the most popular. The most common topics addressed were: privacy; misuse of intellectual property; invasive techniques such as hackers, viruses, etc.; codes of ethics and conduct for professionals. (Lazaretti 2005)

A recent study at York University in Toronto provides a profile on the current and anticipated future diversity in Toronto and suggests one way to bridge the cultural gap is to begin with the Golden Rule -- “do unto others as you would have them do unto you” and consider how this is a fundamental basis in seven major religions and the secular context of Kant. The study also suggests the use of role playing and written scripts to encourage student engagement. (Prince 2006)

Williams defines three goals that should be addressed in ethics education: increasing awareness; increasing cognitive moral development; and developing the ability to handle complex issues. Increased awareness comes through understanding the ethical consequences of one’s actions. For example, developing poorly written and tested code in a medical environment can have life threatening implications for patients, possibly resulting in death. Students should strive to raise their cognitive moral development from an approach that makes decisions based on their own self interest or following a set of formal rules to make deci-

sions based on their own internalized standards of what is right and wrong. (Williams 2005)

Williams also suggests that an important aspect of handling complex issues is the ability to exercise self-control and follow through on the course of action that an individual has deemed appropriate and to understand what challenges they have to face in acting on their decision. Deciding that an issue is unethical is often the easy part; whereas acting on it is more difficult.

Planning The Delivery

Given the need to deliver the class in a large scale format, a study by Rahanu and Turner, (Rahanu and Turner 2001) provided some observations and challenges in moving a course from a small, highly motivated class to a large compulsory group and that it isn't just a matter of delivering the course to more students. Appropriate planning is required to maintain the same level of engagement and motivation in larger spaces and where instructor/student interaction isn't as frequent. (Rahanu and Turner 2001)

Foster (2004) in her report to Ryerson University to prepare for the Ontario "double cohort" (two years of graduating students would be entering university instead of just one with the removal of grade 13 from the high school curriculum) provided guidance on how to cater for large class sizes (greater than 150 students). Everything takes longer and requires more effort for 150 students than for 30. The instructor should be highly organized and communication and directions need to be crystal clear. Connecting the student with the class is also important and often connecting the student with a group within the class fulfills that objective where connecting with the instructor is not always possible.

Jeffries and Rogerson (2003) also provided some useful insights on developing critical as opposed to factual thinking skills and suggest that when students are actively engaged in discussion, there is a greater likelihood of creative and critical, as opposed to factual thinking. Their examples make use of both synchronous in class discussions as

well as asynchronous dialogues through a discussion board such as Blackboard or WebCT. They also cite McKendress (McKendress, Stenning et al. 1997) to note that "learning occurs not only through participation in dialogue but also through observing others participating in it" and that even though students appear not to be participating in online dialogues, they are actually learning through reading the ideas shared by others.

3. DETERMINING THE DELIVERY APPROACH – THE METHODOLOGY

As with any university course, three key areas needed to be developed: the course content; the method of delivery; and the method of assessment.

Course Content

Ironically deciding on the course curriculum was the easiest part as there is a significant body of literature and expertise available on the critical ethical issues confronting IT professionals today. Four main areas were identified:

- 1) What is "ethics" and what role does it play in the current business and professional environment?
- 2) How do organizations such as corporations, governments, not-for-profits function? What are the ethical issues that can arise, how to identify them and what are various courses of action that one can take to address the situation? What is the role of an IT professional body in promoting ethical behaviours and practices?
- 3) What are the current ethical issues confronting IT professionals today? (For example: freedom of expression, confidentiality of information, misuse of intellectual property, ethical approaches to software design and development, bridging the digital divide, inappropriate behaviour in cyberspace such as hacking, fraud, stalking, libel.)

- 4) How to address the ethical issue: how can students identify an issue, understand the stakeholders, consider options beyond the obvious, and execute on their decisions considering the impacts their decision might have?

In preparing for the course, the author participated in a number of experiences, namely:

- 1) Auditing a small elective Ethics course directed to senior year students.
- 2) Attending a three day AACSB workshop with experienced educators in teaching Business Ethics at the university level.
- 3) Auditing two large classes at the undergraduate level and reviewing a paper written by the author's school's Marketing department on teaching large classes.
- 4) Working with the University's Learning and Teaching Office to identify some useful delivery and evaluation techniques that would encourage student engagement.

The Ethics In Information Technology Elective

TRSITM had provided a senior elective in Ethics and IT that was typically taken by a small group (30) of its students in their final year. The course was delivered by the school director, a highly engaging professor with many years of corporate business experience.

In observing his class, it became apparent that as Class suggested (Class, Brischherz et al. 2004): "Ethical education is a personal journey and it is as much about raising awareness of ethical issues as it is about providing a right course of action. And as a result, the delivery approach should focus on engaging the students to interact with the material and encourage the development of their own ethical frameworks".

Experienced Business Ethics Educators Views on the Challenges

AACSB fortunately offered a conference in the fall of 2007, at the University of Richmond in Virginia to support those involved in Ethics Education at the university level. University educators came from across the Americas (North and South) and were involved in both undergraduate and graduate programs.

Several common themes came up in their discussions.

- 1) As ethical education was a personal journey, the students had to engage and interact with the material. This was not easily achievable at the undergraduate level as many students lacked business experience and certainly had no business experience at the senior management level in organizations the level at which most case studies were centered.
- 2) Students often perceived ethics as a dry and difficult subject and struggled through discussions on philosophy or ethical frameworks such as utilitarianism and assignments for which there were not easily determined right answers.
- 3) Student engagement and interaction with the material such as discussions, debates, case studies, and workshops is important and this is becoming more difficult to deliver with the increasing size of classes particularly at the undergraduate level.

Teaching Large Classes of Early University Entrants

As part of the course preparation the author, in order to understand the dynamics of teaching large classes of 19 to 20 year olds, observed a 200+ first year class of TRSITM students in a 2 hour lecture on Introduction to Information Technology and another first year class of Retail Management students in "Issues in Retail Management" and read and discussed a paper written by the Head of the Marketing Department that included advice on teaching large classes.

Each of these confirmed the need to be highly structured, highly organized and overly communicative in both course material

and in course administration. Students became more engaged when there were class activities that they could relate to (e.g. identity theft over the internet) or there were activities for which they were accountable and marks were at stake. For example, in the Retail Management class, ten students chosen at random at the end of the class were required to put together questions for next week's pop quiz based on the lecture. Course marks were allocated for submitting the questions. One had to be in class to be allocated the assignment marks. The class seemed to be full.

The Learning and Teaching Office - Investigating Other Techniques

Ryerson University has a Learning and Teaching Office that provides many seminars on various aspects of teaching. Several of these tutorials proved invaluable, especially those on "Active Learning Strategies", "Using Simulation to Foster Inter-personal Skills Development" and "Assessment Student Learning". One of the Learning and Teaching Office professors was kind enough to allow the author to observe her fourth year Human Resource Management course using Simulations (a form of role playing using actors) to address specific ethically related issues that an HR manager might encounter. I drew on several ideas presented in these seminars including:

- 1) Emphasis on active learning by limiting the lecture to less than 1 hour of the 3 hours class time and providing an environment for case study analysis.
- 2) Making use of the Simulations to allow students to interact and connect with the actors which provided an opportunity to "think on one's feet" in responding to the often diverse views of stakeholders.
- 3) Tying the assessment to the expected student behaviours of engaging with the material in class time.

4. FINALIZING THE DELIVERY PROCESS

The investigation described above identified three major issues that the delivery process needed to address:

- 1) The need for the students to engage with the material despite the large class size.
- 2) The lack of business experience of the majority of the students.
- 3) The importance of developing personal ethical frameworks that can be applied in dealing with both general and IT related ethical issues.

The Need to Engage with the Material Despite the Large Class Size

To maximize the amount of interaction time, the course was structured so that, on a weekly basis, all 160 students attended a common 1 hour session. This was followed by four separate 2 hour workshops each of which catered for 40 students.

The one hour session was delivered in a lecture format in a large 500 seat theatre with podium and film screen. The purpose of the lecture was to present the course concept for the week, invite guests to speak on a specific ethical issue related to technology or business, and deliver common administrative information to the class as a whole.

A flexible classroom suitable for arranging desks into work groups was provided for each workshop. The purpose of the workshop was to generate engagement with the material in a manner that students could appreciate that others might not have the same views or follow the same problem solving approach. Debates, discussions, presentations, simulations were techniques used in the workshop.

Each workshop built on the materials covered in the lecture with an applied example. For example, in the first workshop, topics such as "Should Euthanasia Be Legal in Canada?" or "Is it Ever Right for One Country to Invade another?" were used to start thinking about ethical issues and different perspectives of individual group members. To encourage participation, students discussed the issue in groups of 5 and then a spokesperson(s) shared their views with the class precipitating further discussions and issues raised by the group.

Individuals were then required during the workshop time to write up their own personal view of the issue and submit it electronically by the end of the class. This assignment was designed to enable the student to develop the ethical decision making skills to quickly analyze an issue, consider a number of options and articulate a recommendation which they can defend in a class discussion. No late assignments were accepted, encouraging students to come to the workshop to participate.

Weekly assignments were required before the end of class. Some were individually submitted. Some were submitted in groups. Feedback was provided by the instructor, by another student or by a group of students. Three percent of the final grade was allocated to each of the seven individual assignments.

Students were divided into eight groups of four to five to make it easy to pair groups for discussions or debates and also to provide a sub-class entity with which students could identify.

The Lack of Business Experience of the Majority of Students

One of the important aspects of the course is to help students develop a decision making process for dealing with ethical issues. Two key areas: understanding stakeholder perspectives and identifying alternative courses of action require the development of critical thinking skills. The University setting provided a good environment to discuss ethical issues that all students could relate to. The Ryerson Student Handbook provides a good example of student roles and responsibilities. It also provides examples of policies and ethical frameworks with respect to plagiarism and cheating and understanding stakeholder impact.

In introducing students to ethical issues in Information Technology, it's important to introduce them to situations they might encounter at junior levels in the organization or areas of technical support or functional areas of business for which they might have a personal understanding e.g. e-commerce; software piracy, etc.

To support the course two textbooks were used, one theoretical (Reynolds 2007) and one practical (Spinello 2003) along with The Ryerson Student Handbook and various Canadian based materials such as the Charter of Rights and Freedoms; the Freedom of Information and Privacy Protection Act; the Intellectual Property office to supplement Reynolds which is an American based book. Blackboard was used to coordinate the distribution of announcements and materials and to support group discussions.

The Spinello case book provides a good compendium of case studies in IT that cover the major IT related issues such as intellectual property; invasion of privacy, etc. During the course, ten of the case studies were used. Each group was given a case study to analyze and provide a recommended course of action. Their presentation of their analysis in the workshop included: background information; stakeholder analysis; alternative courses of action; and justified recommendation.

A second group completed a similar analysis and raises questions following their presentation. For example, one of the cases involved a high school teacher, in an impoverished school, who was asked, by the principal, to install illegal copies of math tutorial software in the schools computer lab for which there were no funds available to buy additional copies. One group recommended not installing the software due to lack of licenses. Another group pointed out the students would fail the public examinations without it and suggested contacting the vendor to arrange delayed payment while fund raising with local businesses.

Simulations were another technique used to bridge the gap with business experience. Actors were invited to the class to play the role of the primary stakeholder in a case study. Using the above example, an actor played the role of the principal and a pair of students, representing the teacher, met with the principal to present their viewpoint (in this case not to install the software). They could "time out" and discuss the situation between themselves or call on members of their group or other students in the class for help. The simulation emphasized two main things: the perspective of the stakeholder is

often different from one's own and that despite the best of intentions to implement a recommendation, it doesn't always go the way you think and you're often forced to consider different alternatives.

Students were also shown the film "The Corporation" (Achbar, Abbott et al. 2003) as an introduction to business, its evolution, business drivers and organizational structure. The film showcases many examples of unethical corporate behavior: pollution of the environment; advertising designed to manipulate children; hiring of child labour and unethical reporting of facts in the media. The film, 120 minutes in length was shown during one of the class workshops.

The Importance of Developing Personal Ethical Frameworks

One of the objective of the course was to make students aware of the ethical issues that can arise in the world of IT and the expectations of the workplace into which they will graduate. The course provided tools on the prevention, detection and enforcement of ethical behaviours. Tools and techniques such as: an ethical decision making process; different ethical frameworks e.g. utilitarian or rights-based or virtue-based approaches; policies such as codes of conduct, privacy and confidentiality agreements or checklists for implementing good IT practices such as security, industrial espionage, software development.

Students kept a personal reflection journal over the semester and were required to write a weekly reflection of 1 to 2 pages, identifying ethical issues they encountered in their everyday life, preferably, but not necessarily, with an IT component. The journal was worth 9% of the term mark and it was "all or nothing" – either 9% for a reasonable effort or 0% for not meeting the requirements.

5. COURSE ASSESSMENT

The course assessment framework was:

- 1) 50% for exams (20% for the mid-term and 30% for the final exam). Exams in-

cluded multiple choice and essay questions based on a given case study.

- 2) weekly assignments, to be submitted in class, both individual and group, were worth 3% each for a total of 21% (only the top 7 assignment marks out of 9 were counted)
- 3) 9% for the completion of the reflection journal
- 4) 20% for the case presentations: 13% for the presentation and 7% for the case review.

6. DELIVERY EXPERIENCE

The course was delivered to both a large class of full-time day students and a smaller class of evening students, which in itself raised a different set of issues because most of the evening students had many years of business experience. These different issues will not be discussed further in this paper since its focus is on the large, full time second year students. Here are the key elements of the experience.

The Need to Engage with the Material Despite the Large Class Size

The Workshop: The workshops were well attended with about 85% participation and the same students appeared to be absent from week to week. The good attendance was largely driven by the weekly graded assignments that were delivered in the class environment either as presentations, participations in simulations or electronically submitted individual or group work. To receive a mark for a group assignment, the student needed to have been present in the class. Key elements of the workshop experience were:

- 1) ***The students, overall, engaged in the course materials***, participating in group and class discussions in sharing their ideas and often raising ethical concerns on the course material.

Unfortunately a workshop size of 40 was too large to ensure that everyone has an

opportunity to contribute to discussions and that everyone gets appropriate feedback on their participation. A workshop size of 24 providing 6 groups of 4 would have been more advantageous.

- 2) **The students engaged in the case study presentations** – especially the first four which centered on issues of software piracy, freedom of expression, privacy and security. All four case studies were presented in one 2 hour workshop with one group's presentations followed by questions from their reviewing group. The reviewing group's analysis was usually thorough and they raised thought provoking questions.

The students would have preferred more opportunity for everyone in the workshop to raise questions and engage in more debate and possibly spread the case study presentations over several weeks.

- 3) **Some of the students were quite comfortable in submitting an assignment by the end of the class.** These were students skilled in doing an adequate quick analysis, critical thinking and a written articulation of their points of view. Others were uncomfortable and wanted more time following the class to develop their response.

The point of the exercise was to encourage quick critical thinking. This perhaps may disadvantage the students with a specific learning disability or a lack of confidence in English.

- 4) Despite the indication that managers and supervisors assess and give feedback on the performance of their employees, **some students and student groups were not comfortable in marking and providing feedback on assignments for other individuals.**

Assignments were worth 3% of the grade and most grades ranged between 2 and 2.8 so there was little risk in poorly graded assessments. However in the case of the larger case studies where marks were worth 13% and marks

ranged from 8% to 12%, groups raising concerns on their marks would be considered. Rubrics and guidelines were given but would have benefited from a more detailed discussion on how they should be applied.

The Lecture

The 1 hour session was able to cover the key concepts in each of the chapters of the text book so that students were aware of the expectations for the exam. Slides were posted following the lecture for reference. One lecture was a presentation from a guest lecturer who talked about the role of a professional body and also how ethics is handled in her technology based firm.

- 1) **Throughout the course attendance at the lecture proved to be a challenge**, typically 30% of the students attended. This is a common problem at the University.

Comments on the lack of attendance centered around the 9:00 a.m. start time for a class that only lasted an hour and it was often too early for students to rise and a long way for many to come if this was their only class in the morning (as a commuter school, student journey times often exceeded 1 hour each way).

There was also no incentive to come - there were no marks allocated and as slides were posted, they felt they could catch up on most topics.

The lecture hall was not conducive to engagement - 50 seats filled out of 500 with seating in the middle to the back to be able to see the screen effectively.

- 2) The guest lecture, while it was well received, was also poorly attended, partly due to poor weather conditions and transport delays and perhaps lack of appropriate preparation on the advent of a guest lecture.

The Lack of Business Experience of the Majority of Students

Given the experience of the students, a significant effort was expended to compensate for their limited business experience.

- 1) ***Focusing on basic ethical issues to which all students could easily relate*** made it easier to understand and apply the ethical decision making process, especially the stakeholder analysis and developing different alternatives that could be followed to address the issue. The example of cheating at the university illustrated the role that policies, such as Academic Misconduct or Plagiarism, play in communicating what is acceptable behaviour and the consequences of breaching those policies.
- 2) The Spinello text provided good examples of ethical issues of IT in business. ***The case studies were short and easy to follow*** and the only drawback was they included little financial information that would have been helpful in developing truly realistic options or alternatives. Of the ten case studies chosen, eight of the case studies proved a good basis for discussion. The two that weren't suitable, were either too far out of date to be relevant because the issue had been resolved (such as the Napster case) or too complex to be covered in the tight time frame (such as the AOL/Time Warner merger).

The students would have liked to spend more time on some of the case studies and to investigate the policies that organizations and IT departments would use to reinforce ethical practices such as employee contracts, codes of conduct, ITIL, CMM procedures or privacy/security statements.

- 3) The film "The Corporation" provided an insight into corporations and how the governance is in place to support reporting unethical business practices. It provided a useful, but somewhat biased, view on corporations with few examples of corporations with good business practices.

The students found the film insightful and commented on the bias of the direc-

tor towards highlighting only the unethical practices of global corporations and his reasons for doing so but indicated that it would have been more worthwhile to provide the film for viewing outside of workshop time and use that time for in class discussion on the film.

- 4) ***The students engaged in the simulations and said they learned a lot in interacting real time with the actors who took on the role of the stakeholder.*** They were surprised that the stakeholders didn't share their perspectives – the principal was more interested in her students' performance and the lack of funding than she was in issues of breaking the law over software piracy. In addition students realized how quickly they had to come up with other alternatives to solving the problem in order to avoid the ethical issue and that at times, they were concerned about the security of their jobs.

Only a few students in the class were able to participate in the simulations. The class would have liked the opportunity for more students to be involved however they did get a lot out of watching others engage in the interaction and providing helpful suggestions.

The Importance of Developing Personal Ethical Frameworks

The students were initially asked to hand write their journal into a spiral bound notebook to make it easier to include articles, pictures, diagrams etc. After three weeks, many students asked if they could submit their journals electronically as their handwriting was out of practice. It was agreed that as long as the journal could be submitted in paper form at the end of the course that handwriting or typing would be acceptable.

Both the mid-term exam and the final exam included both multiple choice questions on the theory and essay questions based on ethical analysis and recommendation on a case study. The journals included reflections on ethical issues they had encountered at the university, in their work environment or

in the community at large. In reviewing both the final exam and the journals at the end of year, Exhibit 1 provides a list of some of the major ethical issues they chose to address. Some were issues they personally encountered during the course e.g. the Transit Strike or the issue of Forced Marriages, others were ones they were exposed to in their current environment such as the University taking the initiative to prosecute plagiarism in a FaceBook environment and others were issues they had been exposed to through the media such as the use of technology in the workplace.

The students applied the seven-step ethical decision making process provided in the Reynolds's text book throughout the course. The table in Appendix A summarizes how their capabilities improved in each step of the decision making process throughout the course.

Student Feedback

To provide some additional richness, in addition to the comments included earlier in the report, these direct quotes from the student evaluations indicate student responses to the experience:

- 1) "Being in an ITM program equipped with knowledge about the latest technology, we as future IT professionals are faced with many ethical issues and dilemmas, and must be seen as leaders in properly addressing such ethical issues. Having such responsibility along with the skills and knowledge we often find opportunities and vulnerabilities to use them to our advantage".
- 2) Two textbooks were excessive (\$135) and one should include Canadian content.
- 3) "The first day I set foot into this class I let out a groan at the idea of actually taking an ethics class..well I can say with a sense of humility that I was wrong...I enjoyed the hands-on work and the weekly assignments. I was so happy to be able to write regular essays again!"

<i>Situation</i>	<i>Ethical Issue/Comment</i>
Transit Strike	Is it ethical for transport workers to go on strike as an essential service? Is it ethical for transport workers to walk off the job at midnight on a Saturday night without giving due notice to their ridership?
Digital Music Download	Many focused on the recording label as the primary stakeholder rather than the artist.
Forced Marriages	Is it right for a man and woman to be forced into a marriage by their parents? (The differentiation between a "forced" and an "arranged marriage" - in an arranged marriage either party can decline.)
Use of technology in the workplace	It is ethical for companies to restrict open access to the internet, social networking sites, msn and personal email in the work environment?
FaceBook	Is it ethical for the university to identify work done in study groups set up in a social networking environment such as FaceBook as cheating?
Cheating on a programming course	Was it ethical for a student to be punished for academic misconduct when he showed his work to another student who then stole it and submitted it as his own?
Open internet access	Is it ethical to share your internet access with friends who are not paying for the service?
Ticketmaster	Is it ethical for the only place that sells tickets for a concert to charge an administration fee?

Exhibit 1: Ethical Questions Raised by Students in Journals and on Final Exam Question

- 4) Excellent change of pace in the business IT program. However I didn't like the journal idea very much..."

7. LESSONS LEARNED

The first instance of the course went as well as might be expected. While it would have been better if the course could have been

piloted on a smaller number of students, the course provided value to most students and provided many insights for what worked well and the areas that need improvement.

Many students indicated in their final course comments that they were initially skeptical of the value of an ethics course and had changed their mind by the end of the course. Several students were glad of the opportunity to engage in addressing issues for which there were not necessarily right answers but depended on how well you argued your case.

In an attempt to make the course an engaging experience for students, many techniques were tried that proved to be successful in their own right but in looking at them across the course, there were perhaps too many things included in a short space of time, leaving the students feeling uncomfortable and uncertain.

8. CHANGES TO BE MADE IN DELIVERY

The following improvements will be made before delivering the course in the next winter term:

- 1) Be clearer on the value of the lecture as a review and elaboration of the reading materials through examples, films, guest lecturers and presentations of the concepts to be applied in the workshop. Perhaps introduce some incentive or reward for attendance. Find a smaller lecture theatre and a more conducive time - perhaps just before one of the workshops.
- 2) Continue to make effective use of the case studies and the simulations but spread them over the various weeks allowing more time to focus on the issues and the alternative solutions. Include more in-depth discussion on IT related policies and standards that could be used to manage ethical issues.
- 3) Continue to use the Journals, encourage the use of an electronic environment for recording the journals and be a bit more directive in suggesting topics for the students to consider.

- 4) Continue with the evaluation structure especially the weekly assignments due at the end of class but give students preparation material so they could do some research before the workshop. Provide equal marks of 10% each to both presenters and reviewers since laterally it appeared that both groups did equal amounts of work.
- 5) Identify some mechanisms that could be included to improve their oral and written communication skills, especially in the areas of communicating their recommendations.

9. CONCLUSIONS

In conclusion, it is possible to engage undergraduate IT Management students in a compulsory course in ethical issues in IT, even with a large class of full time 2nd year students. The course needs to be structured in such a way that the students can connect with the material. The course material should relate to their personal experiences, either from the real world or drawing on case studies that relate to the entry level jobs they can expect to take as summer jobs or internship opportunities. There was a lot of discussion on student responsibilities to stakeholders at the university and how cheating could impact them and the reputation of the university. The Student Handbook provided excellent examples of policy frameworks that can be used to help manage unethical behaviour such as plagiarism.

The students also need to be able to engage with the material through discussions, debates, presentations, simulations, etc. Case studies provided good detailed IT related examples of situations that could occur in the workplace that provided a realistic basis for applying an ethical decision making process and creative thinking in identifying alternatives that could help avoid ethical behavior.

The students need to see value in the course, especially on how it will help them to get a job or progress in a career. Developing principles and frameworks for use in the business world such as codes of conduct, non-disclosure agreements, employee con-

tracts, guidelines on use of technology are deliverables they can take away to the places of work.

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Appendix A

How ethical decision making capabilities improved throughout the course.

Ethical Decision Making Component	Initially	End of Course
Identifying the ethical issue, get the facts.	Good at identifying a straightforward ethical issue.	Improved in assessing the facts to articulate more complex ethical issue.
Identify stakeholders and their positions	Poor at identifying the stakeholders beyond the obvious 1 or 2 primary stakeholders.	Overall improvement in identifying secondary stakeholders. Often missed the primary stakeholder if it was an ethical issue in which they were involved.
Consider the consequences of your decision, especially on the stakeholders.	Good at identifying the problems that would arise in not addressing the ethical issue.	Continued favourably.
Take various guidelines and principles into account	Good at using the ethical frameworks such as utilitarian, virtue, etc.	Improved in making use of other frameworks such as codes of conduct, policies, etc.
Develop alternatives and evaluate them	Poor at identifying more than 2 options: the on/off situation. To do this or not to do this.	Improved in the creativity of the options identified. More were identified although not necessarily of greater quality.
Make a decision	Weak in articulating the reasons to support their recommendation, either orally or in written form using principles or frameworks to support them.	Improved during the course as they became familiar with ethical frameworks and techniques such as codes of conduct, policies, etc. Oral and verbal communication skills improved.
Evaluate the results of your decision	Not always easy to see the impact of their recommendation on the stakeholder.	Improved through the simulations of seeing the impact of their recommendations through the eyes of a stakeholder.