A Case Study: Enhancing Critical Thinking Skills in an Online Health Care Ethics Course

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Abstract

This case study describes the journey of revising an online health care ethics course in an accelerated nursing program. The primary goal was to incorporate additional opportunities for fostering critical thinking along with updating the course design to reflect the university's standard of academic rigor. This required health care ethics course has been known to be challenging from the student's perspective, due not only to the volume of the work involved, but also to the inclusion of sensitive topics that are addressed such as beginning of life issues and whistle-blowing. The revisions, constructed from student feedback, were aimed at stimulating critical thinking, providing spaces for reflection, and adding engaging activities that could solidify concept acquisition while reducing both redundancy and temptations to participate in academic dishonesty.

Keywords: critical thinking, engagement, reflection, Socratic Method, course revision, health care ethics, online teaching and learning

Introduction

This case study describes the process of revising an online health care ethics course, which is a required course in an accelerated nursing program. The primary goal of the revision was to incorporate additional opportunities for fostering critical thinking along with updating the course design to reflect widely held academic standards and rectifying identified challenges. After the revision was complete, the revised course was piloted by one of the authors; the pilot course consisted of twelve students.

This course, taught in an 8-week accelerated format journeys into sensitive topics, individual and group decision-making, and serious self-reflection. The ultimate desired outcomes of the course are to empower health care professionals to understand their ethical worldviews and to be able to make sound ethical decisions in their professional practices. The course is taken by hundreds of students each year and is taught by a variety of instructors. For instance, during the academic year 2008-2009, approximately 250 students took the course, and it was taught by 15 different instructors.

In Spring 2009, the revision was well underway since the last significant revision update occurred in 2005. Analyzing the course evaluations from the past few years revealed several themes, one of which was the heavy workload. Students pointed out that they yearn to dive deeper into some of the ethical theories but were simply not able to do so. This could have been due to the accelerated nature of the course along with the vast number of topics and ethical theories that are covered in a mere eight weeks. Richard Paul (1990), a leader in guiding educators and students in the realm of critical thinking, points out that when redesigning a course, one should focus on creating "coherence, connection and depth of understanding." (p. 229) Therefore, the instructional challenge was to develop a course that would not only provide students with opportunities to practice higher order thinking and be successful in achieving the desired course outcomes, but also to make it practical for them recall important concepts and methodology while working in a fast paced health care environment.

Learning theories and instructional design

The standards for a quality online course, as determined by the Quality Matters Rubric (2005/2006), were referred to initially as a best practice checklist while the original course was reviewed. This rubric is grounded in a research supported framework and has described standards in the following eight broad areas: course overview and introduction, learning objectives, assessment and measurement, resources and materials, learner interaction, course technology, learner support, and ADA compliance ("Research Literature," 2005).

Careful investigation of possible solutions to the instructional challenges and student frustrations ensued. Adult learning theories were a constant force in guiding this redesign and tackling the challenges. One of the basic tenets of adult learning theory is to provide students with opportunities to practice realistic problem solving as they mirror professional applications, and while the original design did do that via case study activities and discussions, there was room for improvement. The course assessments and activities were redesigned to make the content more meaningful and practical for real world professional applications (Herrington, Herrington, Oliver, Stoney & Willis, 2001). Although novel technology would be utilized to enhance the course and solve some of the instructional challenges, the redesigners were careful not to use technology for technology's sake. Instead, educational technology was used for presenting course content and concepts in innovative ways that would stimulate the learner's thinking.

In addition, the redesign was guided by the Seven Principles of Good Practice (Chickering & Gamson, 1987). Refer to Table 1 to examine the teaching strategy that aligns with each principle (Conceição, 2007).

Table 1. Alignment of teaching strategies and principles of good practice.

Principles of Good Practice	Teaching Strategy for Online Environment
Principle 1: Encourage Student-Faculty Contact	Clear guidelines for the discussion forums, e-mail, and phone are provided for students to connect with their instructor.
Principle 2: Encourage Cooperation Among Students	Netiquette and discussion guidelines are provided to the students.
Principle 3: Encourage Active Learning	Case studies, problem-based scenarios, and collaborative activities are incorporated. Students have several opportunities to present their findings to the rest of the class for feedback and discussion.
Principle 4: Give Prompt Feedback	The instructors of this course are encouraged to respond to individual students in a consistent, timely manner and also to be 'present' in the course. Each week there is a discussion forum where the instructor provides an introduction to the weekly topic and feedback on how the week ended.
Principle 5: Emphasize Time on Task	A detailed course calendar is available for the students to view or print that outlines all course activities and assignments. In addition, the course announcement tool is used to keep students on task.
Principle 6: Communicate High Expectations	Expectations are clarified for all course activities. As it stands, the course activities push student's thinking and provide opportunities for real world applications.
Principle 7: Respect Diverse Talents and Ways of Learning	Students are welcome to submit ideas or topics that have practical meaning for them. Additionally, a variety of technologies and media are utilized, and transcripts and alternative means of delivery are provided with any audio content.

Critical Thinking Component

Many years ago, John Dewey characterized critical thinking as a unique, cognitive thought process that is grounded in reflection (Jones & Brown, 1993). As the discipline of logic progressed, the definition was refined to tie explicitly into the ability to evaluate statements and arguments. For instance, according to Epstein (2002), critical thinking involves the evaluation of claims and arguments along with the ability to form one's own arguments that are free from informal and formal fallacies.

Another leader in critical thinking, Richard Paul, describes critical thinking as:

> The intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action. In its exemplary form, it is based on universal intellectual values that transcend subject matter divisions: clarity, accuracy, precision, consistency, relevance, sound evidence, good reasons, depth, breadth, and fairness (1987, ¶ 2).

Critical thinking plays a large role in everyday life, especially as the world is in a constant state of change and as there are ever increasing methods and motivations to manipulate our thinking. When students sharpen their critical thinking skills, they become equipped to tackle the challenges of everyday life. With those skills, individuals can astutely evaluate claims and arguments and can construct meaning based on sound logic instead of fallacious assumptions (Paul, 2007). Furthermore, the skills provide a methodology that one can utilize to avoid being easily manipulated by the media and other self-interested social forces. Self-awareness is also enhanced since critical thinking provides a means for individuals to critique their own beliefs and biases.

The critical thinking component of this class was enhanced in several fundamental ways. For a quick overview of critical thinking revisions, refer to table 3 located later in this paper. First, an explicit critical thinking activity was added to the course. The purpose of this was to enhance the understanding of some of the fundamental ethical theories by going through the universal intellectual standards developed by Elder and Paul (1996) and to achieve some conceptual depth, which in the past had been sacrificed for breadth. In this new activity, the students are given a list of eight ethical theories from which they choose two theories to explore in depth. For each chosen theory, they responded to a set of questions - designed with the andragogical goal of enhancing critical thinking - from the perspective of that theorist. Although initially this was an individual activity, students' responses to each theory are posted in a discussion forum to share with other students. Students, then, have the opportunity to explore how others responded to the questions, and they can review the theories that they did not choose and ask clarifying questions about their peers' work.

Second, the authors constructed educational materials with the intent to aid students in developing the skills to think critically about the course concepts. In the age of Wikipedia and Google, oftentimes students struggle with deciphering what may be considered a reliable source. Additionally, students tend to lack the ability to construct arguments that are free from common fallacies. Hence, there is a gap between their prior skills and the class expectations. In the course redesign, the lacuna was filled by developing a reliable evidence checklist that addressed the basic components of a source that would be deemed 'reliable,' according to common scholarly expectations, and a related PowerPoint presentation.

The reliable evidence checklist included basics such as prompting students to use peer-reviewed sources written by scholarly experts coupled with providing methods that students can utilize, to detect bias - not only in arguments - but in the sources themselves. In the "Tips for Argument Construction" narrated PowerPoint presentation, students are offered some rudimentary tools for accurate argument construction and analysis. The resource starts with a brief overview of what an argument is along with methods to assess truth, validity, and cogency. Then, some specific informal fallacies are addressed along with methods on how to spot these fallacies and how to avoid them in argument construction. In determining which informal fallacies to specifically address, the authors drew from their experience in seeing these fallacies exhibited in previous student paper submissions. Some of the most common fallacies found included: ad hominem attacks, hasty generalizations, and 'slippery slope' assumptions, which revealed the need to address each of these common fallacies individually. In concluding, the PowerPoint urges students to continue their pursuit of learning about effective argumentation by including some additional, selected resources to explore.

Critical thinking was also enhanced through use of the Socratic Method. Garrison (2003) claims that having reflective inquiry modeled by the instructor enhances higher-order learning, and one of the ways

reflective inquiry can be modeled is by the consistent use of the Socratic Method. The Socratic Method uses the dialectic approach exemplified by the character of Socrates in Plato's dialogues in which the interlocutor is asked many questions with the purpose of clarifying concepts, exposing inconsistencies, and detecting bias. As Whitely states, "The Socratic Method is an approach that is designed to engage the student in critical thinking and in the process of reflective thinking" (2006, p. 67).

The weekly discussion forums were determined to be an ideal place to utilize the Socratic Method because the forums allow for robust dialectical interaction among the students and the instructor. As a result, the instructor can use the Socratic Method to ask engaging questions that can enhance critical thinking and that can lead to greater conceptual clarity. Moreover, the students can see the Socratic Method modeled by the instructor, and can emulate this behavior in their responses to their peers. To assist with teaching consistency, the authors created discussion rubric guidelines that addressed the requirement to use the Socratic Method in vetting students' arguments and claims. The authors also enhanced the discussion forum grading rubric to include critical thinking as an independent variable in grade determination. To earn full points on the critical thinking component, students are prompted to use clear and logical statements, refute bias, and engage the content by drawing parallels and by explicating novel insights. The queue to refute bias was explicitly designed to encourage the instructors and students to use the Socratic Method in the forum when vetting others' claims, with the intent to not only enhance critical thinking, but also to bring a consistency to the class that may have been lacking due to it being taught by different instructors who are bound to have diverse styles of facilitating discussions.

Finally, the authors modified the capstone paper project. In lieu of a position paper on a selected topic, a more engaging assessment was developed not only to enhance critical thinking but also to incorporate bioethics topics as they are represented in motion pictures. One objective for the Bioethics at the Movies activity was for the student to analyze the reality of how bioethical issues are portrayed in popular media. Students choose a movie from a list, watch the movie, and then write an individual paper. The paper includes three main sections. First, the students are asked to summarize the movie to ensure the reader understands the plot and the pivotal characters. Second, the students are asked to apply the critical thinking skills they have developed throughout the course to critique the movie. The critique section includes a requirement to detect bias within the film and to justify claims of bias by using objective sources. Moreover, the critique section includes an assessment of the facts presented within the film, and again, students are required to support claims of accuracy or lack thereof by finding and using reliable evidence to support their claims. In the third and final section, students are asked to form a thesis statement, and then use the justificatory apparatus of the ethical theories and principles to support their claims while also exploring and refuting counterarguments. In the argument section, the instructions explicitly guide students to avoid the informal fallacies and other faulty methods of argumentation as laid out in the aforementioned PowerPoint.

Coupled with this paper, students develop a discussion prompt based on their selected movie and then lead a stimulating discussion with the rest of the class based on one or two ethical issues raised in their chosen film. The students are asked to use the Socratic Method in facilitating the discussion. At this point in the class, the authors determined that using the Socratic Method should be easy for the students since it has been modeled by the instructor for the first four weeks of class.

Technology

Adobe Presenter was utilized to create narrated PowerPoint presentations. Informative, yet brief, narrated presentations were developed on topics such as moral status and determination of death with the aim to enhance difficult concept acquisition. These presentations were incorporated into the course materials, and students had the ability to review them as often as they felt necessary. To comply with American Disability Act (ADA) requirements and to address different learning styles, transcripts were provided to accompany auditory elements. Oftentimes, students like to read along or use the transcripts as notes for quick review.

As stated earlier, this health care ethics course can be emotionally challenging. It addresses personal views and sensitive topics. Unfortunately, the modern world doesn't offer much space for reflection. One goal in the revision was to provide students with an effective and engaging space to practice the art of reflection. Using Adobe Presenter, a plug-in for PowerPoint, a reflective space was developed for each week of the course. The reflective spaces include relaxing music, a peaceful image, and a thought provoking quote that relates to the weekly topic. In his article, "Nurturing the Soul in Adult Learning," John M. Dirkx (1997) wrote, "To truly grasp the holistic nature of learning in adulthood, its mystery and messiness, we need a way of seeing that keeps learning embedded in the concreteness of everyday life"

(p. 81). In a sense, the weekly reflective spaces offer a structured space to ground the students for a moment and to encourage them to make the time for deep reflection. After this course redesign was piloted, a student remarked, "The reflective space was nice but I am not a good one for meditation. It did allow me to make a few minutes for myself and think about the quote which I believe was the purpose, so thank you."

Another technology introduced through the redesign was a Web 2.0 tool that offered a solution to organizing the course's extensive external resource library. Delicious, a social bookmarking tool, was an excellent choice to organize and easily continue to build the course resource library. The most exciting feature of a tool like Delicious is that it is external to the course management system, so students have continued access to this library after the class ends. Social bookmarking taps into learner-centered and discovery learning instructional design theories; it places the learner in control and enables him or her to choose what topic to focus on and learn more about.

Table 2: Some examples of added elements using technology

Narrated PowerPoint	Argument Assessment and Construction
Weekly Reflective Space	Week 3: Ethical Analysis and Decision Making *Quote by Ram Dass; Image by Nicole Marcisz; Music- "Gypsy" by Gordon Schaeffer and Peter Schimke found on "Cafe Santa Fe"* Week 6: Across the Life Span *Quote by Friedrich Nietzsche; Image by Nicole Marcisz; Music- "Highroad" by Gordon Schaeffer and Peter Schimke found on "Cafe Santa Fe"*
Health Care Ethics Resources	http://delicious.com/HealthCareEthics

Other course revisions

In the past, evaluations of the course revealed that students found a lack of clarity regarding assignment expectations. Moving forward in the course redesign, this issue was addressed for each assignment and its accompanying instructions and grading rubric. Explicit expectations such as writing mechanics, proper organization, and accurate use of the APA style were included in those rubrics along with specific measures of evidence of critical thinking. In revising the assignment instructions, the re-designers also incorporated reminders of the importance of maintaining academic integrity by reiterating the definitions of plagiarism and the need to use proper citation methods.

The discussion forums were also revised. When reviewing all the mandatory discussion forums, the authors found that some of the forums were redundant while other weeks simply had too many forums occurring simultaneously. For instance, during some weeks, there were up to four simultaneous discussions, which was too much for the students to effectively process and discuss. This, of course, also fueled complaints about the heavy workload. Richard Paul cautions against designing a course that covers too much content. This overload merely scratches the surface of learning and is actually an obstacle to deeper learning. The content, Paul maintains, should focus on depth of concepts and understanding while utilizing higher order learning (2007, p. 232-233). The revision of the discussion forums, therefore, included two goals: the elimination of redundancy, and the reduction in the workload with the purpose of allowing students to delve deeper into the conversation and to think critically about the discussion at hand. After the course redesign, there are only two mandatory forums occurring each week. In an effort to reduce sensitive topics from getting out of hand or disrespectful, the students are provided guidelines for proper netiquette and tips for conducting an effective discussion. This is an essential standard for providing a quality online experience.

In this specific course, to meet the learning objectives of both group and individual decision-making, students are required to prepare two formal case studies: one of these case studies is done as a group and the other as an independent project. However, in the past, the same collection of cases was used for each section of the course, and recycled session after session. This opened the door for opportunities to engage in academic dishonesty since a student could use a case study turned in by a peer who took the class at an earlier point. To avert this specific opportunity to engage in academic dishonesty, a different collection of cases was developed along with the creation of a case repository. Although the case

repository is still in development, it will eventually include six unique sets of cases that can be used for each of the six sessions that occur in each academic year. This not only introduces novel content into the course, but also reduces opportunities, and perhaps, the temptation for students to reuse peers' assignments. The plagiarism detection service, Turnitin®, was also introduced to faculty, and it is now utilized as another effective tool for reducing plagiarism.

Table 3. Overview of revisions

Revision Task	Rationale
Developed a critical thinking activity that focuses on ethical theories. The students work in pairs for this activity.	This activity provides opportunities for critical thinking and allows students to develop a deeper understanding of chosen ethical theories.
Created a "reliable evidence" checklist for the students.	Students were having trouble determining reliable sources from unreliable ones. This checklist should assist students in that process. Reliable evidence assists in the development of stronger arguments, and is in line with standard scholarly expectations.
Developed narrated mini-lectures for the weekly topics.	Brief narrated presentations are better than non-narrated PowerPoints because students may find it challenging to derive meaning from bullet lists sans narration. The goal is for students to get 'more' out of the presentations, and thus retain the information.
Revised all rubrics to include critical thinking skills; revisions were made to reflect instructions about writing mechanics, proper organization and accurate use of APA style, which is the required citation method in the nursing program.	The new rubrics clarify expectations and encourage critical thinking. It also demonstrates that critical thinking skills are valued in terms of grading purposes. It fulfills standard III.3 of the Quality Matters (QM) rubric.
Developed discussion guidelines along with netiquette tips for students.	The guidelines clarify expectations. This course addresses sensitive and emotional topics. It is very important to be proactive in preventing any inappropriate behavior in the discussions. With a solid structure of guidelines and netiquette, a successful discussion may ensue with respectful conversations, more clarity in showing emotion, and fewer ad hominem attacks. It meets standard I.3 in the QM rubric.
Created a new capstone activity "bioethics at the movies" where students will watch a movie that involves a bioethical topic that will form the basis of their final papers; students, working collaboratively in small groups, also led a class discussion.	Basing the capstone project off a film provides more exciting content for the paper. It also shows students how the issues they explore in class are relevant in their lives, and includes opportunities to think critically about the presentation of bioethical issues and the accompanying facts.
Added 8 mini-reflection objects (a narrated quote with a photo and relaxing music), one for each week.	These reflective spaces provide a calming moment and encourage contemplation. The hope is to encourage the practice of this life-long skill.

Revised all of the discussion activities to reduce redundancy and workload.	Before the revision, there were up to four discussions occurring each week, which appeared to be too much for students to process and effectively discuss. With the reduced workload and redundancy, students will have the opportunity to engage more deeply with the issues and to have more robust discussions.
Established the Web 2.0 tool "Delicious" to lasso all the resources to a central location.	There were many external resources for the course. An advantage for using a tool like Delicious is that students can be involved with contributing to it (engagement and community) and it is a resource that they can access after the course is over.
Updated case studies; started the creation of a case repository.	Some cases were clinically outdated, and providing novel cases prevents reuse of a prior student's work. Updated cases are more clinically accurate and applicable to professional situations. In addition, the updating is a good practice to reduce plagiarism.
Introduced the use of Turnitin® plagiarism software.	Turnitin® works as a deterrent to plagiarism and encourages students to do their own work, which hones critical thinking skills.

Conclusions

The online course revision was piloted by one of the redesigners before it was adopted as the new course master, and the piloted course consisted of twelve students. In addition to the regular end of course evaluations conducted by the department, another survey instrument was developed to assess specific aspects of the redesigned course elements. (See Table 4)

One student stated:

> This is one of the most interesting classes I have taken in this nursing program. The subject matter and assignments were great learning tools and I really learned a lot, in fact I wish there were more classes like this for me to take. The movies were perfect choices for an ethical discussion and it certainly helps with the very timely and important subject of health care reform and the ethical dilemmas we face today only evolve in complexity. I liked the variety too, in that each week had a different flavor. I also love quotes so the reflective formats were of interest.

The authors were pleased to see that over 80% of the class indicated that the course revisions were helpful and stimulating. For instance, in regards to the 'bioethics at the movies' assignment, students agreed that it was enjoyable and engaging to watch the movie and to analyze the related ethical concepts. The PowerPoints, from the students' perspectives, seemed to meet the learning goal of solidifying concept acquisition. When evaluating the results of the reflective spaces, perhaps, the students are still having difficulty finding time for quiet reflection in the midst of their busy lives. Furthermore, in comparison to the pre-revision, there were far fewer questions to the instructor regarding expectations for assignments and activities.

Deeper measures of evaluating the success of the redesign, especially in terms of the critical thinking component, will be underway as the course continues to be taught. For example, plans are being developed to compare students' written work, both pre- and post redesign, to determine if the quality and level of critical thinking has increased. Strategies are also being developed to bring all of the instructors for this course on the 'same page' for successful facilitation and use of the Socratic Method. Although the major revision has been completed, the course will continually be monitored and improved using student and faculty feedback.

Table 4: Pilot Survey with Results (n=12)

Were the grading criteria as outlined in the syllabus clear? 6- Strongly Agree 6- Agree 0- Neutral 0- Disagree 0- Strongly Disagree
Was the amount of reading manageable? 4- Strongly Agree 5- Agree 3- Neutral 0- Disagree 0- Strongly Disagree
Was it engaging to use a film as the basis of your position paper? 6- Strongly Agree 6- Agree 1- Neutral 0- Disagree 0- Strongly Disagree
Did the narrated PowerPoints help you understand the course concepts? 5- Strongly Agree 7- Agree 0- Neutral 0- Disagree 0- Strongly Disagree
Did you have any trouble accessing the course web resources? 11- No problems 1- Few problems 0- Several problems
Did you listen to the weekly reflective spaces each week? 5- I listened to all 4- I listened to most 3- I listened to a few 0- I listened to none
Did the reflective spaces deepen your level and frequency of your reflective practice? 0- Strongly Agree 5- Agree 5- Neutral 2- Disagree 0- Strongly Disagree

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