



The Brewsters: A new resource for interprofessional ethics education

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Abstract

Background: One of the barriers to interprofessional ethics education is a lack of resources that actively engage students in reflection on living an ethical professional life. This project implemented and evaluated an innovative resource for interprofessional ethics education.

Objectives: The objective of this project was to create and evaluate an interprofessional learning activity on professionalism, clinical ethics, and research ethics.

Design: *The Brewsters* is a choose-your-own-adventure novel that addresses professionalism, clinical ethics, and research ethics. For the pilot of the book, a pre-test/post-test design was used. Once implemented across campus, a post-test was used to evaluate student learning in addition to a student satisfaction survey.

Participants and research context: A total of 755 students in six academic schools in a health science center completed the activity as part of orientation or in coursework.

Ethical considerations: The project was approved as exempt by the university's Committee for the Protection of Human Subjects.

Findings: The pilot study with 112 students demonstrated a significant increase in student knowledge. The 755 students who participated in the project had relatively high knowledge scores on the post-test and evaluated the activity positively.

Discussion: Students who read *The Brewsters* scored well on the post-test and had the highest scores on clinical ethics. Clinical ethics scores may indicate issues encountered in mass media.

Conclusion: *The Brewsters* is an innovative resource for teaching interprofessional ethics and professionalism. Further work is needed to determine whether actual and long-term behavior is affected by the activity.

Keywords

Ethics, ethics education, interprofessional education, professionalism

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Background

In “Why Our Ethics Curricula Don’t Work,” Bertolami¹ provocatively begins his article with this claim: “No one has ever done the right thing because of taking an ethics course in dental school” (p. 414). He also notes that the universal answer to most of society’s problems is “education.” When, for example, a healthcare provider is disciplined for unethical behavior, his or her license is sometimes revoked and often some kind of educational program in ethics and professionalism is required for the offender to reenter the profession. “But,” Bertolami¹ writes, “what are we in the schools supposed to do with them? Enroll them in a continuing education course and then test them on the definition of the word ‘beneficence’? No one’s behavior changes as a result” (p. 415). He continues, “the difference between knowing the answers to questions on a test and assimilating the meaning of those answers into one’s professional and personal identity is crucial,” because “[s]tate dental boards, dental associations, legislatures, and the universities themselves should know better. It just doesn’t work that way, but we pretend it does (which is an ethical issue in itself)” (p. 415).¹ Bertolami¹ believes that “our ethics courses are inadequate in content and form to the extent that they do not cultivate an introspective orientation to professional life” (p. 415). He suggests that students need to address on a personal and existential level the question as to *why* one ought to be ethical in the first place. Until we engage students in this way, he argues, teaching them various ethical theories, procedural methods, or historical cases will have no effect in terms of changing the inner person: “The difference between living ethically and studying ethics,” he writes, “is the difference between playing a sport and reading the rulebook” (p. 417).¹

Ten years after Bertolami’s work, ethics education continues to be the recommended solution to enhance ethical behavior within the health professions.^{2,3} Other authors agree that emotions involved in ethical decisions must be part of ethics education.⁴ Despite the continued call for ethics education, however, authors still report a lack of evidence that ethics education has an impact on the behavior of healthcare professionals and unethical and unprofessional behavior continues by healthcare professionals and students.^{5–12}

Responding to Bertolami’s critique, *The Brewsters* is an attempt at making studying ethics more engaging and introspective.¹³ Written as a “Choose Your Own Adventure” (CYOA) novel, *The Brewsters* allows readers to confront life-changing ethical dilemmas and make choices without facing genuine consequences. Compared to passive learning through didactic classroom lectures, CYOA learning is inherently active. Readers must make decisions for the narrative to progress. For example, in *The Brewsters*, if you make a poor decision (such as posting inappropriate pictures on a social media site), you receive a fictional letter from your dean and have to start over.

This article describes the creation of *The Brewsters* and early assessment findings. We begin by situating *The Brewsters* in recent pedagogical discussions within health professional ethics education and suggest how *The Brewsters* intersects with these debates.

Recent pedagogical discussions

In a systematic review of research on faculty and students’ perceptions of ethics education, Cannaerts et al.⁵ report that students and faculty perceive active learning strategies preferable to traditional lectures. The most common active learning strategies were case studies, small group discussion, problem-based learning, and reflective exercises. In a comparison of problem-based learning to small group discussion, Heidara et al.¹⁴ found that problem-based learning was more effective. Henderson and Malone¹⁵ reported on using fairy tales as case studies; however, they did not include data on the effectiveness of the methodology. Authors have also examined the effectiveness of ethics education in an online versus face-to-face format and found the online format as effective as face-to-face courses.^{16,17}

Coulehan¹⁸ offers a critique of the teaching of ethics and professionalism in medical schools, which is consistent with Bertolami's critique of ethics and professionalism teaching in dental schools: "I believe the movement to teach and evaluate professionalism in medical training is threatened with failure because the intervention is too simple, too neat, too flimsy, and doesn't engage the problems it attempts to address" (p. 892). Coulehan believes that the teaching of ethics and professionalism is important—as does Bertolami—but also thinks current efforts providing this education (such as "whole-person" medicine, biopsychosocial medicine, medical humanities) engage the mind but not the heart. What does Coulehan think the answer is, and how does he think ethics and professionalism education *can* engage the heart as well as the mind? He suggests that "narrative-based professionalism" is the answer. Coulehan defines narrative-based professionalism as a method of teaching and learning that inculcates elements of professionalism, however defined by the profession, by means of narrative. This learning happens in two ways: (a) by learning about the grand narrative of one's health profession (e.g. in medicine, the Hippocratic Oath, or, in nursing, the life of people such as Florence Nightingale) and (b) by fitting one's own personal narrative into the narratives of what it means to be a health professional. Otherwise, Coulehan¹⁸ suggests the elements of professionalism remain "mere academic abstractions, like the bioethical principles of autonomy and beneficence" (p. 893).

The Brewsters is an interactive narrative approach to teaching ethics and professionalism designed to help students connect their own personal lives with narratives of what it means to be a health professional. The novel intentionally focuses on the mundane and practical issues that are likely to interest students entering a profession, rather than hoary grand narratives beyond their personal experience or interest. Our approach is meant to demonstrate that living out ethics and professionalism is a practical matter.

Objective

The objective of this project was to create and to evaluate an interprofessional learning activity providing basic education on professionalism, clinical ethics, and research ethics to students in all schools of a health science center.

Design

The context

As part of the 10-year accreditation process, the university was required to design and implement a 5-year Quality Enhancement Plan (QEP) to enhance student learning across the campus. As a health science campus, the leadership team realized ethics was a topic area of concern for all six health science schools. Baseline assessment determined that all degree programs had content on ethics. In some majors, ethics was a separate course, while in other majors it was integrated into multiple courses. Few academic programs addressed ethics during the first semester. Following the development of a tool to assess ethical decision-making, baseline data were collected on all graduating students from the university in all six schools.^{8,19} Findings revealed that students were satisfied with their ethics education and perceived themselves to be competent in ethical decision-making. However, direct assessment of their skills revealed that they had difficulty even identifying ethical dilemmas, and few students could describe the application of ethical codes or principles in their ethical decision-making process. As a result of this baseline assessment, multiple strategies were designed to improve students' ethical decision-making skills. It was determined that one strategy should assure that all students are introduced to ethics concepts early in their education at the university (for most students during their first semester). Guidelines for this activity included completion by most students in the first semester they are enrolled in the institution, requiring minimal faculty resources, not being bound by place or time, and that content must be applicable across all schools

Table I. Professionalism (Act I).

Definition of a profession
Codes of ethics
Interprofessional ethics
Misleading titles
Social networks
Academic integrity and academic misconduct
Self-regulation (personal self-control and self-care)
Duty to report (responsibility to maintain group's standard of practice)
Confidentiality
Sexual relations and harassment
Accepting gifts from industry
Cultural understanding
Conscientious objections

(interprofessional) at all degree program levels (BSN-MPH-MD-DDS-PhD). The activity was not meant to replace other courses or activities on ethics, but to provide a basic foundation to ethics and professionalism for all students. *The Brewsters* was, thus, created as the introductory activity on ethics.

The Brewsters

The Brewsters is an introduction to professionalism and interprofessional ethics, consisting of a fictional narrative interspersed with fact-based instructional materials. Modeled after CYOA novels, the activity is meant to be immersive, entertaining, informative, and educational. The first draft of *The Brewsters* was written by a bioethicist with over 20 years' experience in teaching bioethics and in clinical ethics. An expert in integrating ethics and the humanities into medical schools and a publisher of nontraditional learning resources also assisted with the first draft. The first draft was then sent to an interprofessional team of nurses, dentists, a physician, attorneys, researchers, a theologian, and public health faculty. One team member had created Institutional Review Boards at two universities, and another team member chaired an Institutional Review Board. All team members had experience teaching ethics. Changes were made based on feedback from the interprofessional team, and the book was then shared with a small group of students from each school. After reviews by students, final changes were made to the first edition of the book prior to use with the first cohort of entering students.

The narrative of *The Brewsters* follows three generations of a family through encounters with students, physicians, dentists, dental hygienists, nurses, an epidemiologist, and health researchers. The story unfolds in three acts: (a) professionalism, (b) clinical ethics, and (c) research ethics (Tables 1 to 3). Professionalism was defined as the normative belief system common to health professions including but not limited to codes of ethics. In the professionalism act, topics not typically taught in ethics courses are encountered, including academic dishonesty, sexual harassment, use of social media, and substance abuse. Each act is followed by approximately 15 didactic essays that distill intellectual content embedded in the story. In each act, the reader chooses a character representing him or her in the story. In Act I, the reader can choose to be a male or female medical student. In Act II, the reader can choose to be the patient or a nurse, and in Act III, the reader can choose to be a research subject or researcher. Readers then make decisions that determine what happens next. The story is nonlinear—that is, one decision may take the reader to page X, while another decision takes them to page Y. In Act I, for example, students choose to be either John Guerra or Cheryl Stewart. John is a 25-year-old third-year medical student who comes from a working class family in Houston, Texas, and loves Willie Nelson. Cheryl is a 29-year-old African American student from Atlanta,

Table 2. Clinical ethics (Act II).

Introduction to clinical ethics
Four prima facie principles: <i>anywhere but New Jersey</i>
Ethical theories and principles
Beneficence and non-maleficence
Autonomy and paternalism
Confidentiality and informed consent
The right to refuse treatment
Rights of children and teens: the capacity to make decisions
Telling the truth: breaking bad news
Telling the truth: work excuses and disability
Telling the truth: admitting mistakes
Conflict of interest: evidence-based medicine and cost-effectiveness
Conflict of interest: cultural diversity and accepting gifts from patients
Conflict of interest: gifts from companies
Complementary and alternative medicine
Justice: preventive medicine and vaccines
Justice: access to care and the role of government
Justice: health disparities and public policy

Table 3. Research ethics (Act III).

The scientific method and research integrity
Authorship
Misconduct, fabrication, falsification, plagiarism, and data management
Nuremberg and informed consent
The Tuskegee study and Belmont report
IRB: consent and the right to withdraw
Therapeutic misconception
Placebo-controlled trials
Vulnerable populations
International research
Human use of animals in research
Institutional Animal Care and Use Committee

IRB: Institutional Review Board.

Georgia, who grew up singing gospel music, worked in an emergency room after graduating nursing school, and is now in her third year of medical school. The story begins when they receive an invitation from a professor to a pool party for new students.

Act I is designed to help students begin to form a professional identity by (a) immersing them in a story in which they have to make decisions and (b) introducing them to concepts and topics central to professionalism. John, for example, has to decide whether to have his picture taken clowning around in the pool after a couple of beers and also whether to take his friend's car keys away at the end of the party. If John allows his picture to be taken in the pool, the compromising photograph turns up on the Internet and he soon gets a letter from the Dean of Students. If John does not take his friend Walter's keys away, Walter drives his car into a tree. On the path where John does take the keys, Walter pulls out a spare key and drives his car into the tree anyway (showing that good choices do not always lead to good outcomes). In the didactic section that follows Act I, John's choices are informed by instructional materials on social networks and duty to report. From the other character's point of view at the same pool party, Cheryl has to decide how to react to a

faculty member who makes a pass at her in a hot tub. She later faces a decision about accepting the gift of a stethoscope from a pharmaceutical representative. Reading didactic sections, students learn about Cheryl's choices by reading material on accepting gifts from industry and on sexual relations and harassment. Didactic materials are designed to provide students with a basic introduction to—not a comprehensive or adequate treatment of—the topics listed in Tables 1 to 3.

Evaluation methodology

A small pilot study was conducted using a pre-test/post-test design in two health science center schools. A six-item multiple-choice test was used for the pre-test and post-test. For the evaluation of the implementation of *The Brewsters* across the health science center, a 30-item multiple-choice post-test was given to students in all six schools. Questions in the post-test were designed to assess basic knowledge from each act. For example, a question for Act I was “The arguments against accepting gifts from pharmaceutical companies include all of the following except . . . ” For Act II, a question was as follows:

Walter Brewster brings in his 17 year-old daughter, Stephanie, for a dental cleaning. Radiographs (X-rays) are a routine part of the cleaning. As you get Stephanie ready for the radiographs (X-rays), she tells you that she might be pregnant, that she does not want radiographs (X-rays), and that she does not want her parents to know. What is the appropriate course of action?

An example of a question for Act III was “Based on the Belmont Report, vulnerable populations include all of the following except . . . ” Ten questions were included for each of the three acts in the book. The questions in the post-test were written by the primary authors of the book and revised by the larger interprofessional team previously described. Cronbach's alpha for reliability of the post-test was .70. All evaluation instruments were designed by the authors to address learning outcomes for the activity. In addition to learning of content, student satisfaction with the activity was assessed using a survey.

Participants and setting

The university has six professional schools: Medical School, School of Dentistry, School of Nursing, School of Public Health, School of Biomedical Informatics, and Graduate School of Biomedical Sciences. Total enrollment in the institution for Fall 2011 was 4600 students. In order to reach each school with *The Brewsters*, the activity was incorporated through courses and orientations. The School of Dentistry received copies of the novel at orientation and the post-test delivered through “Ethics in Dentistry” and “Introduction to Dental Hygiene” courses to dental (DDS) and dental hygiene (DH) students, respectively. At the Graduate School of Biomedical Sciences, students received *The Brewsters* and completed the post-test as part of the required course, “Ethical Dimensions of the Biomedical Sciences.” Medical School students took the post-test through a required course (“Introduction to Clinical Medicine”) after receiving the book at orientation. Unlike other schools, however, the School of Nursing required completion of *The Brewsters* by undergraduate, master's, and doctoral students as part of orientation. No courses were used to deliver the post-test examination; however, completion of the post-test was required before registration for the next semester for all new nursing students. Finally, both the School of Public Health and the School of Biomedical Informatics delivered *The Brewsters* through courses, not as a part of orientation. Public Health students completed their post-test as part of “Ethics in Public Health,” while Biomedical Informatics students completed the post-test in the course “Introduction to Health Informatics.”

Table 4. Number of students who completed *The Brewsters* in Fall 2011.

School	Number of participants
School of Dentistry	124
Graduate School of Biomedical Sciences	109
Medical School	240
School of Nursing	224
School of Public Health	39
School of Biomedical Informatics	19

Ethical considerations

The study was submitted to the university's Committee for the Protection of Human Subjects and was approved as an exempt study. Students took the post-test in Blackboard, a password-protected, secure learning management system. Data were downloaded from Blackboard and stored in a password-protected computer without identifying information.

Findings

Pilot study

A total of 112 students from the Graduate School of Biomedical Sciences and 23 students from the School of Public Health took a pre-test before reading *The Brewsters* and a post-test following the activity. Paired-sample *t*-tests were conducted to determine whether pre- and post-tests were significantly different. Results indicated that test scores were significantly different for students of both schools. For the Graduate School of Biomedical Sciences, the mean for the pre-test ($M = 2.66$, $SD = 1.41$) was significantly lower than the mean for the post-test ($(M = 5.22$, $SD = 0.89)$, $t(108) = -18.07$, $p < .001$). For Public Health, the mean for the pre-test ($M = 2.91$, $SD = 1.41$) was also significantly lower than the mean for the post-test ($(M = 4.28$, $SD = 1.21)$, $t(21) = -5.59$, $p < .001$). Significant knowledge gain was observed for students of both schools.

Findings

The participants were from six schools, consisting of 755 students. Table 4 presents the breakdown of participants from the different schools. Table 5 presents the means and standard deviations of test scores by the six schools. The means and standard deviations of the test scores were relatively similar for the six schools. However, on average, students from the School of Dentistry, the Graduate School of Biomedical Sciences, and the Medical School scored higher than those from the School of Nursing, the School of Public Health, and the School of Biomedical Informatics. In the School of Dentistry, students in the DDS and DH programs also were assessed separately; DDS students earned an average of 28.13, while DH students earned 26.03. The School of Nursing involved three students groups—undergraduate, master's, and doctoral students. The undergraduate group earned an average of 24.80 out of 30, master's students earned 25.58, and the doctoral-level students earned 25.04. Out of the 755 students, 53.0% of them (400 students) earned 90% or greater on the post-test.

All students, on average, missed less than 4 out of 30 questions. A look at how students scored on particular learning objectives indicated what most students learned and areas in need of improvement in the curricula of various schools.

Table 5. Mean scores by school.

School	Overall		Professionalism		Clinical ethics		Research ethics	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
School of Dentistry	27.47	2.29	9.13	.95	9.60	.68	8.75	1.36
Graduate School of Biomedical Sciences	26.55	2.38	8.67	1.06	9.29	1.08	8.59	1.31
Medical School	26.71	2.66	8.74	1.10	9.45	0.95	8.52	1.61
School of Nursing	25.07	3.25	7.98	1.35	9.04	1.11	8.04	1.78
School of Public Health	23.56	4.12	7.82	1.37	8.46	1.67	7.28	2.20
School of Biomedical Informatics	23.21	4.16	7.42	1.47	8.58	1.50	7.21	2.28

SD: standard deviation.

Table 6. Highly achieved professionalism items.

Objective	% Students achieved
Determine steps to take when unprofessional behavior is observed	99.6
Identify academic misconduct regarding data integrity	98.9
Analyze reasons why accepting gifts from pharmaceutical companies is problematic	95.6
Appraise when it is appropriate to address oneself as “doctor”	95.2

Professionalism (Act I)

Of the 10 questions, 4 areas were highly achieved by more than 90% of students (Table 6). In this section, only two areas show room for improvement, meaning they were correctly answered by fewer than 70% of students: “Be able to detect inappropriate sexual relationships” (achieved by 68.6%) and “Identify academic misconduct relating to plagiarism” (achieved by 68.5%).

Clinical ethics (Act II)

For nearly all schools and programs, clinical ethics was the highest-scored section. Average scores ranged from DDS students at the School of Dentistry who earned 9.76 points to School of Public Health students who earned 8.46 out of a possible 10 points. As this section was the highest area of performance, no objectives encountered low performance (i.e. below 70% achievement). The top objectives achieved are listed in Table 7. The two lowest scores on clinical ethics were “Be able to outline what needs to be included on the informed consent form” (87.1% answered correctly) and “Be able to determine actions to take when confronted with an ethical dilemma” (88.5% answered correctly).

Research ethics (Act III)

Research ethics proved to be the section with lowest performance for nearly all schools. Dentistry students continued to perform highest with 9.05 out of 10 points, while Biomedical Informatics students performed lowest with an average of 7.21. Only two objectives were highly achieved by 90% or more of students completing the post-test: “Be able to identify conflict of interest in a given scenario” (95.8%) and “Recite the most widely quoted statement in the Nuremberg Code” (93.5%). The objective “Conduct research with integrity” was lowest in achievement, with only 65.8% of students answering the related question correctly.

Table 7. Highly achieved clinical ethics items.

Objective	% Students achieved
Identify individuals with decision-making capacity	98.7
Identify unethical behaviors	97.4
Know when it is appropriate to incorporate complementary and alternative medicine	95.9
Identify when a patient's autonomy is respected	94.4
Justify the need to admit mistakes	94.4

Table 8. Student satisfaction.

Attribute	Average rating based on a scale 1–5, in which “1” is Strongly Disagree and “5” is Strongly Agree
When reading the stories, the “choose your own adventure” learning method was easy to follow	4.49
“Choose your own adventure” is an interesting method of presenting information	4.42
Reading the instructional materials after each act increased my knowledge of basic terms in health professional ethics	4.26
I enjoyed the self-paced aspect of this learning activity	4.33
The time it took to complete this learning activity was just right	3.87
This educational activity provided an adequate introduction to health professional ethics	4.28
This educational activity enabled me to see ethical issues beyond my own health profession	4.18

The remaining seven objectives were achieved by an acceptable percentage of students, ranging from 74.8% to 89.5%.

Student satisfaction

After reading *The Brewsters* and taking the post-test examination, students were given the opportunity to provide feedback on the activity (Table 8). A total of 143 students across all six schools shared their opinions. Students had the opportunity to rate several attributes of *The Brewsters*.

Students were also asked to share what they thought were the most and least valuable traits of this educational activity. Several students from each school felt the most valuable aspect was providing students with a background on ethics and professionalism; others believed that the topics were presented in an engaging way while still providing instructional materials. Some students felt it was valuable that the activity put students in real-life situations wherein they had to make decisions.

When asked what was least valuable, students provided a variety of constructive criticism. Some expressed concern over the amount of time it took to complete the activity, and others noted the story may have been too easy and the answers or choices too obvious.

Discussion

Why did students perform highest on clinical ethics? This finding could be because students naturally know more about issues relating to clinical ethics than either professionalism or research ethics. There are many

Table 9. Fall 2011–Fall 2013 average scores.

School	Pre-test		Post-test	
Total	N = 1789	62%	N = 2419	85%
School of Dentistry	N = 281	53%	N = 405	87%
Graduate School of Biomedical Sciences	N = 299	58%	N = 300	86%
Medical School	N = 494	67%	N = 731	91%
School of Nursing	N = 372	63%	N = 610	77%
School of Public Health	N = 302	64%	N = 315	82%
School of Biomedical Informatics	N = 41	68%	N = 58	78%

television shows that address matters of clinical ethics in dramatic form, such as *ER* or *House, MD*. There have also been many examples of debates in clinical ethics that make the news. It could be that clinical students were simply more interested in clinical ethics, and thus read more closely. This rationale could explain why clinical students did better than non-clinical students on Act II. Questions that students disagreed on (and, according to the advice offered in *The Brewsters*, answered incorrectly) involved how to respect the confidentiality of a teenager with regard to matters of sexuality. This finding indicates that the topic would be good for further debate and discussion in other classes and during grand rounds.

The two lowest scores in Act II were “Be able to outline what needs to be included on the informed consent form” (641 or 87.1% answered correctly) and “Be able to determine actions to take when confronted with an ethical dilemma” (632 or 88.5% answered correctly). For the objective “Be able to outline what needs to be included on the informed consent form,” 60 students (or 8.2%) answered informed consent forms can exclude the length of rehabilitation and the expected rehabilitation site. Since one question involved abortion, the variation in responses could be due to political disagreements or emotional responses to the ethics of abortion.

Student responses to questions in Act III demonstrated the widest variability. Perhaps this finding is the nature of research ethics. One might argue that research ethics, as a field, is less defined and perhaps more complicated than both professionalism and clinical ethics because there is less agreement on normative questions. Or it might be that pre-medicine and pre-nursing programs do a better job of introducing students to ethical issues in clinical practice than do basic science majors.

There are limitations to these data. *The Brewsters* was introduced in different ways at different schools. Sometimes, for example, it was introduced during a class, other times during orientation, and, in one case, only online. Because we did not do a pre-/post-test with all schools or with all of the questions, we do not know students’ previous knowledge of ethics and professionalism or their interest in health professional ethics. The data set for the School of Biomedical Informatics was incomplete. These limitations determined our future directions since our pilot study. A pre-/post-test, for example, is now being used in all of our schools. Each year we revise questions and learning objectives, and our assessment findings inform other teaching in our institution. Data from follow-up years were not included in the previously reported findings because of differences in format (hard copy vs online) and differences in measurement. However, Table 9 shows the average percent correct answers for students in three Fall semesters, demonstrating an increase in scores from pre-test to post-test.

Conclusion

We have now used *The Brewsters* for another two classes, with about 900 students in each year (750 in the Fall and another 200 starting in the Spring each year). Results continue to be consistent, with substantial gains in knowledge among the students in each of the professional schools. Importantly, the novel

consistently gets strong feedback from students who enjoy reading it. We do not believe these are two independent facts, but rather that students are learning ethics because they enjoy the way it is presented.

Teaching ethics is not a hopeless task. To be successful, however, we believe students should be immersed in the deliberation of issues, that these issues should be presented in ways students find interesting and that encourage them to express their opinions, engage them with people with differing opinions, and offer information about the professional consensus on controversial topics. To teach ethics is not to require students to memorize facts, but rather to get students to wrestle intellectually with challenging humanistic issues. Becoming more ethical is akin to becoming more worldly and more mature. Socrates famously asked, “Can ethics be taught?” By using a narrative with characters students identify with, and placing students inside situations they recognize as likely to occur to them someday, we may indeed be able to guide their ethical and professional development.

Conflict of interest

Richard Buday, FAIA, is co-author and publisher of *The Brewsters*. Jeffrey Spike, PhD, is a co-author of *The Brewsters*. The other authors declare no conflict of interest.

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References

1. Bertolami CN. Why our ethics curricula don't work. *J Dent Educ* 2004; 68: 414–425.
2. Keune JD and Kodner IJ. The importance of an ethics curriculum in surgical education. *World J Surg*. Epub ahead of print 14 April 2014. DOI: 10.1007/s00268-014-2569-0.
3. Milstone M. Teaching medical ethics to meet the realities of a changing health care system. *J Bioeth Inq*. Epub ahead of print 6 May 2014. DOI: 10.1007/s11673-014-9520-9.
4. Gillam L, Delany C, Guillemin M, et al. The role of emotions in health professional ethics teaching. *J Med Ethics* 2014; 40: 331–335.
5. Cannaerts N, Gastmans C and De Casterié BD. Contribution of ethics education of nursing students: educators' and students' perceptions. *Nurs Ethics*. Epub ahead of print 8 April 2014. DOI: 10.1177/0969733014523166.
6. Poikkeus T, Numminen O, Suhonen R, et al. A mixed-method systematic review: support for ethical competence. *J Adv Nurs* 2013; 70: 256–271.
7. Stankovic B and Stankovic M. Educating about biomedical research ethics. *Med Health Care Philos*. Epub ahead of print 22 April 2014. DOI: 10.1007/s11019-014-9561-1.
8. Rozmus C and Carlin N. Ethics and professionalism education in a health science center: assessment findings from a mixed methods student survey. *Med Sci Educ* 2013; 23(3 Suppl.): 502–512.
9. Arhin AO and Jones KA. A multidiscipline exploration of college students' perceptions of academic dishonesty: are nursing students different from other college students? *Nurse Educ Today* 2009; 29: 710–714.
10. Fischer BA and Zigmund MJ. Educational approaches for discouraging plagiarism. *Urol Oncol* 2011; 29: 100–103.
11. Kusnoor AV and Falik R. Cheating in medical school: the unacknowledged ailment. *South Med J* 2013; 106: 479–483.
12. Staats S and Hupp JM. An examination of academic misconduct intentions and the ineffectiveness of syllabus statements. *Ethics Behav* 2012; 22: 239–247.
13. Spike J, Cole T and Buday R. *The Brewsters: An interactive adventure in ethics for the health professions*. 2nd edition. Houston, TX: University of Texas Health Science Center at Houston, 2012.
14. Heidara A, Adeli S, Taziki S, et al. Teaching medical ethics: problem-based learning or small group discussion? *J Med Ethics Hist Med* 2013; 6: 1.

15. Henderson KL and Malone SL. Ethical fairy tales: using fairy tales as illustrative ethical dilemmas with counseling students. *J Creativ Ment Health* 2012; 7: 65–82.
16. Mantie-Kozlowski A. Cognitive presence in ethics training: a comparison of online and face-to-face learning communities. *Contemp Issue Commun Sci Disord* 2013; 40: 50–58.
17. Halkoaho A, Matveinen M, Leinonen V, et al. Education of research ethics for clinical investigators with Moodle tool. *BMC Med Ethics* 2013; 14: 53–58.
18. Coulehan J. Viewpoint: today's professionalism: engaging the mind, but not the heart. *Acad Med* 2005; 80: 892–898.
19. Carlin N, Rozmus C, Spike J, et al. The health professional ethics rubric: practical assessment in ethics education of health professional schools. *J Acad Ethics* 2011; 9: 277–290.