

***An Exercise in Ethical-Empowerment:
Integrating Ethics in an Introduction to Computers Course***



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A simple exercise and faculty training facilitates integration of ethics within existing course content.



Introduction to Computers Course

Provides ethics exposure for a large number of students from many disciplines in their first or second year of college

Provides students with awareness of ethical issues and, more importantly, awareness of sources that address the evaluation of these issues

Provides students with basic knowledge to develop arguments to support or refute "ethical" situations

Provides basic skills that can be applied outside the context of computers and information technology

Prompted simple but useful ideas for integration

Consider ethics content when evaluating textbooks

Discuss ethics chapter/sections early in the semester

Seek and utilize the sidebars, discussion questions, and excerpts related to ethics found in most chapters

Incorporate and discuss current "ethical" events

Faculty training through an "Interdisciplinary Research and Training Program in Ethics for Business, Science, and Engineering in the Puerto Rican Context (NSF grant SBR-9952958 and 9810253) has helped us develop exercises for integrating ethics across the curriculum. Two retreats and related activities provided the background for faculty to feel comfortable with the idea of integrating ethics into their courses. Some of the ideas developed were to consider ethics content when adopting new textbooks, discuss topics in ethics earlier in the semester, utilize sidebars and discussion exercises related to ethics found in many books, and to incorporate a discussion of current ethical issues.

Many more elaborate exercises emerged from the general discussion. One such exercise integrates ethics into the course content of an Introduction to Computers Course. This exercise provides exposure to ethics for a large number of students from many disciplines in their first or second year of college, provides them with the basic skills to develop arguments to support or refute ethical positions, and provides basic ethical skills that can be applied outside the context of computers and information technology.

An existing textbook exercise provides the basis.

An adaptation of a text book exercise that requires students to consider whether a scenario is a computer crime or not.

The adaptation modifies the exercise to . . .

Provide more room for discussion

Suggest that the issues are not just "black or white"

Prompt students to go beyond treating all scenarios as computer crimes

Provide more opportunity to discuss issues outside the context of computers and information technology

Students evaluate and discuss whether the scenarios are ethical or not.



The first step of the exercise is to have students individually evaluate 8 to 10 scenarios individually using the following 3 questions:

"Do you think this situation is common/realistic?" (Yes or No)

Helps emphasize that we are considering real world issues

"Do you think this situation is ethical/unethical?" (Ethical or Unethical)

Students provide an intuitive answer

"Do you think others may disagree with you?" (Yes or No)

Helps illustrate that the issues are not "black or white"

The first question emphasizes the fact that we are considering real-world issues. The second question asks students to provide an intuitive answer by evoking an honest, anonymous opinion on the issue. The third question serves to illustrate that the issues are not "black or white".

The scenarios can be taken from a variety of sources: from textbook exercises, from the newspaper, from novels and movies, in other words, any source that suggests something provocative and realistic. Many of the cases we developed in our NSF ethics initiative have been adopted to fit into this exercise.

Informal and Formal Discussion of Scenarios

For example: discuss whether using a computer at work to send e-mail to relatives is ethical.

Can generate 20-30 minutes of discussion

Some students will argue one extreme, some the other

Some students will take an "it depends" stance

Students will offer analogies based on the telephone, fax or regular mail

Some students will provide their own real world experience


The discussion reveals the intricacy of the issues

During the first step, students reflect on the issues individually. In step two, the instructor leads an informal group discussion of a few of the scenarios. For example, the class could discuss whether using a computer at work to send e-mail to relatives is ethical. This simple statement has often generated 20 to 30 minutes of lively discussion. Some students will advocate one extreme (that the action is unethical) while others will argue the other extreme (that the action is customary and ethically permissible). Other students will try to secure the middle ground by citing circumstances in which it is ethically permissible (when workers are taking a break) and others when it is impermissible (when a worker spends too much time doing this).

Even as simple an exercise as this gives students good practice on framing moral arguments. Students will offer analogies based on the telephone, fax, or regular mail. Many offer examples from their own real-world experiences. Discussing the scenarios familiarizes students with the complexity of the issues, gives them practice in drawing analogies with their own experiences, and helps them to frame moral arguments.



Ethical Decision-Making Tests Provide Insight and Focus



The informal group discussion sets up the next stage since students already have raised many relevant issues in their comments. In the third step, several intuitive ethical tests are applied to two or three of the scenarios.

Reversibility: Would I think this a good choice if I were among those affected by it?

Publicity: Would I want this action published in the newspaper?

Harm: Does this action do less harm than a possible alternative?

These tests help students to formulate supporting arguments that evaluate the scenarios. Often during the informal group discussion, these tests have already been employed either by the students themselves or informally by the instructor. In either case, it is important for students to realize that they are thinking already in ethical terms and that their ethical reflection is complex and sophisticated. It is also helpful to use local idioms for expressing these notions (especially in Puerto Rico): the expression, "putting yourself in someone else's shoes" is, for example, a good way of presenting the reversibility test. This helps students realize that their parents, teachers, and religious leaders have passed on much of this "wisdom" to them.

***Student Groups Re-evaluate Scenarios with Ethics
Tests***

The next step allows students to apply the ethics tests. In groups of three or four, the students select two or three scenarios and re-evaluate them, using the tests to sharpen their ethical arguments. The results are impressive: students quickly reach a consensus, back their position with well-constructed ethical arguments, and emerge from the discussion with more confidence. They are, in short, ethically-empowered. A debriefing session follows in which students summarize their group results with the rest of the class. This, in turn, generates more discussion.

***Closure: Brief Discussion of the Importance of
Ethics***

totality. Issues that can be raised: (1) awareness that ethics affects our behavior, (2) incorporating ethical considerations early in the decision-making process helps to avoid ethical dilemmas later on, (3) we can learn from past problems and adjust future actions to avoid their repetition, (4) everybody practices ethics, not just the so-called expert, and (5) generally speaking, "Good ethics is good business." We conclude the exercise with the slogan, "Be Ethical, be Wise."

*Some students want to learn more...where to go
from here?*

it changes the student's perspective on ethics in the direction of empowerment. In fact, it promotes ethical-empowerment in several ways.

1. Students learn to recognize ethical problems in real-world contexts.
2. Students discover that they are already thinking ethically. Employing the ethics tests produces a sense of recognition in the students of skills they already possess.
3. It gives students practice in formulating ethical arguments and gives them more confidence.
4. It excites further interest that often leads to follow-up activities.
5. This is an exercise that can be used by instructors who are not experts in ethics and can be integrated into the content of their classes. In fact, through careful selection of scenarios, students can be led to see how ethics is a natural and essential part of a real-world practice such as engineering, computer programming, or strategic planning.