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Ethics and Academia

The importance of discussion about ethical conduct cannot be denied. A quick review of one professional newsletter [American Society of Civil Engineers (ASCE) News] reveals five major articles in the past year regarding ethics and professional conduct.[1,2,3,4,5] During his tenure as ASCE President, William Henry, P.E. brought the ethics issue to the forefront. His comments at the Excellence in Civil Engineering Education (ExCEEd) workshop at West Point Academy in July of 2005 [witnessed by the author] stressed these issues. ASCE has further supported the discussion of ethics in the Civil Engineering discipline by adding a half page column in the monthly newsletter ("*A Question of Ethics*") and by producing and distributing a video aimed at addressing a broad spectrum of ethical dilemmas.[6] Indeed, the ASCE website lists ethics as the cornerstone of civil engineering practice.[7]

Accepting the importance of ethical debate, one must ask if ethics should be, or even can be taught in the university environment. Or is this topic more appropriately the responsibility of parents during a child's formative years? One could argue that the groundwork for ethical conduct is laid in the moral development provided by the family during a student's childhood. While the discussion of broader moral topics most assuredly rests with parents, the collegiate environment surely plays an important role in the development of professional ethics. For many students there may be no other place to discuss career-specific ethical issues prior to employment.

Ethics lessons in academia may be over-simplified in order to appeal to a broad range of disciplines, and likewise may fall short of actual experience. Alternatively, an ethics lesson may be constructed to be very specific in order to present a detailed analysis. One pitfall of this methodology is that many students may not see a future connection to their career and become uninterested.

Broad topics provide an environment that will include the majority of the students and facilitate open discussion. While this approach may not apply to specific issues encountered in practice, it does provide an awareness and basic thought process to evaluate ethical questions in the future.

The Difficulties in Teaching Ethics

Students often struggle with ethics lessons because the issues presented in a classroom may rely upon business knowledge that they do not yet possess. The inability of the student to visualize how the ethical question will impact them in a real sense may lead to an apathetic response. Case studies often include detailed information that does not relate to the student's expected career choice, thus heightening their apathy.

Another difficulty of teaching ethics is forecasting the topic. Once the students realize that the daily topic is ethics, they switch into a thinking mode that attempts to search for a right answer,

often even before even hearing the question. This "prepared" mindset somewhat negates the instructor's intention. Demonstrating how the "wrong" option is often easier to select in the real world is often more dramatic. Ethical questions for the practicing engineer do not arrive with a flashing marquee telling the engineer there is an "Ethical Question Approaching, Make the Right Choice". They are subtle, and many times the individual is embroiled in controversy even before they realize they are in an ethical dilemma.

Overcoming the Difficulties

One tool the instructor can use to overcome the difficulties in teaching ethics is to draw from personal experience. All practicing engineers have encountered some type of ethical dilemma, albeit hopefully in conjunction with a minor issue. By using personal experience, the instructor reinforces the idea that this topic is one that the student will inevitably encounter, that it will not be a simple issue to resolve, and that forethought into how the student will react in these situations may help them in their careers.

A simple example of how this can be used in a class involves the subject of safety factors. Assume an engineer designs a project using appropriate safety factors. To provide an economical design, the engineer is likely to design close to allowable limits. After construction, while reviewing as-built drawings the engineer realizes a small construction change has reduced the safety factor just below those allowed by code [say from 2.00 to 1.97]. Technically the structure does not meet code, but the cost of changing the project is likely to be steep. The physical risk of not correcting the deficiency is probably minimal, but the legal risk may be quite large.

This simple scenario highlights the subtlety of ethical questions, is readily transferable to the students actual experience [they probably have made such a minor mistake in some homework assignment], and is "real" in the sense that it could happen to any type of engineer in a variety of situations.

A second tool to draw students into the ethical discussion is to ask about their own ethical dilemmas during school. Without discussing specifics, almost all students are able to recount at least one issue of academic dishonesty they observed. This short exercise quickly demonstrates the commonality of ethical choices we experience on a regular basis.

A final tool the instructor may use to heighten the discourse in ethical questions is to simplify examples so that the discussion is more inclusive. Published, detailed case studies might possibly be simplified so that discipline specific details are removed and the topic becomes more applicable to all class members. By doing this, the majority of the students will feel more receptive to drawing from their own experiences to support their comments and the teaching environment becomes more interactive.

A Sample Case Study

One specific case study used by the author was taken from a column in a newsletter.[8] While the actual case study was quite detailed, the information used in class was reduced to simplify the problem and appeal to a broader audience. In addition, the problem statement included the word "you" to personalize the dilemma for the students.

The modified case study was presented as follows:

> You are an engineering intern working for a large firm. The firm is involved in a lawsuit regarding a project in which you had a minor role. You receive a package addressed to you from the opposing counsel. You open and read the first few pages before realizing that the lawyer intended this package to go to his own client. You now realize the envelope was obviously mislabeled. What do you do?

This question leads to a series of discussions aimed at slowly eroding the ethical judgment of the audience.

The Teaching Methodology

The primary goal in this method is to first establish the correct, ethical response. Then, by varying the way in which questions are asked, the instructor leads the students down the wrong path, without recognizing the implications of their answers to seemingly harmless questions. Ultimately the instructor reveals how this path down the slippery slope has compromised their beliefs, and in doing so brings the students to a realization that ethical issues are often complex, rarely obvious and can be presented in a distorted fashion that may lead them to the wrong answer.

Using the modified example above, a simple question sequence might be as follows:

Q1. What would be the correct thing to do?

Q2. Should you notify the opposing lawyer that you read some of the material?

Q3. Do you think legally you are allowed to read the material?

Q4. What if a colleague [and very close friend of yours] said you should read the material or asked to look at documents?

Q5. What if your boss, who has his PE license, encouraged you to read the material?

Q6. What would you do if your boss asked for you to give him the material?

Q7. What if your boss said he consulted the company lawyer and the lawyer indicated that it was alright to read the material?

Q8. What if the company lawyer asked for the material?

Q9. Through all of these questions, has it at any time become more ethical to read the material?

There is a distinct goal for each question in this sequence.

Question 1 is used to establish the moral climate of the class. In my experience, and hopefully in yours, the students will know the correct answer is to stop reading the material and return it to the sender.

Question 2 is simply to distract the class from their first response.

Question 3 is to distinguish between legality and ethics. While we expect them to be identical, legal goals and ethical goals are not always the same. Often students will see that they are legally allowed to read the material because it was addressed to them.

Question 4 is to establish the effect of peer pressure on ethical conduct. Many students will read the material if a close friend encourages them too.

Question 5 begins a series of questions aimed at the power of authority to persuade individuals to violate their own sense of ethics. Students are often predisposed to defer to someone who has licensure, without question the ethics of this authority figure.

Question 6 is a continuation of Question 5, however now the student is asked to go further down the "slippery slope". Many students will allow the authority to make the ethical choice to read the material and feel absolved of wrongdoing.

Question 7 heightens the authority question and further obscures the ethics decision with legality.

Question 8 is a continuation of Question 7, but adding self absolution into the mix.

Question 9 brings us full circle. By now many of the students will have in some way eroded their own initial decision. This is the epiphany stage where the instructor asks "when did it become acceptable to violate your first decision?"

The author's experience is that the last stage of this example has a powerful effect on students' realization that they can easily violate their own ethics. A brief summary speech by the instructor about being diligent, watchful and careful in their actions is now more readily accepted as an important component in their own careers.

This example reinforces the key ideas that ethical questions are often subtle, and yet complex; can easily transition from obvious to obscure; and can be distorted by colleagues and authority figures, whom one cannot always assume are acting ethically themselves.

Application in Different Settings

While the author's classes are usually small [less than 30 students], a modified version of this approach could be attempted using either interactive classroom technology [i.e. – student remotes or "clickers"]. In this way the instructor can pose the same ethical questions using the varying word choices and display class results in real time. The anonymity of the response may actually benefit the instructor and help direct the questioning process.

Another alternative for large classrooms would be a discussion of the scenario by a small panel of students in front of the class. Volunteers would likely work best, since the act of volunteering is somewhat exhibitionist. As such those who volunteer would be more predisposed to participate in the panel discussion. By using 6-10 students, the panel would also have some support structure and therefore may be more likely to vocalize their responses.

Conclusion

Ethics instruction can be easily integrated in any class. A brief, 15 minute discussion can have a powerful impact in highlighting the tricky nature of ethics questions that most likely all engineers will face in their careers in some form.

Instructors should focus on non-traditional methods and select or modify examples to appeal to a broad spectrum of students. In this way an interactive atmosphere is established and students are more likely to add to the discussion.

By stressing the need for careful consideration in their professional actions, and by demonstrating a sincere desire to help students make the right choices, this exercise can be fun, rewarding, and often surprising, for both the instructor and the students.

References

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