

Reflection on the Teaching of Ethics in Physical Therapist Education: Integrating Cases, Theory, and Learning

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Background and Purpose. Engaging in the scholarship of teaching and learning (SoTL) in our classrooms is an important professional role and responsibility for physical therapist educators. In physical therapist education, there is an increased emphasis on the moral and ethical development of students, yet we know little about which learning tools work best. The purpose of this case study was to explore student learning in the teaching of ethics in physical therapist education.

Case Description. Evidence for this case comes from the experiences of 3 classes of physical therapist students taking the ethics course from 2003 to 2005. Data sources for the case include data gathered from the following: (1) student debriefing/self-reflection responses following 2 videotaped standardized patient (SP) interactions centered on ethical problems; (2) student peer and self-assessments; (3) student pre- and post-test scores on a self-efficacy survey tool; and (4) instructor reflections on student learning.

Outcomes and Discussion. Standardized patient interactions centered on ethical issues provided structured, authentic learning experiences and opportunities for students to grapple with uncertainty in the context of performance. Student performance did vary as those students who were extremely confident in the SP interaction also demonstrated less critical self-reflection on perfor-

mance. All students demonstrated significant increases between pre- and posttest scores on a self-efficacy ethics survey. This case study suggests the following about ethics education in the health professions: (1) one of the most important goals of ethics education may be facilitating development of students' *reflective capacity* as a critical element in their professional formation, and (2) learning experiences that have clinical authenticity may well be an important element of *pedagogical content knowledge*.

Key Words: Ethics, Moral education, Reflection, Scholarship of teaching and learning.

INTRODUCTION

A few years ago, I was on a plane returning from the East coast, dreading the thought of having to read and comment on the student papers in my briefcase. These papers were student responses to reflection questions done directly following a standardized patient (SP) interaction. As I began to read the student papers, I realized that something was very different about them. I found myself totally captured by the students' responses and had no problem writing copious comments on their papers. In fact, the man sitting next to me said, "You know, you should be reading a book, not grading papers." I replied, "Usually that is the case, but I had students do a new assignment and these papers are incredible—I never knew what students were thinking before." Although I have spent the last 20 years priding myself on my role of advocate for promoting methods of facilitating reflection in my students, this became a critical incident for me. I will never forget that moment of my own personal insight as I realized, perhaps for the first time, I had a deeper insight into what students were actually thinking.

Over the last 3 years, I have engaged in a process of inquiry focused on student and instructor learning in the teaching of ethics in physical therapy. This inquiry process has been driven by collaborative conversations with a Carnegie Scholar on our campus about pedagogy in higher education, as well

as my own desire to learn more about my teaching and enhance student learning. This paper is a case study representing a collaborative reflective analysis of the teaching of ethics. The first author (GJ) provides the case materials from the teaching of an ethics course and, together with the second author, a Carnegie Scholar (AR), provides a critical analysis of the case.

Early in my teaching career in physical therapist education, I taught lecture and laboratory courses in the musculoskeletal area that had direct clinical application and "perceived relevance" to students. After completing my graduate work, I gradually began to teach more in the behavioral science area of the curriculum. I quickly realized that planning and integration of my best pedagogical tools and "active learning techniques" did not result in the kind of student engagement and motivation that I had previously experienced in my clinical teaching days. I have been curious about the differences in teaching in these 2 domains (the behavioral sciences as compared with the clinical/application sciences) throughout my teaching career. In this project, I took the opportunity to study more thoroughly my teaching and student learning in the ethics course I teach.

Courses in ethics or other areas of the humanities are present in health professions curricula, but often the course content and learning experiences are seen by students to be in stark contrast to the intensity of the basic and clinical sciences.^{1,2} Students quickly learn the lessons of the explicit and implicit curricula because there is often a strong focus on the "hard sciences," which demand intense study and often memorization in order to digest extensive amounts of information for academic survival. This is often in striking contrast to more experiential and applied emphasis in the humanities and behavioral sciences.^{3,5} The paradox here is that the clinical realities for practitioners occur in the complex context of health care provision, where change and uncertainty are the norm. The rising health care costs that often result in constricted care provide a good example. This kind of practice environment makes ethical dilemmas and decision making a daily occurrence for physical therapy

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practitioners. A common response to these challenges in clinical practice across professions has been a renewed emphasis on professionalism and professional ethics.⁶

Professionalism is a core component of physical therapist education as seen in the American Physical Therapy Association's (APTA) 2020 Vision Statement and Strategic Plan.⁷ This initiative projects that by 2020 physical therapy services will be provided by physical therapists who are doctors of physical therapy and hold all the elements of autonomous practice. One of the first steps in the physical therapy profession's transition to the DPT as the professional (entry-level) degree was to identify the core attributes of professionalism for the graduate. In 2003, the document "Professionalism in Physical Therapy: Core Values" was adopted by the profession. The statement identified 7 core values as critical elements of professionalism: accountability, altruism, compassion/caring, excellence, integrity, professional duty, and social responsibility.⁸

In physical therapy there continues to be increased support and demand for curricular focus on the moral and ethical development of students.⁹ Swisher¹⁰ argues that professional role, identity, and the moral obligations of professionalism should be the emphasis of the "moral curriculum." In the 23rd Mary McMillan Lecture, Purtilo¹¹ called for the profession to do "ethical planting for future generations" and urged the profession to sow the seeds of care and accountability as the staple crops for preparing students to practice in an increasing complex health care system that is inevitable in a shifting social landscape.

Preparing the Practitioner for Change

How do we best prepare students for meeting the current and future challenges and changes in health care? How do we facilitate student awareness and insight into social, cultural, ethical, and moral aspects of practice? Dewey¹² wrote that "the object and reward of learning is continued capacity for growth and that students develop skills and habits of mind that will enhance their creativity and problem-solving abilities with respect to the issues they are likely to meet." The tools of ethical decision making include developing "habits of thought" for reflection on complex, changing situations that are part of everyday practice. Facilitating reflective habits of the mind is a necessary but difficult task in a professional education environment.¹³

In this report, we investigate student learning in the teaching of ethics in physical therapist education. Our focus is on the pedagogical value of cases, case analysis, and theory

application as tools for engaging students in the type of analysis and reflection required for ethical practice. We will also demonstrate how these pedagogical strategies simultaneously provide the physical therapist educator with valuable knowledge about student learning as the novice practitioners engage in this work.

CASE DESCRIPTION

Making Learning Visible: A New Approach

Although I have been teaching in physical therapist education for over 20 years, my experience teaching ethics is more recent and well supported with the presence of a Center for Ethics and Health Policy on our campus. Amy Haddad, PhD, a colleague and Carnegie Scholar, was studying the use of standardized patients in the teaching of pharmacy ethics. She asked me if I was interested in trying something similar in physical therapy.

Over the last few years, I had continually revised my ethics course and redesigned the learning experiences; these efforts were aimed at getting students engaged and committed to learning that, to them, stood in strong contrast to the clinical science courses. In my first attempt to revise my course, I implemented student-generated clinical case reports, an exercise in which students bring real cases from their most recent clinical rotation and then use those cases for further analysis and development throughout the course. While these student-generated clinical case reports enhanced student discussion and application of ethical case analysis in the classroom, it did not help them understand the importance of seeing the case from the perspectives of all people involved in the case.

A second change was the implementation of ethics case consultations, where small groups of students discussed and analyzed an ethics case, wrote counter case letters, and developed a final consultation report that applied ethical principles and consultation.¹⁴ While this learning experience brought about active student involvement through the small group process, I had little access and, therefore, insight into student thinking and their reflections on how they arrived at their recommendations or proposed actions.

Assessing Student Learning

In the physical therapist education program, we use a modified objective structured clinical examination (OSCE) format to assess levels of student performance of clinical skills and safety measures prior to entry into clinical rotations. This examination, which occurs at the end of every semester of study, has continued to emphasize performance of

clinical science-based skills. Other aspects of our professional preparation—in this case, moral deliberation or decision making—are not formally assessed.

I was particularly interested in finding out more about the experience of student learning in my teaching of ethics. I had been redesigning the course each year, integrating more interactive learning experiences, and, while student course evaluations expressed more student interest and satisfaction with the course, I still had little insight into their understanding of ethics. I had the more traditional assessment of student learning, measures of what they know and apply through traditional testing, yet I still had little insight into student thinking about how they might actually analyze and address ethical situations. With the implementation of standardized patient learning experiences, I had the opportunity to find out more about what students were thinking when engaged in a simulated case.

The Context: Ethics Course in Physical Therapist Education

This study took place in my 3-semester hour course called "Ethics in Physical Therapy Practice." This course is part of an 8-semester professional program that leads to a Doctor of Physical Therapy (DPT) degree. All health professions programs at Creighton University require a 3-hour course in ethics. This is consistent with the mission of Creighton University, a Jesuit institution, and school goals of preparing graduates who possess moral and ethical capabilities for the highest level of professional practice. Students enrolled in the course are in the third year of the program and have participated in 2 clinical experiences, for a total of 7 weeks, prior to this term.

Studying My Practice: The Data

Evidence for this case is from the experiences of 3 classes of physical therapist students taking the ethics course from 2003 to 2005 (N=121 students). Data sources for the case include: (1) student debriefing/self-reflection responses following 2 videotaped SP interactions centered on ethical problems; (2) student peer and self-assessments; (3) student pre and posttest scores on a self-efficacy survey tool; and (4) instructor reflections on student learning. The instructor reflections on student learning were gathered through instructor comments on student papers and reflective notes on student learning and course plans made in and stored in a course portfolio.

For each class I prepared materials for 2 SP interactions. They were based on actual

Table 1. Reflection Questions

1. What was the CENTRAL ethical issue you encountered?
2. At the end of the interview, why did you choose [to] resolve the ethical issue the way you did?
3. If you were the therapist in this case—what would you DO NEXT?
4. What still confuses you about this case?
5. What did you LEARN about YOURSELF from doing this encounter?

clinical practice situations where ethical issues were central aspects in the delivery of patient care. The blueprints for the 2 cases were modified from these clinical cases by the practicing therapist consultation with the first author (GJ). The blueprints for the cases included instructions for SPs, instructions for the student, and peer and self-assessment forms. The first SP experiences took place at the end of week 4 of the semester and the final experience at the end of week 12.

The SP interactions took place in Creighton University Medical Center's Clinical Assessment Center. The Center has 6 individual examining rooms all equipped with video and audio systems for recording the SP and student interactions. Students were given the instructions about the clinical case scenario 5 minutes before their scheduled time. They were allowed 15 minutes for the entire interaction with the standardized patient: 10 minutes for the interview and 5 minutes for feedback. After completion of the interview, students then went directly to the computer room to respond to a series of reflection questions (Table 1). Following this computer debriefing session, students then were placed in small groups where they reviewed their videotapes and filled out peer and self-assessment forms. These data in particular provided a window into my students' thinking about the dilemmas posed in the case, as well as into their assessments of each other's performance.

In addition to these records of student learning, I adapted for physical therapy the self-efficacy survey tool developed by Larson and Haddad¹⁵ and used it as a consistent data source in this work. Students indicated their perceived confidence from 0% (no confidence) to 100% (total confidence) on 12 items. The first 5 items addressed the overall course goals and the remaining 7 items addressed common ethical problems encountered in physical therapist practice (Appendix 1). Students are given this survey during the first class session and again during the last class session.

OUTCOMES

Balancing Uncertainty With Self-Confidence

The first SP case presented a very common dilemma for physical therapists: honoring patient autonomy when it may be in direct opposition to promoting beneficence or good for the patient (Table 2). Key elements in the case were the issues of patient adherence or ability to follow through with exercise programs and safety concerns. It is challenging for therapists to be present, respect the patient, and listen to the concerns of the patient and family, while working together toward a mutually acceptable solution.

A consistent core theme in student responses across the years has been their struggle with the uncertainty of the individual cases and frustration with their inability to "fix the problem." The students are used to the structure and format of a clinical examination and find the challenge of negotiating the contextual issues of patient cases more difficult. Most of the students are able to work through that struggle and begin to see that the learning experience is about them and their roles as therapists who listen, withhold judgment, and advocate for the patient.

Maria: During the first standardized patient case I felt completely unsure of myself in both recognizing and resolving the ethical issue before I went into the room. I remember having to map out what I planned to do...once I entered the room I realized the plan had to be thrown out the window. I feel for the first time I did really well at being a compassionate health care provider that tried to listen to the patient's wants and needs.

Don: I learned that listening to everything the patient is saying is very important. They can give you clues that will help you determine the underlying problems that are impeding progress. I also realized that just because a patient does not seem

compliant does not mean they are lazy—there could be issues that are not apparent on the surface. Knowing what a patient wants or is afraid of is one of the most important facts a therapist needs to know.

Maureen: I learned that you never know what to expect. I was nervous but made it through the exam. A patient guides your exam. It is up to you to make the patient feel comfortable. The more opportunity I have to work with patients, the more confident I will be, knowing that I can make a difference in a patient's life. I may be the only person the patient is able to trust or confide in so it is up to me to deliver a caring response in return.

While the majority of students did acknowledge their personal struggle with the first case, there continued to be a consistent presence of a small cohort of confident students who know the answer and are unable (or perhaps unwilling) to take a critical look at themselves and the interaction.

Charles: First of all, we are dealing with a somewhat uncooperative patient, even though he is performing some of the exercises he is being too dependent on a family member who will not be there forever. I learned that I can handle a situation like this and that motivation is a huge factor in dealing with the geriatric population. I also learned that it is important to be somewhat stern and act like you are in command and confident.

Marion: The patient had desires that were in direct conflict with her overall well-being and health status. . . . I simply told the patient that we were going on with the family conference where we could hear the concerns of all involved. I learned that I can deal with an ethical issue on the fly and do that without stumbling over my words or thoughts.

Sally: I think I did pretty much in the room what I would do in a real clinic

Table 2. Case Narrative for Standardized Patient Interaction 1: Beneficence and/or Patient Autonomy?

Bess Jones is an 82-year-old person who fell at home 8 months ago and fractured the right femur just above the knee. Because of a past medical history of osteoporosis, left hip fracture, diabetes, emphysema, and congestive heart failure, the orthopedic surgeon felt at the time that surgery was too great of a risk to her life. The right leg was set and placed in a long leg immobilizer. Bess received home health for 4 months and has received 2 weeks of outpatient with very little progress in gait, transfers, bed mobility, strength, and range of motion, partly because of a lack of cooperation. At the present time she has a daughter from out of state with whom she has lived since the injury, 2 sons, and another daughter locally who refuse to let her move in with them. The out-of-state daughter would like to go home, but she knows that her parent is unable to care for herself. The family has asked you to meet with Bess to discuss further care options that will progress her toward independence.

situation. . . . I really did not have anything that confused me about the case. It was pretty much the way I thought it would be. I learned that I am cool and calm under pressure. I eat pressure for breakfast.

My enthusiasm for writing comments on these student responses to the reflection questions has been consistent across the years. All of their responses provided me with dramatic insight into their thinking and the kind of learning that this activity facilitates. Students who indicated their struggle with the uncertainty of the case also demonstrated insights into what they did and what they were learning about themselves. For me, this was evidence of "reflection on their performance" and I acknowledged that they were on the right track. For the small cohort of student responses that exude quick judgment and decision making along with strong self-confidence, I gained insight into their learning and a private opportunity to provide comments on where they could improve.

Part of the class session directly following the first SP interaction was spent discussing the question: "What was this SP interaction all about?" This common performance-based learning experience across students provided ample opportunity for real discussion about the critical role of listening to patients, withholding judgment, therapist and patient shared responsibility with exercise programs, negotiating with families, and handling uncertainty. Again, it provided me with an opportunity to witness their learning and their growing ability to reason through these cases. The predictable challenges have become visible as well.

Peer Assessment: Get Faculty Out of the Way

In the first year that SP sessions were used, I had expected that the most revealing feedback would be generated from the small-group videotape debriefing sessions done with 6 students and a faculty facilitator. What happened was the groups ended up filling out the assessment forms with consistent high marks and saw the faculty member as the source for the answer, rather than the session generating group discussion. The following year, I changed the structure and had 1 of the students in the group serve as group facilitator. I gave explicit written instructions for the review and feedback process. Students did an adequate job of giving honest and helpful feedback to one another. Importantly, this structural change resulted in more varied peer and self-assessment scores.

Table 3. Case Narrative for Standardized Patient 2: Physician Locus of Authority Issue

Dale is a 34-year-old person who was diagnosed with a nonmalignant tumor in his cervical spine at the C7-T1 level 5 years ago. He underwent a radical procedure to remove the tumor, but part of it was embedded in the spinal cord and he was left with some significant neurological deficits. Dale underwent outpatient physical therapy in your clinic 2 weeks after the initial surgery. At the time that he presented, Dale was wheelchair bound and his greatest goals were to be able to transfer and dress independently. After physical therapy intervention 5 years ago, Dale surpassed everyone's greatest expectations and was ambulatory with a quad cane and independent with all activities including ADLs and transfers. You have kept in touch with Dale and his wife over the years and have kept tabs on his abilities. You have also seen him gradually decline over the past year. He has changed physicians twice because of insurance and differing opinions. You feel, along with Dale's wife, that Dale would benefit from physical therapy intervention, but his physician feels differently.

Making Learning an Explicit Focus

The second SP case occurred during week 12 of the semester and focused on another common ethical dilemma for physical therapists, a locus of authority issue. This kind of authority issue in clinical practice usually deals with differences of opinion between the recommendations of the physical therapist and the physician (Table 3).

In the past, student responses to this SP case centered on emerging confidence and enhanced self-awareness. The typical responses here were that students acknowledged that listening and identifying the other person's viewpoint were effective tools. This listening led to discussion and negotiation with the physician with the caveat that they felt somewhat intimidated. Most of the students then expressed a need to be more assertive.

John: After discussing the case with the doctor, I realized that the issues were maleficence and beneficence. I learned that I can think quickly and clearly if I'm not nervous. I can also talk to a doctor without afraid of being laughed at; however, I still need to improve on slowing down and taking time to listen to the doctor's view of the case. . . . This interaction helped me gain confidence in my abilities to think clearly, advocate for the patient, and speak to other health professionals.

Marie: I learned I am able to stand up for a patient and gain a direct answer from a physician. I am also able to compromise and set up a situation so that both the physician and I are able to do what is best. . . . I gained more confidence in myself because when talking to the physician—this is one group that still intimidates me.

Deb: I learned something very important through this encounter: the power of listening. In my last interactions, I did very little listening and this put me in a poor

position to decide what was best for the patient. By making sure I listened this time I gained a lot more from the experience.

There continued to be a handful of students who were quite bold and self-confident in asserting themselves with the physician, which generally does not lead to resolution of the dilemma but can contribute to more conflict.

Wayne: I learned that I am pretty good most of the time. I will have to watch and make sure that I don't get argumentative when I know that doctors are just being a pain in the butt. But I do know that I am not afraid to tell doctors what I think.

Jan: I felt the MD felt the patient was his sole property and not acting in the patient's best interest and in this PT's opinion cause the patient more harm and longer recovery.

This year, I decided to let students know more about my excitement and interest in learning more about their learning, which seems to have had an impact on their work as well. I told them after that initial SP session that I continue to find their responses to the self-reflection questions extremely valuable to me as they provide insight into their learning—and that learning was the ultimate goal of the course. Student responses to the second SP interaction this year (2005) contained far more descriptive, self-critical narratives, as seen in the examples here.

Juan: I was at a loss for words and did not know what to say to have a productive conversation and come to a resolution. I became very flustered and just wanted to bolt. However, I held it together as much as possible and upon leaving gathered my thoughts to have an appropriate reaction.

Doug: Sometimes I can be thick-headed, and I think it is the only thing that is right. Listening to others perspective helps [me]

see their train of thought and that will make it easier for . . . [me] to advocate for the betterment of the patient. So now I know I can be more open minded. . . . I learned to listen well to what the doctor was saying and take her perspective into consideration and incorporate her thoughts into my suggestions.

Serena: This experience certainly reconfirmed for me that I often want to be a “people pleaser.” I understood the points the physician was giving, but also wanted to stand up for the wants of my patient. In this case, doing both is possible—by educating the patient more on the benefit of further testing to get answers, we can then proceed with physical therapy to improve function as long as possible.

Student Self-Assessments

Students’ final course self-assessments demonstrated that they were more confident in their ability to identify ethical issues, that they perceived they had a better understanding and insight into their communication skills, and that they were eager to apply these skills in clinical practice.

Beth: I believe I learned a great deal about myself during these experiences. I found some areas of weakness that I can address, as well as strengths I can continue to enhance. I have also seen myself grow from the first interaction to the second.

Ray: I have a greater understanding of how to identify, analyze, and deal with ethical issues in the clinic. I still have room for improvement in my communication skills and hope that will come with experience.

Jody: This course has been a launching pad for me in a couple of ways. First of all the tools we have used to identify ethical issues and initiate a course of action will continue to be invaluable. I feel I have always intended to be a person of high moral integrity but not been able to act on my convictions. I feel I have a better grasp on defining where I stand in practice and become an effective advocate for my patients and myself.

The results of the pre and posttest scores on the self-efficacy survey have been consistent over the classes. Student scores on the self-efficacy survey demonstrated a statistically significant difference on every item of the self-efficacy survey between beginning and end of the course assessments (Wilcoxon signed rank test for related samples, $p < .05$). The pre and posttest mean scores for all 12 self-efficacy items on the survey across the 3 classes are described in Table 4. Those items that demonstrated the greatest change were

Table 4. Self-Efficacy Pre and Post Ethics Course Survey Mean Scores for 3 Class Cohorts (2003-2005) of Physical Therapist Students

Question	2003 Pre (N=42) Mean Score (0-100%)	2003 Post (N=42) Mean Score (0-100%)	2004 Pre (N=41) Mean Score (0-100%)	2004 Post (N=41) Mean Score (0-100%)	2005 Pre (N=38) Mean Score (0-100%)	2005 Post (N=38) Mean Score (0-100%)
Q1	64%	89%	62%	91%	59%	87%
Q2	60%	85%	62%	86%	61%	83%
Q3	54%	82%	54%	85%	58%	81%
Q4	53%	82%	54%	86%	55%	83%
Q5	43%	84%	39%	87%	42%	85%
Q6	51%	79%	52%	84%	53%	81%
Q7	51%	79%	50%	84.86	54%	80%
Q8	49%	78%	48%	83%	51%	79%
Q9	71%	85%	63%	89%	66%	90%
Q10	61%	82%	56%	87%	58%	84%
Q11	56%	83%	53%	86%	54%	82%
Q12	58%	81%	55%	87%	54%	84%

the questions that focused on analysis and resolution of ethical problems using application of theories and principles:

Question 4: With adequate information, how confident are you that you could propose a justifiable solution to an ethical problem in clinical practice?

Question 5: How confident are you that you could accurately use ethical principles and theories to support a specific resolution to an ethical problem?

While the scores show positive change in student perceptions, and provide insight as to the students’ perception of their learning, the qualitative data allow us to see what that learning is about.

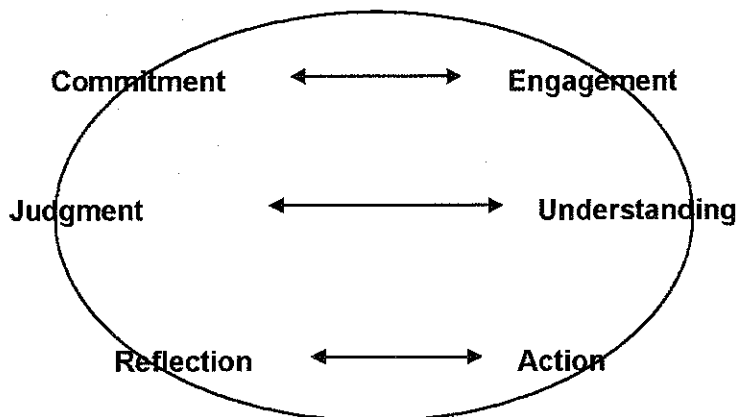
Broader Significance: Reflections on Teaching and Learning in Ethics Education

What have we learned about SP interaction as a strategy for teaching ethical decision making in physical therapist education? We believe the SP interactions provide a realistic, authentic experience that mirrors clinical reality. For physical therapist students, this kind of experience appeared to enhance the clinical credibility of ethics. The experience emphasized ethical case analysis that goes beyond analysis of a paper case or discussion of a videotape, which was the prior way of teaching about the ethical dimensions of physical therapist practice. Students in the

SP experience were at the center of the action/interaction as part of a “lived experience.” The structured debriefing questions students responded to immediately after the interaction appeared to facilitate further student reflection on the SP process and provide insight into their reflective process.

Simulations are described as learning tools that motivate students, provide opportunities for active learning, develop interaction and communication skills, provide opportunities for students to apply theory and practice skills in authentic environments, and can lead to deep learning.¹⁶ Clinical simulations such as SP encounters have been successfully used in medical education for teaching and evaluating students’ clinical skills, interpersonal skills, and clinical-reasoning skills.¹⁷ Standardized patients have been used in physical therapist education for development of communication skills¹⁸ and acquisition of basic patient care skills.¹⁹ As revealed in the analysis of this case study, the SP interactions, as structured learning experiences, provided students with opportunities to grapple with uncertainty in the context of performance and reason through hard-to-reconcile dilemmas to come to some professional decision. In addition, structured assessment activities provided a framework for reflections on self and reflections on self as a professional where we saw variation in students expressed levels of confidence and ability to engage in critical self-reflection.

Figure 1. Two versions of Shulman's²⁰ Table of Learning. The top model represents a cyclical approach where the core elements are paired within a cycle of learning. The bottom taxonomy makes this argument: (1) learning begins with student engagement, which in turn leads to knowledge and understanding; (2) if the learner understands, then there can be performance or action; (3) critical reflection on that performance and understanding leads to higher order thinking or judgment in the face of uncertainty which leads to creation of designs in the face of uncertainty; and (4) it is the exercise of judgment that makes possible commitment.



Shulman's Table of Learning

Engagement and Motivation
Knowledge and Understanding
Performance and Action
Reflection and Critique
Judgment and Design
Commitment and Identity

On Student Learning

What can we say about student learning? Shulman's²⁰ Table of Learning provides a helpful frame for organizing our results and understanding what our students learned. It also helps us think about how this learning is useful for effective professional practice. The Table itself is not a rigid taxonomy where the order of concepts is fixed, but more of a middle-range theory or conceptual model that can be applied practically to a wide range of conditions (Figure 1). Shulman²⁰ proposes that student *engagement* is a necessary condition for learning. While knowledge is important, it is the ability to *understand* what we know that is essential. Next, learners must take what they know and understand toward *performance*, or practice. However, in order to act effectively, critical *reflection* is necessary, and action without reflection is unlikely to lead to learning. Exercising *judgment* means that the learner must take into account multiple factors and continue to compare those factors to other values and stan-

dards in order to make an evaluative judgment about courses of action or people. The final category of *commitment* refers to both moving inward and connecting outward and committing to an identity through a set of values and internalized dispositions. Shulman²⁰ sees his Table of Learning as a heuristic because it can help us think more clearly about what we are doing. So, how might this heuristic apply to variations in student learning in this case?

The SP interactions provide the opportunity for student engagement and performance. Students gain some understanding of themselves and the consequences of their actions as they allow themselves to experience some frustration and struggle with their performance, and are able to reflect on that performance both during the interaction as well as when reflecting on the interaction. This reflection on their performance allows them to negotiate the uncertainty of the interaction, come to middle ground, and make a judgment that is more patient-centered.

They also begin to identify that 1 of their roles as physical therapists is to serve as an advocate for their patients (Figure 2).

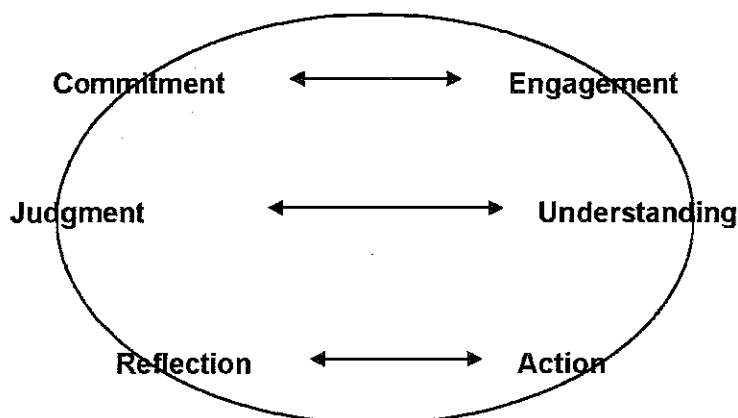
Our data also suggest that students who are quite confident in their interactions with the standardized patients also engage and perform during the interaction, yet they are quick to judge the situation and patient. Their approach lacks reflection and understanding (Figure 2). They exhibit a strong sense of identity based on an internalized disposition of a confident, all-knowing professional. The critical question here is: How can the instructor facilitate the reflective process within these students? The instructor comments made after the first patient interaction were a wake-up call for some students, but not all. As for students' enhanced self-confidence as shown in their changes in perceived self-efficacy, could it be that too much self-confidence may limit the ability for the learner to engage in critical self-reflection?

This case also tells us something about the role of pedagogical content knowledge for those of us who teach ethical decision making in PT professional education programs. Pedagogical content knowledge is the intersection of the content knowledge—in this case ethics—and the knowledge of the teaching of ethics in professional education.²¹ Let's go back to the narrative that opened this case study, where I perceived a dramatic change in student engagement and motivation for learning when I moved from teaching in the clinical sciences to the behavioral sciences. There is something far more challenging for faculty in health professions education when you are teaching in what students perceive as "nonclinical" areas. In this case, it appears that the ability to bring clinical reality and authenticity to student learning is an important, but not sufficient, element of pedagogical content knowledge in the teaching of ethics in physical therapy. Authentic learning experiences also need structured opportunities for student reflection, since the reflective process appears to be a critical element for students' understanding of their performance and actions.

CONCLUSION

This case study describes a pedagogical approach to teaching clinical ethics in the professional education of physical therapists. The study focuses on the pedagogical practice of SP interactions centered on ethical issues. The strategy served to provide our students with structured, authentic learning experiences that allowed them to grapple with uncertainty in the context of performance and provide evidence of their ability to engage in critical self-reflection. As is typically true, the study raises many more questions

Figure 1. Two versions of Shulman's²⁰ Table of Learning. The top model represents a cyclical approach where the core elements are paired within a cycle of learning. The bottom taxonomy makes this argument: (1) learning begins with student engagement, which in turn leads to knowledge and understanding; (2) if the learner understands, then there can be performance or action; (3) critical reflection on that performance and understanding leads to higher order thinking or judgment in the face of uncertainty which leads to creation of designs in the face of uncertainty; and (4) it is the exercise of judgment that makes possible commitment.



Shulman's Table of Learning
Engagement and Motivation
Knowledge and Understanding
Performance and Action
Reflection and Critique
Judgment and Design
Commitment and Identity

On Student Learning

What can we say about student learning? Shulman's²⁰ Table of Learning provides a helpful frame for organizing our results and understanding what our students learned. It also helps us think about how this learning is useful for effective professional practice. The Table itself is not a rigid taxonomy where the order of concepts is fixed, but more of a middle-range theory or conceptual model that can be applied practically to a wide range of conditions (Figure 1). Shulman²⁰ proposes that student *engagement* is a necessary condition for learning. While knowledge is important, it is the ability to *understand* what we know that is essential. Next, learners must take what they know and understand toward *performance*, or practice. However, in order to act effectively, critical *reflection* is necessary, and action without reflection is unlikely to lead to learning. Exercising *judgment* means that the learner must take into account multiple factors and continue to compare those factors to other values and stan-

dards in order to make an evaluative judgment about courses of action or people. The final category of *commitment* refers to both moving inward and connecting outward and committing to an identity through a set of values and internalized dispositions. Shulman²⁰ sees his Table of Learning as a heuristic because it can help us think more clearly about what we are doing. So, how might this heuristic apply to variations in student learning in this case?

The SP interactions provide the opportunity for student engagement and performance. Students gain some understanding of themselves and the consequences of their actions as they allow themselves to experience some frustration and struggle with their performance, and are able to reflect on that performance both during the interaction as well as when reflecting on the interaction. This reflection on their performance allows them to negotiate the uncertainty of the interaction, come to middle ground, and make a judgment that is more patient-centered.

They also begin to identify that 1 of their roles as physical therapists is to serve as an advocate for their patients (Figure 2).

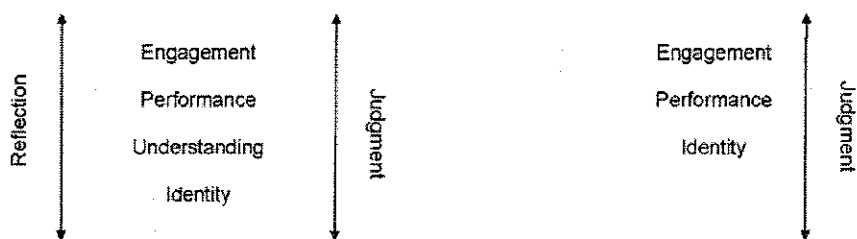
Our data also suggest that students who are quite confident in their interactions with the standardized patients also engage and perform during the interaction, yet they are quick to judge the situation and patient. Their approach lacks reflection and understanding (Figure 2). They exhibit a strong sense of identity based on an internalized disposition of a confident, all-knowing professional. The critical question here is: How can the instructor facilitate the reflective process within these students? The instructor comments made after the first patient interaction were a wake-up call for some students, but not all. As for students' enhanced self-confidence as shown in their changes in perceived self-efficacy, could it be that too much self-confidence may limit the ability for the learner to engage in critical self-reflection?

This case also tells us something about the role of pedagogical content knowledge for those of us who teach ethical decision making in PT professional education programs. Pedagogical content knowledge is the intersection of the content knowledge—in this case ethics—and the knowledge of the teaching of ethics in professional education.²¹ Let's go back to the narrative that opened this case study, where I perceived a dramatic change in student engagement and motivation for learning when I moved from teaching in the clinical sciences to the behavioral sciences. There is something far more challenging for faculty in health professions education when you are teaching in what students perceive as "nonclinical" areas. In this case, it appears that the ability to bring clinical reality and authenticity to student learning is an important, but not sufficient, element of pedagogical content knowledge in the teaching of ethics in physical therapy. Authentic learning experiences also need structured opportunities for student reflection, since the reflective process appears to be a critical element for students' understanding of their performance and actions.

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Figure 2. The figure on the left represents the Table of Learning applied to students who engage in a reflective process. The figure on the right represents the Table of Learning applied to students who are overconfident and quick to render judgment in the scenario, and who do not appear to engage in a reflective process.



about student learning in the teaching of ethics than it answers. Given the evidence that for some students their over-confidence interferes with their ability to engage in self-reflection, an important question to investigate is: What strategies work best in facilitating critical self-reflection for those students who appear to be over-confident? While our data provide evidence of student learning at 1 point in time, we do not know how much of what students learned in an ethics course is transferred into clinical education experiences and eventually into practice.

The physical therapy profession has set a Vision for 2020⁷ that “a graduate who is a doctor of physical therapy and holds all of the elements of autonomous practice” and that the graduate will exhibit the essential elements of professionalism.⁸ What is the role of ethics education in physical therapy in moving toward this vision? We would argue that learning to be a professional is not simply accumulation of knowledge, skills, or attitudes, but rather a consideration of whether or not the graduates can use what they have learned to act in a professional manner. Part of acting in a professional manner involves responding in an ethical way to the many dilemmas of professional practice. From here we must also think about the development or formation of that professional. Does the student think like a professional? Does the student perform like a professional? Does the student act in ways that are consistent with the norms and core values of the profession? We have learned that clinical simulations such as the one we studied here is 1 such learning tool that does engage students in thinking, performance, and action. Shulman²⁰ poses that:

Acting is more than knowing something or performing well; it seems to

involve the development of a set of values, commitments, or internalized dispositions. It reminds me of what theological educators talk about formation—the development of an identity that integrates one’s capacities and disposition to create a more generalized orientation to practice.

It may be that 1 of the most important goals of ethics education is facilitating the development of students’ reflective capacity as a critical element in their professional formation. Only continued inquiry into the scholarship of teaching and learning in ethics education will help us more fully understand.

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Appendix. Self Efficacy Pre and Post Course Survey Tool¹⁵

Directions: Please rate how confident you are to perform the following tasks by circling the appropriate number—from 0% indicating no confidence to 100% indicating total confidence.

1. How confident are you that you could identify an ethical problem in a written case study?
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
2. How confident are you that you could identify an ethical problem in an actual clinical setting such as a hospital, outpatient clinic, or rehabilitation center?
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
3. In analyzing a patient problem, how confident are you that you could differentiate between an ethical problem and other kinds of problems such as miscommunication?
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
4. With adequate information, how confident are you that you could propose a justifiable resolution to an ethical problem in clinical practice?
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
5. How confident are you that you could accurately use ethical principles and theories to support a specific resolution to an ethical problem?
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
6. Assume that you are in a clinical position and corporate facility where you find out that you must continue physical therapy interventions (treatment) and billing with patients after you believe they have reached their goals. How confident are you that you could resolve this ethical problem?
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
7. Assume that you are in a face-to-face interaction with a physical therapy peer whom you suspect has a substance abuse problem. How confident are you that you could resolve this ethical problem?
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
8. Assume that you are in a face-to-face interaction with a health professional with whom you disagree about end-of-life care for one of your patients. How confident are you that you could resolve this ethical problem?
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
9. Assume that you are in a face-to-face interaction with a patient who has been told by the physician that he has a shoulder problem and upon examination and evaluation you find that the patient has a primary cervical problem referring pain into the shoulder. How confident are you that you could resolve this ethical problem?
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
10. Assume that you are in a face-to-face interaction with a patient who does not adhere with your prescribed exercise regimen and you believe is ready to return to work, yet the patient appears to be malingering. How confident are you that you could resolve this ethical problem?
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
11. Assume that you are in a face-to-face interaction with a physical therapist who does very poor documentation often late and sometimes is unable to accurately record what actually happened during the treatment session. How confident are you that you could resolve this ethical problem?
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
12. Assume that you are in a face-to-face interaction with a patient who is not safe to perform independent ambulation and return to home alone yet insistent upon making her own decision. How confident are you that you could resolve this ethical problem?
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%