

Integrating Ethics into Information Systems Courses: A Multi-Method Approach Based on Role Playing

ABSTRACT: The need to include ethics in the IS curriculum has been well documented by academics and practitioners. Educators are still struggling with how to accomplish this task, due in part to their inexperience with ethical theory and with pedagogical methods for teaching ethics. The purpose of this paper is to present a multi-method pedagogical approach centered around a role playing exercise that the author has used for teaching ethics to undergraduate business students enrolled in a Management Information Systems course. The approach is based on the belief that in order to raise the students' consciousness about ethical issues, the students must be challenged to experience conscious ethical conflicts and to incorporate their own values into solving ethical problems. Ethical decisions must take into consideration the positions of the stakeholders prior to the decision and the potential outcomes of the decision for each of the stakeholders.

KEYWORDS: *Ethics, Information Systems Courses, Pedagogy, Role Playing*

INTRODUCTION

The need to incorporate ethics into the information systems curriculum has been recognized by both the academic and professional communities. Smith [1] suggests that "professional ethics in the Computer Information Systems/Sciences is a developing topic that demands discussion and training in the undergraduate IS curriculum." Cohen and Cornwell [2] explain that "software piracy and the apparent rampant disregard for software as intellectual property convinced us that ethics must be taught as part of the information systems (IS) curriculum." The Data Processing Management Association (DPMA) has adopted a Code of Ethics and Standards of Conduct for its members that is consistent with their mission to foster responsible management of information. The DPMA has further advocated that the topics of IS professionalism and ethics be incorporated in their Model Curriculum for the 90's [3]. Other professional organizations such as the Association of Computing Machinery (ACM) and the Institute for Certification of Computer Professionals (ICCP) and the Canadian Information Processing Society (CIPS) have adopted their own codes of ethics [4].

Within the business ethics literature there has been a strong call to include a dis-

ussion of ethics in all business courses [5, 6, 7] including information systems [1, 2]. Despite the recognition of the need for incorporating ethics into the IS curriculum, educators have been criticized for paying inadequate attention to teaching ethics [5]. Discussion of ethics in IS courses, for example, is often found towards the end of the IS text, and is often relegated to the status of being covered only if time permits. In part, the lack of attention to ethical issues by educators may be due to their inexperience with ethical theory and with pedagogical methods for teaching ethics. The purpose of this paper is to present a multi-method pedagogical approach that the author has used with success for teaching ethics to undergraduate business students enrolled in a Management Information Systems Course. The course is required of all business students and is the follow up to a first course in information technology. The multi-method approach incorporates the use of a mini case, group assignments and role playing and is flexible in that it may be integrated into any IS course.

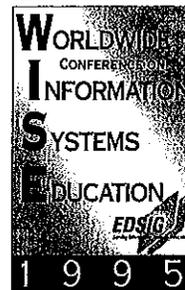
THEORETICAL FOUNDATIONS

The approach described in this paper is founded on the belief expressed by Bishop[5], that in order to raise students' consciousness about ethical issues, students

must be challenged to experience conscious ethical conflicts and to incorporate their own values into solving ethical problems. The power of working through ethical conflicts lies, as Castro [8] puts it, "in its ability to force such a confrontation and, through it, to achieve enhanced self understanding." In order to achieve this objective in the classroom, the students were engaged in a series of assignments which had as its central focus a role playing exercise.

Role playing has been advocated as a technique for teaching ethics in the business curriculum [6 9] and more specifically in information systems courses[1]. Role playing provides students with an opportunity to achieve insights into themselves, others and motivations for actions which can aid students in clarifying their own values and in effectively directing their own behavior [6, 10]. It permits students to express strong opinions in the rather benign environment of the classroom and thus creates an environment in which open confrontation may find expression both internally and among students. Ethical positions are challenged and students are required to defend their own values and beliefs or are forced by their assigned roles to defend the beliefs and values of others with whom they may disagree. A key to developing an ethical consciousness is the

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Richard Glass will be presenting a workshop on using the multi-method approach at the Worldwide Conference on Information Systems education, June 11-14, 1995 in suburban Denver



Richard Glass

Department of Computer Information Systems
Bryant College
Smithfield, RI 02917
401-232-6393
rglass@research1.bryant.edu

ability to imagine all the stakeholders involved in the particular decision and the consequences that any decisions may have on the stakeholders [7,8]. By carefully structuring the role playing exercise (see Table 1), the positions of the significant stakeholders are evoked by the role players as a natural process of the role playing session and are communicated to the class in a personal and passionate manner with which the class can better identify. In a sense, the students live the ethical dilemmas rather than have them presented to them in an objective lecture format.

The main value of the role playing experience for the students is in the role playing process and not in the fact that they will reach a definitive answer to the ethical problem encountered in role playing. In other words, there is no right or wrong solution for the ethical problem presented in the role playing. The objective of including ethics in the curriculum should not be to teach the students right and wrong, but rather how to incorporate their values into the ethical problem solving process [5]. Extreme care should be taken not to preach the ethical position of the instructor nor that of some other authority figure [5,6,7]. This is not to say that students should not be given a clear understanding of the law and how it pertains to their behavior within their organizations and in their private life. Software piracy, for example, should be clearly communicated as being against the law.

A MULTI-METHOD APPROACH

One problem with role playing is that for any one role playing setting, the size of the class often makes it impractical to provide each student with a role to play. Typically this is handled by giving the non role playing students the task of observing and reporting their observations at the end of the role playing exercise. This often results in the non role playing students becoming passive observers where they do not empathize with the characters in the roles being played out. It has been argued above that in order to raise ethical consciousness, it is important to have the students experience ethical conflict. Thus the value of the exercise to the non role playing students may be compromised. To enable these students to better experience the ethical problems presented in the role playing exercise, the students in the class were required to participate in an in-class experience prior to the role playing exercise. The

Table 1. INCLUDING STAKEHOLDER ANALYSIS IN ROLE PLAYING

1. Imagine all the stakeholders involved in the decision, including the individuals directly and indirectly involved, the organization and its external environment (shareholders, society, competition etc.).
2. Consider the individual stakeholder's cultural perspectives and the influence of organizational culture before and after the decision.
3. Consider the goals of the organization and how they affect the stakeholders.
4. Consider external influencing factors such as laws.
5. Estimate the costs of alienating various groups of stakeholders from the organization to which the decision maker belongs.
6. Understand the interrelationships among stakeholders prior to a decision and consider the potential impact of a decision on these relationships.
7. Consider the potential impact on the self-regard and moral power of the decision maker and involved others.

Adapted from Castro, B., "Business Ethics and Business Education: A Report from a Regional State College," *Journal of Business Ethics* 8, p. 479-486, 1989.

in-class experience took place during the same class as the role playing exercise and immediately preceding the role playing.

In-class Exercise

In the class prior to the class in which the role playing took place, the instructor discussed the meaning of ethics with the students and then introduced Mason's four ethical issues of the information age [11]. Invariably an animated discussion ensues about each issue with the issue of personal privacy receiving the most attention. Towards the end of the class the students were advised that during the next class they would form groups and would be participating in an in-class experience that was related to employee monitoring (any appropriate ethics issue may be substituted for monitoring). They were told that at the conclusion of the experience, each group would be: (i) required to hand in a written report that the group would prepare during the experience and (ii) assigned a second written report concerning the experience that would be due at the beginning of the following class. They were told that both written assignments would be graded and would count towards their final grade in the course. The students were not forewarned that there would be a role playing exercise during the next class. To prepare them for the assignment they were asked to review the chapter in their text dealing with ethics and to read the article by Karen Nussbaum entitled "Computer monitoring: A threat to the right to privacy"[12].

Another advantage of having the in-class experience and a written assignment stems from the fact that students who do not anticipate playing one of the roles in the exercise will often not do the assigned

readings for the exercise. By telling the class in advance that there will be an in-class experience with a deliverable that will be graded, the number of students who prepare the readings before class increases considerably.

At the beginning of the role playing class the students were given a one page case involving employee monitoring. The instructor read the case out loud and answered any questions of clarification. The students then formed groups. Half of the groups, chosen randomly, were asked to assume that they were members of management and to make a list of all the reasons to support the monitoring system described in the case. The rest of the groups were told to take the part of labor and to prepare a list of all the reasons against the monitoring system. They were allotted twenty minutes and told that at the end of the exercise that they would be required to hand in their lists of reasons.

Mini Case

The case given to the students is an armchair case written by the author and is presented in Table 2. The case was designed with the following criteria in mind:

1. The case should not be dry and boring to the student [1].
2. The case should present a real life, credible business situation requiring that an ethical decision be made [7].
3. The decision that must be made should pose an ethical dilemma that the students can identify with.
4. The ethical dilemma must present the potential for disagreement among the students.
5. The case should focus on the policies in an organization and the implementation

Table 2. EMPLOYEE MONITORING CASE

Do you know where your employees are? The case of Aperture Inc.

During the fall of 1992, Aperture Inc., a large manufacturer of camera equipment specializing in high tech equipment for the military, installed an employee surveillance system in its main manufacturing plant. Each employee was required to wear an employee identification badge at all times while on company premises. Each badge contained a tiny transmitter that emitted radio signals. Throughout the plant transmitters were placed within walls and other suitable locations. The transmitters picked up the signal in the employees' badges and their locations within the plant were continuously monitored and stored in a computer database. In addition, video cameras were placed in a number of high security locations. It was briefly explained to the employees that their badges contained transmitters that would permit the company to know where the employees were located at any given moment during the day and that the cameras would monitor areas of high security. They were not advised that any of this information would be collected and stored in a database. They were told that they were to wear the badges for security purposes, given the importance of their products to the military and that there would be other benefits such as being able to easily contact them if a telephone call or urgent matter arose.

In September of 1994, Veronica Madison, assistant to the plant manager, entered the office of Mary Turcotte, vice president of human resources. Veronica was clearly very distressed. She related to Mary that last July 15th her boss, John Barrows had asked her to help prepare a presentation to the executive committee. He asked her to meet him in the conference room located in the back of the plant at 2:00 PM. The room was located in a remote area of the plant that received very little traffic. Veronica recalled asking John why he chose that room since no one ever seemed to use it. He responded that the presentation was important and that he wanted to hide away so that no one could bother him. Shortly after meeting John in the room, John began to make sexual advances towards Veronica. When Veronica resisted he threatened her with her job. At that point Veronica ran from the room. Veronica explained to Mary that up until now she was afraid to say anything to anyone and besides John had not made any other advances since that time. However, yesterday she had a job review with John and he was very critical of her job performance even though she had only received praise in the past. She was now afraid that John was trying to get rid of her.

When Mary confronted John, he acted amazed and responded that Veronica is making all of this up. He couldn't imagine why she would do this other than he had to reprimand her in her performance review the other day. When Mary told John the details, John said "that's impossible, I haven't been in that conference room in the back of the plant for years, never mind being there with Veronica." The next day, Mary spoke with the director of MIS. Together they looked up the where abouts of Veronica and John on the day in question. "My goodness," exclaimed Mary. In the computer database it clearly indicated that on July 15th at 2:00 PM, the tracking system recorded that both Veronica and John were in the conference room at the back of the plant together.

Prepared by Professor Richard Glass of Bryant College. This case was inspired by Professor John Sviokla of the Harvard Business School. All references to companies or individuals is purely fictional.

of an information system to achieve these policies.

6. The case should illustrate that there may be potential benefits of the information system implementation for both management and the employees of the organization.

After the student groups had completed their lists, the class was told that a role playing exercise would follow. The students were to assume that the employees were very upset after having found out that the company had kept an historical database containing their location while at work without their prior knowledge. A meeting was to take place between representatives of labor and management to discuss the surveillance system. Because of the sensitivity of the issue, a mediator has been assigned to participate in the meeting. Three students were asked to volunteer from the groups having prepared the pro monitoring management position. They were assigned

the roles of Director of Human Relations, MIS Director and Executive Vice President of the company. Three student volunteers were taken from the groups who prepared labor's anti-surveillance stance and were assigned the role of the company union boss, his or her assistant and a union executive from outside the company. The instructor played the role of mediator. The role of mediator enabled the instructor to interject in order to move the role playing forward when it appeared to become bogged down and to make sure that key issues be addressed by the participants (see discussion session below).

Post Role Playing Exercise

At the end of the role playing session, each group was given an assignment to prepare a written report that listed all the arguments for and against computer monitoring with respect to the Aperture Inc. case. They were then required to specify whether the monitoring device should be continued or not

and to indicate how they would implement the removal or continuation of the system in light of what had transpired in the case and in the subsequent meeting between management and labor. This final assignment is important in that it forces the students to push their analysis to the point where a decision has to be made [7] and to further begin to consider factors related to implementing an information system in the organization that raises ethical issues.

In the class following the role playing, the instructor began the class by polling the groups for their decisions on whether to continue or discontinue the surveillance system. A discussion ensued on how to best manage ethical issues in an organization to ensure that ethical conduct is promoted in light of varying potential consequences for the stakeholders.

DISCUSSION

At the end of the multi-method exercise, the instructor always asks for feedback concerning the group assignments and the role playing exercise. The response by the students has been universally favorable. When asked whether the role playing should be continued in future classes the response is a consistent and resounding "yes." The feedback not only indicated that the whole exercise was enjoyed by the students but that they were also able to appreciate that ethical issues in an organization are not one dimensional and that envisioning the impact of ethical decisions on stakeholders (including themselves) is key to the effectiveness of those decisions.

Each time that the role playing has been conducted, the students began in the same manner by arguing about the advantages and disadvantages of the monitoring system. Arguments in favor included the need for security because of the sensitive military technology, the ability to use the information to measure performance and to reward those who are deserving. Arguments against the system mostly hinged around the position that the system causes the employees to become demotivated (stress, treated like a child, lack of trust, etc.) and that the system may not indicate what is actually transpiring at any point in time since there is no recording of verbal exchange and the cameras do not cover the entire range of the badge signals picked up by the transmitters. These arguments are objective and tend to relate to the organization's effectiveness. They do not address the ethical issues presented in the case. After

a period of time (sometimes with the subtle push of the mediator) the discussion begins to take on an ethical dimension, usually with the employees raising the issue of privacy and an ensuing discussion of the constitution and the right to privacy. The fact that they were never informed of the historical database looms large at this point. The major arguments that management bring out at this time are that: (i) we pay your salary; (ii) therefore we have a right to monitor your performance and (iii) if you are not doing anything wrong why would you care if you are monitored. The confrontation between labor and management now escalates and the exchanges between the students become very heated. At this point in the role playing exercise (but not before ethical issues are brought up) if the non role players appear to be losing their ability to hold themselves back, the discussion is opened up to the entire class.

It is interesting to note that the students do not engage in a discussion of sexual harassment during the role playing. This is most likely a result of the fact that the course is in Information Systems and that the focus of the readings were on surveillance. The students do make reference to the fact that the surveillance system apparently caught the manager in a lie and a case is made by the role players representing management that the system is of benefit to all levels in the organization. The role players representing labor counter that the system only indicates that Veronica and John were in the room together but gives no evidence of what actually transpired in the room.

For the author, it is extremely rewarding to observe how the role playing confrontation naturally evolves from a discussion of organizational effectiveness, the traditional approach to business problem solving, into a personal and emotional discussion of ethics. The point is later brought up to the students that perhaps ethics should be a natural part of all business decisions similar to concerns such as finance.

In the class following the role playing the discussion of the case broadens to include a wide variety of stakeholders, the legal system and laws governing employee monitoring, and prescriptions for dealing with ethical issues in organizations. In the discussion of the prescriptions the students always bring up the need for full disclosure of information systems that may invade their privacy. This leads to a discussion of forming an ethical code of conduct in the organization and the need to involve the

employees in developing the code of conduct. Interestingly, when polled for their decision on the surveillance system, by far the majority of groups decide to continue with the surveillance system but with the participation of the employees in setting guidelines for its use. It would be interesting to engage non business students in this exercise to see if they are more likely to decide to discontinue the use of the monitoring system.

CONCLUSION

Integrating ethics into the IS curriculum is a difficult but necessary task for educators. A number of pedagogical methodologies and techniques are needed to provide educators with the tools to address ethics in the IS arena. This paper presented a multi-method approach used by the author to teach ethics to undergraduate business students. The same methodology should be applicable to graduate students and to educational programs within the business sector.

A major premise underlying this approach is that in order to raise the students' consciousness about ethical issues, the students must be challenged to experience conscious ethical conflicts and to incorporate their own values into solving ethical problems. Ethical decisions must take into consideration the positions of the stakeholders and the potential outcomes of the decision for each of the stakeholders.

The role of the IS educator is not to teach what is right or wrong but to teach the students to care about ethics and to provide them with tools and a context in which to apply their own values to making ethical decisions. Can we afford not to do it?

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Author's Biography

Richard Glass is an Assistant Professor of Computer Information Systems at Bryant College in Smithfield, Rhode Island. He holds a BA from the University of Manitoba, an MBA from the University of Western Ontario and a Ph.D. in MIS from Concordia University. Dr. Glass has had papers accepted for publication on the topic of ethics in *The Journal of Computer Information Systems* and *the Journal of Business Ethics*. He is a Fellow of the John Hazen White Sr. Center for Ethics and Public Service and is involved in providing ethics seminars and training for the public sector. Dr. Glass' current research interests include information ethics, IS education and computer assisted decision making. He has recently received a Department of Defense research grant to study the transfer of high technology from the military to private industry.



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