



An Ethics Case Study for Engineering Technology Students

Dr. Barbara L. Christie, State University of New York, Farmingdale

Barbara Christie is a professor and the Dean of the School of Engineering Technology at Farmingdale State College, recently arriving on Long Island after 20 years at Purdue University in Indianapolis, Indiana. As a clinical engineer with degrees in biomedical engineering, she has authored several books exploring the branch of engineering technology that supports the safe and effective use of medical equipment in the clinical setting. In addition, Dr. Christie's research has explored the experiences of STEM learners in an effort to understand persistence and to support academic success. Her goal to promote degree attainment, especially by under-represented learners, including women, is well-matched to the Farmingdale campus mission.

An Ethics Case Study for Engineering Technology Students

Abstract

Integral to student development, the exploration of ethical principles is deeply connected to ABET curricular requirements associated with respect for diversity and professionalism. Case studies can serve as an impactful tool to support cognitive and personal growth prior to student graduation. While engineering technology ethical case studies exist, most have a technical focus. In contrast, the *ASEE Prism* case study related to the publication of a letter to the editor from Wayne Helmer [1], a professor of mechanical engineering in Arkansas, offering the “truth about the homosexual /lesbian/ bisexual/ transgender lifestyle” can prompt a classroom discussion of sexual orientation within an engineering and legal context. The event offers engineering technology students a context-based tool to evaluate the clash between statements of policy, free speech, intolerance, and opinion. This case study exercise is designed to illustrate how professional and ethical standards intertwine and relate to real life situations while avoiding a debate over homosexuality and personal beliefs.

Introduction

Scales [2], an ethics educator, suggested that the academic environment offers faculty and students opportunities for “polite and reasoned interactions...and the ethical reasons behind such behaviors” (p. 1). Scales explained that civil discourse requires a respect and consideration for others. “Civility is a quality that requires the restraint of angry emotions directed toward others” (p.2). The root of civil discourse transcends the individual and focuses on the interests of the whole society, the common good. This framework serves as an excellent reference for the evaluation of a discipline-specific case study by engineering technology students. Because civility permits peaceful disagreements, educators can promote a free and open forum for focused discussion and thoughtful debate regarding editorial decisions.

The Engineering Technology Accreditation Commission (ETAC) of ABET establishes general criteria for student outcomes associated with program accreditation [3]. The curriculum of ETAC programs must include “topics related to professional responsibilities, ethical responsibilities, respect for diversity, and quality and continuous improvement.” These curricular components are further clarified with the ABET Policy on Diversity [4]. This statement encourages a commitment to “diversity and inclusion through developing and using the talents of all persons.” With these guidelines in mind, engineering technology educators are encouraged to promote student development and reflection on diversity as an ethical underpinning of professionalism.

Ethical challenges or discussions often lack binary decisions. Many times, no single "correct" solution exists. Typically, one can identify a range of solutions that are clearly wrong and a range of solutions that are better than others. This range of responses is opposite to the "check the answer in the back of the book" instruction in circuit analysis or other engineering technology coursework. Some students find this aspect of ethics personally challenging.

Offering students a case study that is directly associated with the engineering profession yields a context-based discussion far more valuable and productive as students develop their professional identity. The personal life and professional practice of graduates will be interlaced regardless of how hard educators try to disconnect the two. Maxwell [5] stated "one of our problems is that ethics is never a business issue or a social issue or a political issue. It is always a personal issue." If ethical decisions are ultimately personal, even when connected to the workplace, exploration of the statements made by Helmer and the subsequent reactions can help students understand and develop a balance between professional ethics and personal views.

A fundamental feature of professional practice is compassion. This perspective is unique because students may report that technical ability would be the cornerstone of an occupational identity. How is compassion defined? One definition is the recognition of the interconnectedness of all things. Another is simply to care about the people served by a discipline. Both definitions are associated with respect, a cornerstone of the ABET Diversity Policy. Helmer's comments offer a stance ready for critique by students developing this ABET curricular requirement learned capability.

Background

The concept of free speech began long before the creation of the founding documents of the United States. Freedom of expression as a human right forms the cornerstone of many societies. The First Amendment to the Constitution of the United States protects citizens from government restrictions or control over speech, press, and association. Personal expression is generally protected in public forums. However, a personal right to privacy supplants free speech when people are located within private spaces. Only government employees have protected speech rights preventing workplace control (such as by editors or employers). In this *ASEE Prism* case, courts have cited the First Amendment as a legal tool to permit Helmer, as a faculty member, to publish works that are controversial or reflect personal beliefs rather than those of his university [6,7].

When expressed opinions are racist, anti-Semitic, homophobic, sexist, or viewed as derogatory and degrading, content is often labeled as *hate speech*. Regardless of content, the First Amendment protects the expression of these views [8]. Often, ideas identified as hate speech are extremely negative and describe a diverse group with broadly unifying humiliating themes. Some groups and individuals see restrictions on this type of speech as a desire to be politically correct [9]. Balancing hate speech with free expression has been associated with several prominent court cases. In *Doe v University of Michigan* [10], the university's hate speech policy was ruled unconstitutional because it punished constitutionally-protected speech. The United States Supreme court in *Texas v Johnson* made it clear that speech cannot be prevented simply because "society finds the idea itself offensive or disagreeable [11]".

Speech may be regulated through codes of conduct created to establish policies or guidelines for the expression of ideas that may be inflammatory or degrading. Some policies attempt to define hate speech as libelous or containing threatening language. Speech codes on college campuses are evaluated and monitored by the group *The Fire*. Focused on protecting individual rights, a

speech code review and report is produced each year. A review of this *ASEE Prism* case was published here: <http://thefire.org/article/16290.html>

Many engineering technology programs are ABET accredited. The ABET policy regarding diversity encourages *respect* for human qualities including sexual orientation [4]. As educators guiding student development, Helmer's article offers a discipline-specific tool to discuss respect, its definition and concept. The case study exercise does not ask learners to form an opinion regarding sexual orientation or religious ideas. Helmer possesses the right to believe the ideas espoused in his letter. Instead, the case study analysis focuses only the decision by ASEE to publish the message.

Events

The case study begins with a review of the *Prism* article on diversity and sexual identity published in October, 2011 [12]. Engineers interviewed for the article described the challenges faced throughout their academic and professional careers because of their gender identity and sexual orientation. The article also discussed groups who are trying to improve the acceptance and working conditions of LGBT (lesbian, gay, bisexual and transgender) individuals in science, technology, engineering, and math disciplines.

Following the publication of the 2011 *Prism* article, an editorial piece was published in the *Email from Readers* section of *Prism* by Helmer [1]. The brief letter included a photo from the 2011 article and statements explaining the negative consequences of sexual preference. No references were provided but the content was written to "teach the truth" to the subjects of the 2011 article and other LGBT individuals. References to the Bible were included. Word choices included: promiscuous, disease, destructive, detrimental. Helmer explained that LGBT engineers do not need encouragement or approval.

In a letter to the board of directors of ASEE, the executive director of ASEE, Norman Fortenberry explained that he approved the publication of the Helmer's email over the objections of *Prism* editorial director. Previously, the editorial director had explained to Helmer that his submission could not be published because it advanced a particular religious belief. However, when Helmer threatened to end his ASEE membership, Fortenberry supported the publication in the hopes of a free exchange of ideas, demonstrating that *Prism* is an open forum.

Many reactions were published across the Internet soon after Helmer's letter appeared. The opinions are posted online on an ASEE website <http://www.asee-prism.org/email/> Some people clearly supported publication and some people were deeply upset. An apology was published by Fortenberry at <http://www.asee-prism.org/from-the-publisher/> The presidents of ASEE explained in an October 2013 *Prism* article that Helmer's letter should not have been published [13].

Student Activities

The sequence of events offers students the opportunity to explore the case with a chronological approach. The purpose of the case study is to assess the factors associated with the publication

of Helmer's letter, not to evaluate sexual orientation or religious beliefs. To begin the case study students explore the initial published article in *ASEE Prism* related to diversity. Then Helmer's letter to the editor is considered and analyzed within the constructs of personal opinion, tolerance, and civility. Next, students review the documents associated with the *Prism* discussion related to Helmer's submission that consumed months of debate. Finally, public commentary associated with the letter are analyzed. Through writing or discussion prompts, students will explore ethical constructs that form part of their professional identity.

Part I can be explored by the faculty member and presented to the students or offered as independent research.

Purpose: students are not to assess the content of Helmer's letter regarding sexual orientation or religious expression. Instead, learners should determine if Helmer's opinions related to these ideas should have been published in a discipline-specific magazine.

Part I Introduction

Student prompts:

1. Research the First Amendment of the Constitution. Define and describe the constitutional protection of freedom of expression. *ASEE Prism* is a private publication for members of a society. Does this alter the rights of individuals to express themselves within the publication?
2. Explore the concept of *hate speech*. Define and describe this. Is there a uniform definition? Do the concepts of "derogatory" or "degrading" depend on the perspective of the listener/reader?
3. What is civility? How is civil discourse defined? Be sure to observe that civility does not imply harmonious agreement or uniform ideas. Instead civility rests firmly upon factual evidence and respectful arguments.
4. What is a code of conduct? What is a policy on diversity? How do these guidelines influence behaviors, rights and responsibilities?

Part II Case Study

1. Read *ASEE Prism* article from October, 2011 *Secrets are Out*. Summarize the article in one paragraph.

2 Read *ASEE Prism* article from September, 2013 *Emails from Readers*.

Note: this step does not ask the student to form an opinion regarding the validity or appropriateness of the assertion that LGBT engineers should not be "encouraged." In addition, students should not assess the religious lens through which the position is taken.

Summarize the opinions presented. Given what you have learned about hate speech, does this qualify? How do your personal beliefs influence your position regarding the hate speech benchmarks of inflammatory, derogatory, harassing, libelous, or disrespectful. Does Helmer have an obligation to be compassionate or respectful? An ethical responsibility?

3. Read Fortenberry's letter to the board of directors.

Do you agree with Fortenberry's assessment that Helmer's piece was not mean-spirited? In his original submission, Helmer provided numerous scholarly citations for his positions on the negative effects of gender identity. The references were not included in the published article because of concerns over the validity of the sources. Should the editors have included the citations? Would the inclusion of citations improved public reception of the letter or would the lack of scholarly status of the citations made the situation worse? Do scientific/scholarly references change the validity of the argument?

4. Read the ASEE Statement on Diversity at <https://www.abet.org/about-abet/governance/board-of-directors/policies/>

Does Helmer's opinion differ from the policy? In what way, specifically?

If Helmer's opinion differs from the policy, should this have guided the publication of the letter? Fortenberry explained that publication of Helmer's piece was supposed to have included a disclaimer citing the statement on diversity. Might this have changed the public reaction?

5. Read Fortenberry's apology and the letters from the presidents, both printed in the October, 2013 issue of *ASEE Prism*.

Do you think the comments are based on the reactions of readers and the public, in an effort to stem the negative press or do you think the writers genuinely feel the letter should not have been published?

6. Read the published responses to the piece at <http://www.asee-prism.org/email/>

Several writers argue that Helmer's position is not based in fact. If so, should this have changed the publication of the letter? Does a message need to be factual?

7. Opinions about Helmer's stance and the publication of his opinions varies widely. Select a position – to publish or not - and list evidence to support your decision.

Conclusion

The decision to publish an opinion piece in *ASEE Prism* characterizing LGBT engineers in negative ways offers engineering technology students the opportunity to explore the concepts of free expression and civility within the engineering technology domain. Prompts for writing exercises or discussion promote student exploration of ethical themes surrounding free speech concepts. With an emphasis on the decision to publish in contrast to an analysis of the arguments, students can view the complex facets of ethical constructs and professional identity.

References

- [1] W. Helmer, "Is all diversity good?" in *ASEE Prism*, vol. 23, no. 1, p. 10, 2013.
- [2] S. Scales, "Teaching civility in the age of Jerry Springer." *Teaching Ethics*, vol. 10, no. 3, pp. 1-20, 2010.
- [3] "Criteria for Accreditation of Engineering Technology Programs" [online], Available: <https://www.abet.org/accreditation/accreditation-criteria/criteria-for-accrediting-engineering-technology-programs-2019-2020/#GC5>
- [4] "Diversity and Inclusion," [online], <https://www.abet.org/about-abet/governance/board-of-directors/policies/>
- [5] J. Maxwell, *Ethics 101: What every leader needs to know*. New York: Warner Books, 2005.
- [6] *Maples v Martin*, 858 F2d 1546 (11th Cir 1988)
- [7] J. W. Lowery, "Understanding the legal protections and limitations upon religion and spiritual expression on campus," *College Student Affairs Journal*, vol 23, no. 2, pp. 146-157, 2004.
- [8] I. Maitra, and M. McGowan, *Speech and harm: Controversies over free speech*. Oxford, United Kingdom: Oxford University Press, 2012.
- [9] W. A. Kaplin, and B. A. Lee, *The law of higher education* (4th ed.). San Francisco, CA: Jossey-Bass, 2007.
- [10] *Doe v University of Michigan*, 721 F Supp. 852 (E.D. Mich. 1989)
- [11] *Texas v Johnson*, 491 U.S. 397 (1989).
- [12] J. Schock, "Secrets are out." *ASEE Prism* vol 21, no. 2, pp. 44-47, 2011.
- [13] K. Galloway, N. Altiero, and W. Buchanan, "Letter was inappropriate." *ASEE Prism*, vol. 23, no. 2, p. 6, 2013.