

2-1-2012

A Look in the Mirror: Self-development and transformational learning in medical students

Mary Elizabeth Walcher

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Mary Elizabeth Walcher

Candidate

Organizational Learning and Instructional Technology

Department

This dissertation is approved, and it is acceptable in quality and form for publication:

Approved by the Dissertation Committee:

Patricia Boverie, Chairperson

Mark Salisbury

Bruce Noll

Janice Schuetz

**A LOOK IN THE MIRROR: SELF-DEVELOPMENT AND
TRANSFORMATIONAL LEARNING IN MEDICAL STUDENTS**

By

Mary Elizabeth Walcher

B.S., Consumer Sciences/Business, New Mexico State University, 1978
M.A., Communication Studies, New Mexico State University, 2001

DISSERTATION

Submitted in Partial Fulfillment of the
Requirements for the Degree of

Doctor of Philosophy
Organizational Learning and Instructional Technology

The University of New Mexico
Albuquerque, New Mexico

December 2011

Dedication

In memory of my beloved father,

Paul Calvin Duffield,

My mentor, best friend, and loving and patient parent,

Who taught me the value of life long learning.

“Power and prestige does not come from position or status.

It comes from character and integrity.”

Unknown

Acknowledgements

This work would never have been possible or completed without the support and guidance of several people in my life. So many have helped me, encouraged me, asked me how it was going, never letting me forget I had work to be completed. I am thankful to each one of you who believed in me before I believed in myself.

I especially want to thank my advisor and dissertation chair, Dr. Patsy Boverie, who is probably overworked and underpaid, but loved and respected by many. Her encouragement and gentle prodding along with many discussions over coffee finally paid off. I also want to thank my committee members, Dr. Mark Salisbury, Dr. Bruce Noll, and Dr. Jan Schuetz, all of whom I respect tremendously. I wish to be as good a writer as each of you are one day. Thank you for taking the time to read, advise and encourage me to finish this project, and for allowing me to attend a class more than once to gain inspiration (Dr. Noll).

Many thanks to my OLIT friends, who overlooked my excuses and believed that one day I could close this chapter of my life, and move on to a new one. In particular, thank you to Carla Forrest, Charlotte Hendrix, Mia Logan, Jesse Mendoza, Barbra Portzline, Lawrence Roybal, and Susan McKenzie, who all helped me pull this study together by offering their insights into the data results.

Finally, thank you to the “love” of my life: my family; my husband Joe; daughters Erin and Jillian, who are following in my footsteps; and to Mamacita, the woman I admire most in this world. And to Missy, Scarlet and Venus who waited patiently underfoot for me to finish.

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MARY ELIZABETH WALCHER

B.S., Consumer Sciences/Business, New Mexico State University, 1978
M.A., Communication Studies, New Mexico State University, 2001
Ph.D., Organizational Learning and Instructional Technology, The University of
New Mexico, 2011

ABSTRACT

Given the call for change in medical school curriculum towards a more humanistic approach, it remains clear that there is an urgent need to study the effects of personal development classes on medical students' skill level.

Using participants from an ethical influence communications class, this study explored the impact of the use of reflection on personal awareness and professional competence skills in second and third year medical students. A total of 230 reflection papers from 46 medical students were analyzed using CAQDAS – computer assisted qualitative data analysis system-- with Atlas ti 6.2. Personal interviews (n=11) followed for clarification and verification of results. Analysis showed that reflection papers proved to be an effective way to measure changes in self-development levels as well as some of the dimensions of professional competence skills required for graduating medical students.

Students reported an appreciation and a strong desire for increased classes on personal awareness as well as insight into the results on communication skills of a medical curriculum based on a strictly medical model. The reflection papers allowed some students to

“have a voice” in a system, they felt, where they were not heard. Many students reported an increased awareness of viewing the patient as individuals, vs. the “uniform patient,” as a result of learning about themselves. Several students suggested a need for advanced communication classes to develop the skill level they felt they needed to deal with public expectations. Interestingly, all graduating students interviewed, who applied the content of the class to the final assignment of writing an application to a residency program, were admitted into their first program of choice.

Findings from this study may provide suggestions on incorporating personal and self-development classes into a medical school curriculum. Using a case study approach, this qualitative exploratory study offers an example for future researchers on insights into the use of reflection and assessing learning in medical students, how medical students perceive their educational experience, and the benefits of incorporating personal awareness experiences for the individual student.

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Chapter 1

Introduction

In 2008, the Josiah Macy Jr. Foundation convened a conference to discuss important issues in medical education. Among these were the crisis in healthcare of more than 60 million uninsured or underinsured people in the USA and how the patient satisfaction level was the worst of all the developed nations. Medical education has not kept up with the public's needs and expectations as students graduate without the knowledge and skills needed. Medical schools were asked to revise and modify their educational content and process and to minimize the powerful lessons learned from the "hidden curriculum" as it served to undermine a school's commitment for "high standards of professional behavior" and competencies. Among the many suggestions were those regarding innovations in medical education such as recognizing the shortcomings of a traditional, science based curricular content and implementing approaches that enhance learning in students (Cohen, 2008). Aside from the science and technical knowledge learned in the medical student's journey, there also exists the development of the "identity" of a physician—learned from beliefs and values, roles and expectations that go along with the culture of medicine (Suchman, Williamson, Litzelman, Frankel, Mossbarger, Inui, 2004). Called the "hidden curriculum," this learning comes from the organizational culture and the social learning in medical school. Students learn from watching others, the students ahead of them, the interns and residents, and the faculty, and from how they handle themselves and how they treat others, in order to learn and take on the role of "being a doctor."

Statement of the Problem

A growing concern exists for the decline in idealism, optimism, and empathy that medical students experience during the third and fourth years (Shapiro, Rucker, & Robitshek, 2006), defined as their clinical years. The decline in effective communication skills and moral development in these students (Branch, 2000), has created a need for examining the way the medical students are taught. Although several factors could be responsible for the changes in values in medical education, two changes that can influence the process of becoming a doctor are the rigors of the curriculum (Marcus, 1999), and the “corporate transformation of medicine,” the takeover of medicine by big business enterprise (Relman, 1998; Swick, Szenas, Danoff, & Whitcomb, 1999). A decline in public trust in medicine reflects a concern that physicians lack competent communication skills, self-awareness and monitoring practices, abilities to work as teams (Safran, Montgomery, Chang, Murphy, & Rogers, 2001), and insufficient concern for the patient. These concerns create an opportunity to examine different strategies for learning that do not follow the traditional learning styles of the medical field.

Many patients can identify a doctor with a less than desirable bedside manner. They can tell stories about physicians who were good technicians, but seriously lacking in interpersonal skills. Examples of poor communication skills in physicians include: speaking in “doctoresque” to the patients; cutting the patient off in mid-sentence when talking, not allowing adequate time to discuss issues; or a seemingly uncompassionate attitude when the patient expresses emotions. These examples seem counterintuitive to a person who enters into the ‘healing’ profession. A physician’s personal characteristics, their values and attitudes, biases and past experiences affect communication with their patient (Novack,

Suchman, Clark, Epstein, Najberg & Kaplan, 1997), and the physician must be aware of these communication concerns.

Most medical school curricula does not undertake an organized approach to promoting self-awareness to medical students even though the literature suggests that enhancing this leads to an increase of the medical provider's satisfaction with work experience and with themselves (Novack, Epstein & Paulson, 1999). A lack of personal awareness in a physician can adversely affect patient care (Kern, Wright, Carrese, Lipkin, Simmons, Novack, Kalet, Frankel & Feldman, 2001) whereas an increase in personal awareness leads to personal growth, changes in values and goals, and increased energy, productivity, and creativity (Shapiro, Rutger, Robitcheck, 2006). Effectiveness as a physician requires a variety of skills including good communication and technical skills and the ability to use them with personal maturity, wisdom, empathy, and integrity. The development of these qualities involves personal awareness and an understanding of how one relates to others (Novack et al., 1997).

Some literature suggests that medical students undergo a developmental delay in "mature emotional empathy and humanistic attitudes" as a coping mechanism of getting through the curriculum (Marcus, 1999), along with a decline in their moral development (Branch, 1998). Because medicine is considered to be a moral profession (Branch, 2000), this could have serious implications both for the student as a future physician and patients alike. The ability to identify this process through self-awareness during the formative years of medical training can help better prepare future physicians to cope with the demands of their future life (Shapiro, et al., 2006).

Purpose of the Study

The purpose of this study is to explore how the use of reflection impacts self-awareness and development of professional competence skills in second and third year medical students. The literature (Eraut, 1994; Schön, 1987; Stanton & Grant, 2002) indicates that learning through reflection as an experiential exercise is an important learning tool, particularly in educating professionals. Reflection enhances a health provider's self-awareness of personal feelings, attitudes and assumptions (Pietroni, 2001). Thus, if physicians become more self-aware of their own cognitive processes, they will become more available and helpful to their patients (DasGupta & Charon, 2004). Their heightened level of self-awareness towards their own feelings increases their capacity for empathy and encourages them to be more generous with self-care (Charon, 2001). One study (Wagner, Moseley, Grant, Gore, & Owens, 2002) designed to identify the relationship between patient satisfaction and a physician's level of emotional intelligence suggests that a correlation exists between patient satisfaction and the level of physician's personal happiness level. The happiness level correlated with one's level of self-awareness.

Medical students often believe that there is a right and wrong way to feel, and they are reticent to share feelings unless they believe them to be correct (Henderson, Berlin, Freeman, & Fuller, 2002). Reflective writing incorporated into medical curricula is an established means of increasing medical students' level of self-awareness, empathy, and re-establishing a voice to the individual in a profession that traditionally "denies or buries the personal voice" (Poirier, 2002). The objectives of this study are: a) to explore in what ways medical students perceive heightened levels of self-awareness, b) to determine whether medical student's levels of empathy are impacted because of heightened levels of self-

awareness, and c) to determine whether medical students find value in increased self-awareness.

Research Questions

The following research questions serve as a guide to examine how reflection, as a means to raise levels of self-awareness, impacts second and third year medical students:

1. How are medical students affected by the experience of personal reflection to promote self awareness?
2. In what ways do medical students experience a heightened level of self-awareness through reflection?
3. How is professional competence in medical students impacted through self-awareness and reflection?

These questions were answered from reflection papers completed by 46 medical students in a communications class at a medical school in the southwest, and follow-up interviews with individual students who had completed the course. The papers were completed over a three year period, for a total of 230 papers. Interviews followed with 11 students who completed the class. These students self-selected to participate in an influence and persuasion communications class and completed the reflection papers as part of a formative evaluation for the class. Based on emergent themes, a sample of these participants were asked to take part in follow-up interviews to obtain more in-depth information about the impact on self-awareness from reflection. Data gathered from the reflection papers and interviews were analyzed for this dissertation.

Justification for the Study

There is an increasing need in the medical school curriculum to prepare students in communication and professional skills in the workplace (Ang, 2002). Two important relationships exist in the context of medical education—the doctor/patient relationships for which the student is preparing, and the teacher-learner relationship with which the student contends with during medical school (Stevens, 2007).

Stevens (2007) points out two developments in health care that have brought changes to the doctor-patient relationship. The first is the necessity for the physician to interact with other health care professionals in a team setting in order to diagnose and address issues with each patient. As recent as twenty years ago the ideal relationship was a one-on-one bond with the patient and one physician was viewed as the ultimate authority on health care issues for a particular patient (Starr, 1992). The relationship now has evolved in what is called a “one-to-many” relationship, making it necessary for the physician to develop team skills. The second issue revolves more around the advent of the Internet, which makes the acquisition of information accessible in an equal way to both physician and patient. The authority that the physician once carried – as the ultimate bearer of information no longer exists, and now the physician is required to customize the information for the patient, making necessary a higher level of effective communication skills (Lingard & Haber, 1999).

The teacher-learner relationship in medical education has also evolved. Dreyfus and Dreyfus (as stated in Stevens, 2002) made the analogy that a medical student learns in similar ways as to how a pilot learns by going through progressive stages: novice, advanced beginner, competent, proficient, and expert. The student, who starts as a novice, at the end of their undergraduate medical education eventually evolves into an advanced beginner. The

advanced beginner can make connections to unforeseen circumstances based on what they learned previously from rule bound behavior. Once the student advances to graduate medical education, they enter the competent stage, evolve into the proficiency stage, and finally proceed through the expertise level that resides with the attending physicians. What makes this relationship dynamic and ever changing is the technology and new knowledge that demand constant learning for medical students as well as practicing physicians. This equalizes the stages between teacher-learner with all participants, including the teacher, who is both learner and teacher at the same time (Stevens, 2007).

A change in the health care system begins with improving medical education (Stevens, 2007). Davidoff (2002) believes that one of the reasons change in the medical school culture is slow to come is because of shame. This culture, that has always prided itself in having the authority in medical knowledge or in breakthrough techniques, now finds itself struggling to keep up with technology. The medical school faculty finds that the student is teaching the teacher how to operate the latest software systems, and so the faculty realize they hold inadequate knowledge to educate the current medical students. Current students find they must be proficient in areas that do not fall into traditional medical education, such as interpersonal communication skills. An urgency exists to bring medical education into better alignment with societal needs and expectations (Cohen, 2008). Among the important goals for medical education are proficiency in the areas of critical thinking, self-reflection and professional competencies to bring about this alignment (Niemi, 2003).

Terminology

It is necessary to understand the following terms with regard to this study: empathy in medicine, professional competence, and reflection.

Empathy is defined as the ability to relate and understand another person's emotional experience (Marcus, 1999). In medicine empathy is the physician's ability for awareness towards emotional engagement and compassion that produces an urge to help (Benbassat & Bauml, 2004). This requires the physician to understand patients' feelings about being ill, the need to be cared for, and their anxiety surrounding whether they will get better or worse (Spiro, McCrea Curnen, Peschel, St James, & Wolf, 1996). Three components of empathy that a medical practitioner engages in are: 1) a cognitive component—describes when a physician attempts to understand the perspective of the patient; 2) an emotional component – explains how the clinician puts him/herself in the place of the patient; 3) an action component – recognizes how the physician communicates understanding back to the patient (Coulehan et al., 2001), Empathy is a necessary skill in medical practice that can be taught (Benbassat & Bauml, 2005).

Professional competencies in medicine are physician skills defined by (Epstein & Hundert, 2002, pp. 226-7) as the “habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in the daily practice for the benefit of the individual and community being served.” Students are expected to graduate with a working knowledge of these competencies in place.

Reflection, as defined by Atkins and Murphy (1993), is a process of internally examining and exploring an issue of concern, triggered by an experience, which then creates and clarifies meaning in terms of self and results in a changed conceptual perspective. The ability for a changed perspective becomes an important skill in medical practitioners as it allows them to reframe a problem, question personal assumptions and look at problems or issues from multiple perspectives when necessary (Plack & Greenberg, 2005). When

physicians or health care personnel use the skill to reflect on their own lives and experiences, or beliefs, values, and assumptions and how they might differ from others (Kind, Everett, & Ottolini, 2009), this can raise the awareness of their own feelings and increase the capacity to respond empathically towards their own patients (DasGupta & Charon, 2004). Traditional medical education has mostly focused on the teaching of facts and clinical skills as the “hallmark” of a good education and has “undervalued reflection in learning” (Barbel Pee, 2000). The need to prepare students as life-long self-directed learners call for an approach to learning that reflection can foster, such as the ability to define their learning needs, goals and monitor their learning process. Moreover, the reflective process is crucial to facilitate moving through the physician’s learning-episode stages where the ability to focus on how the problem fits within the doctor’s life and scope of practice is a central feature (Slotnick, 2000).

Emotional Intelligence, is a kind of social intelligence that allows one to manage and monitor one’s emotions, discriminate between them and use this information as a guide for one’s thinking and actions (Mayer, Salovey, Caruso, & Sitarenios, 2001). They further added to the definition including verbal and non-verbal appraisal and expression of emotion, the regulation of emotion in the self and others, and the utilization of emotional content in problem solving (Elam, 2000; Mayer, et al., 2001). Self-awareness and emotional intelligence fall under the domains of professional competencies for medical students. The process of reflection helps bring about a higher level of self-awareness that can ultimately lead to improved interpersonal interactions both for the physician and the people with whom he or she interacts with.

Limitations

The convenience sample of this study, limited to a group of medical students who self-selected to take a communication class, at a university in the southwest decreases the generalizability of findings. The bias that exists because the researcher and the instructor of the class (who are the same person) could be a source of potential bias that indicates the findings could be subject to other interpretations. Lack of specific demographic data made it difficult to analyze variables such as age or gender. For these reasons the study will not be generalizable to all medical students.

Summary

Medical schools turn out highly intelligent and technically skilled physicians, but these physicians often lack skill levels in the social/emotional intelligence domain. In the context of this study, it was discovered that medical students tend to lack self-awareness and an empathic connection with others, but these emotional skills can be taught. Once thought of as unimportant in the science area, people who possess a high level of emotional intelligence are liked more by others, rise to leadership positions, and when coupled with high technical skills are often on the high end of the income pay scales (D Goleman, 2006).

Physicians need to understand their patients on several different levels, from the biological level to the social/emotional level. This study investigates how medical students experienced the learning process in a class that used reflection to promote self-awareness.

Chapter 2

Literature Review

This chapter reviews the literatures inclusive of the specific concepts of this study: professional competence, learning in medical school, self-awareness in medical students, and reflective learning. First, professional competence skills in medicine are discussed. Next, how medical students commonly learn in the culture of medical school is described. Third, how this process affects medical student's empathy and self-awareness is reviewed. Finally, the chapter concludes with a review of the research about the role of reflection in learning.

Professional Competence

Research indicates the importance of professional competence skills for the current education of a physician (Epstein, Campbell, Cohen-Cole, McWhinney, & Smilkstein, 1993; Heisler, Bouknight, Hayward, Smith, & Kerr, 2002; Maguire & Pitceathly, 2002). The teaching of interpersonal and communication skills falls under a domain of professional competence. Because there has been difficulty in finding an agreed upon definition of professional competence the Accreditation Council for Graduate Medical Education has defined important areas of competence to provide a framework in which to teach and assess. The six areas are: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice (which include health economics and teamwork). Professional competence in the education of a physician, as defined by Epstein and Hundert (2002) means: "the habitual and judicious use of communication, knowledge and technical skills; clinical reasoning, emotions and values; and the use of reflection in daily practice for the benefit of the individual and the community being served." (p. 226)

The definition of professional competence assumes that the necessity for new skills is constantly emerging, in particular with ever changing technology. With no agreed upon definition of competence, Epstein and Hundert (2002) further refine the definition and group the following domains as important for medical students to achieve upon graduation. Components of professional competence include: cognitive, technical, integrative, context, relationship, affective/moral, and habits of mind. Table 1 identifies domains of professional competence skills that emerged from reflection papers, exclusive of the technical skills that are outside the scope of this study (see Table 1).

The Affective/Moral domain pertains to the concept of emotional intelligence (EI). Emotional intelligence, popularized by Goleman (1995), has been described by Salovey & Sluyter (1997) as having four branches of distinct abilities: 1) perceiving emotions, in oneself and in others; 2) using emotions: the ability to anticipate other's emotional reactions and self-regulate one's own reaction; 3) understanding emotions: "the ability to use language to analyze emotion" (Grewal & Davidson, 2008); 4) managing emotions: the awareness that one has of regulating their own emotions in themselves and in others. Proficiency in emotional intelligence positively affects the understanding of interpersonal and communication skills (Grewal & Davidson, 2008).

Characteristics of a well-functioning health care environment include a cooperative partnership type relationship between physician and patient, the spirit of teamwork between physicians and other health care practitioners, functional communication patterns between all aspects of the health care setting, and a feeling of continuity between all of the above (Suchman, Botelho, & Hinton-Walker, 1998).

Table 1. Dimensions of Professional Competence.
(Epstein & Hundert, 2002)

Cognitive
Core knowledge
Basic Communication skills
Information management
Applying knowledge to real-world situations
Using tacit knowledge and personal experience
Abstract problem-solving
Self-directed acquisition of new knowledge
Recognizing gaps in knowledge
Generating questions
Using resources (eg. published evidence, colleagues)
Learning from experience
Technical
Physical examination skills
Surgical/procedural skills
Integrative
Incorporating scientific, clinical and humanistic judgment
Using clinical reasoning strategies appropriately (hypothetico-deductive, pattern-recognition, elaborated knowledge)
Linking basic and clinical knowledge across disciplines
Managing uncertainty
Context
Clinical setting
Use of time
Relationship
Communication skills
Handling conflict
Teamwork
Teaching others (eg. Patients, students, and colleagues)
Affective/Moral
Tolerance of ambiguity and anxiety
Emotional intelligence
Respect for patients
Responsiveness to patients and society
Caring
Habits of Mind
Observations of one's own thinking, emotions, and techniques
Attentiveness and mindfulness
Critical curiosity
Recognition of and response to cognitive and emotional biases
Willingness to acknowledge and correct errors

Past approaches to teaching the doctor-patient relationship included a paternalistic approach in which the physician knew what was best, made the decisions for the patient, and the patient accepted these decisions without resistance. This era came to an end with the advent of consumerism, shared decision making, and access to all information from the internet (Teutsch, 2003).

In order for effective doctor-patient relationships to take place, medical students will need to be equipped with skills in emotional intelligence such as empathy, personal awareness and mindfulness. One study that measured the importance of physician communication skills versus shared decision making with patients found that the patient valued the communication competence and connection established with the physician more than the autonomy they were given to make their own decision (Heisler, et al., 2002). This could indicate the need for a variety of interpersonal skills needed in physicians, including the ability to analyze and anticipate others needs. The goal of medical education is to expose and equip students with a variety of skills, not just technical, in order for them to influence patient compliance and to pursue positive health outcomes (J. Spencer & R. Jordan, 1999).

There is a major dilemma in a medical student's experience: how teachers should deal with the caring orientation as opposed to the functioning orientation and how a caring focus affects ones moral development or personal growth (Branch, 1998). Medical education is currently undergoing change, different approaches to learning are being examined that attempt to produce doctors who are better equipped in adult learning skills necessary for doctor/patient success in the communities they serve (J. A. Spencer & R. K. Jordan, 1999). Medical educators complain of an apparent lack of "love of learning" (p. 159) among medical students (Misch, 2002); however, the medical school culture often is to blame.

Research suggests that many medical educators have had little or no training and possess limited knowledge in the teaching and learning field (Misch, 2002), and they may not be aware of the different strategies they can use to stimulate learning in their students.

Many believe that what drives a medical student is the external quest for a high grade that will enable them to gain admittance into a quality residency program, and yet these are the very qualities that allow a student to be admitted into the existing medical education program. Medical students are rewarded for behaving in a conservative manner; to avoid questioning and risk “not knowing” or be found wrong; to not take chances or think creatively (Misch, 2002); to memorize and repeat the safe and correct answer. Meanwhile, a student who reads broadly, questions the status quo, looks at the “big picture” (p. 1006) and thinks creatively may be punished (Fowell & Bligh, 2001).

In order to get through the grueling medical school program and to achieve the high academic standards required for graduation and admittance into a residency program, students may neglect their own personal issues and needs and commit all their energies into surviving through the program. This could be a reason for failure of medical education to develop interpersonal skills in the students which requires a degree of emotional investment from the students and their professors as well (Davies, Davies, & Rutledge, 1995). Other factors that take a negative toll on the personal development of medical students are the constant tension between medical teachers’ beliefs of whether medicine is a science or an art, when in fact, it is both (Montgomery, 2006). The advent of evidence-based medicine, and its positivist point of view, often forces medical professors to teach a curriculum that neglects the human side of patient care. In turn the medical student fails to learn to appreciate the individual person, and to pay attention to feelings and awareness of their own emotional life

and participation in the lives of others, (Montgomery, 2006). Students' level of self-awareness surrounding these teaching and learning issues could help them realize they bring their own agendas and backgrounds to the doctor-patient relationships (Davies, et al., 1995).

Medical students often experience a deterioration in their communication skills (Prislin, Giglio, Lewis, Ahearn, & Radecki, 2000) as well as diminished levels of moral development during their medical education journey (Branch, 2000). The emotional detachment that is learned during a medical education can cause physicians to view the patient as "the disease" rather than a person with a disease. This process is sometimes called the "I-It" interaction (Buber & Smith, 2000), one where one person may have no connection or awareness of another, and becomes completely detached from them emotionally, so that they merely view others as objects, or as a means to an end (A. Bandura, 2001; D. Goleman & Boyatzis, 2008). Psychologists claim this cold approach as being "agentic" and the opposite of this as being in "communion" (Bakan, 1966). When a state of communion is reached, people feel they are connected to each other and perceive that they are understood and being listened to. This can be described as being empathic. Empathy, or the perception of empathy, is recognized as a necessary skill for a good physician to possess. Some medical school curricula include components that teach or emphasize empathy as a skill, and empathy is one quality that health care consumers and patients wished they felt more of from their doctor. Goleman (2006) does not question whether empathy can be taught, but instead examines what is being done to drive it out of medical students?

Empathy

Empathy is the ability to relate and understand another person's emotional experience (Marcus, 1999). In medicine as the physician's ability for awareness towards emotional

engagement and compassion that produces an urge to help (Benbassat & Bauml, 2004). This requires the physician to understand patient's feelings about being ill, the need to be cared for, and anxiety surrounding whether they will get better or worse (Spiro, et al., 1996). Empathy is a necessary skill for medical practitioners that can be taught (Benbassat & Bauml, 2005).

The ability to empathize appropriately is one contributor to effective communication skills (Brown, Boles, Mullooly, & Levinson, 1999) and is a part of emotional intelligence (Goleman, 1995). In a study of medical students and their reflection on a hypothetical traumatic event, students who showed detachment and emotional withdrawal from the experience were found to have lower ratings in overall communication from standardized patients (Shapiro, et al., 2006). A major challenge in medical education is to identify factors that serve as bridges or barriers in the development of effective skills in students (Grewal & Davidson, 2008). Using concepts of emotional intelligence and professional competence skills to identify these factors allows for the development of more effective medical school curricula.

Loss of empathy may be attributed to the objectification of people instead of the acquisition and replacement with medical empathy, learned through the acculturation of becoming a doctor. Marcus (1999) defines and describes the acquisition of medical empathy as: the ability to identify with patients, an understanding of the emotional experience patients go through, including being ill, cared for, as well as getting better or worse. In order for physicians to manage their emotional state when dealing with a patient's emotions, they learn to objectify and develop what is called "a semi-permeable barrier" (Marcus, 1999, p. 1211). Too thick of an emotional barrier shuts down the physician's feelings and emotions, and

prevents them from experiencing their own humanity. Too thin of a barrier overwhelms the medical student or physician emotionally and lends them to be ineffective in helping their patients. Marcus (1999), a psychiatrist, describes the stages of the development of this barrier as follows:

In year one of medical school, the student tends to develop an empathic identity described as identifying with the ill patient. They feel the patients' emotions as their own. Students often have dreams that what is happening to their patients is happening to them. This causes a state of high anxiety for the student. Not feeling that others understand and because of the highly competitive environment, the student may start to withdraw and will not share these experiences with others (Marcus, 1999).

Year two is called the "man in the pan" stage, where students in pathology study trays of organs. The importance and demand to learn "it all" adds to the anxiety of year one and produces a familiar phenomena called the student hypochondriac. At this stage, the student identifies with the disease. The student can often times feel overwhelmed by feelings of helplessness and start to shut down their empathic ability (Marcus, 1999).

During year three the student re-identifies with the patient, but also attempts to develop an identity of the "ideal doctor," one who is healthy, calm, skilled and not overwhelmed with emotion, in order to survive. Students identify with an authority figure who could be an attending, resident or faculty member. Often these authority figures engage in negative communication, such as cynicism towards the health care system, name calling, or manipulative behavior towards the students. All of these behaviors lead students to believe that this is the "norm" for appropriate behavior, and

will emulate the authority figure's behavior believing this is what they are supposed to do (Marcus, 1999).

In year four, the student is called upon to perform technical medical skills, some of which have become routine. Mastering these invasive tasks develops an identification with technology and manipulation. This increases the thickness of the barrier the student experiences between "self" and the rest of the world (Marcus, 1999). This in turn may cause the loss of empathy and "self" and the development of cynicism that occurs during the clinical years (Branch, 1998).

This description of how medical students may lose their ability to connect with their own feelings is a typical developmental process for medical students (Marcus, 1999).

Connections to emotions are generally not valued in the health care field, offering somewhat of a paradox since many times, the very need to connect with people is what draws one into the health care field. Over time, empathy and compassion are slowly replaced by the "hospital culture: a biomedical orientation that is technology-driven, and geared towards getting patients in and out as quickly as possible" [as stated by Dr. Beth Lown, p. 262 (D Goleman, 2006)] with little need seen to develop any kind of relationship towards the patient. Marcus (1999) suggests that if ethics and values are to be taught, this should be done during the early years of medical school as an intervention to prevent the loss of empathy.

Self-awareness

Positive interactions in a doctor/patient relationship are often described in the literature (Epstein, et al., 1993; Frankel, Morse, Suchman, & Beckman, 1991; Wagner, et al., 2002). In quantitative and materialistic terms, many benefits to both physician and patient alike include a higher rate of patient compliance, fewer malpractice suits, higher patient

loyalty with direct benefits to income generation for the physician, and an improved satisfaction rate for the clinical encounter and outcome for both physician and patient (Wagner, et al., 2002). A compilation of certain physician characteristics desired fall under the category of emotional intelligence and are needed to practice a humanistic approach in medicine. A component of emotional intelligence includes that of physician self-awareness (Wagner, et al., 2002).

Self-awareness, and the concept of self, is defined in different ways. Kegan (1982) describes the self through a constructive-developmental approach framework. The self evolves through six different phases: incorporative, impulsive, imperial, interpersonal, institutional, and inter-individual. These phases, and the capacity that we each have in each of these phases, evolve from our ability to adapt, make meaning, balance and evolve through to the next phase. As one grows through each phase, one is constantly balancing the “two greatest yearnings of human existence” (p.107): 1) the yearning to be included, joined with or connected to, and 2) the yearning to be autonomous, independent, distinct and individual. A person’s ability to navigate through the phases of development of self and balance the two yearnings could determine why parts of the “selves” shut down, why people detach, and do not continue to personally evolve and grow.

Mezirow (2000) describes self-awareness as crucial to transformational learning theory. Meaning making is not possible without being self-aware of one’s own assumptions and expectations, of other’s assumptions and expectations, and of the ability to assess how they impact an interpretation of an experience, event or dialogue (Mezirow & Associates, 2000). Brookfield (1987) describes “insight realization” (p.49) as the most significant

learning experience people can gain from, and an ability one must possess to engage in the critical thinking process.

Self-awareness in medical students is defined as: 1) being aware of the emotions that are evoked in the context of a patient interaction; 2) being aware of the communication skills that one has used; 3) being aware of one's values, beliefs, history, needs, and culture; 4) being aware of how the above self-awareness points affect one's interactions with and care of the patient; and 4) using this information to improve one's care of the patient and achieve mutual benefit (Branch et al., 2001).

Medical students frequently deal with stressful situations including learning to balance an overwhelming course load, dealing with patients, learning to cope and process grief, balancing their educational needs and demands made by family, and overcoming their fears of professional competence (Rabow & McPhee, 2001). Add to that the fact that these stressful situations may come at a stage in their life when they may have moved away from their support system of family and friends and this could lead to developing unhealthy coping mechanisms such as substance abuse, burnout or isolation (Novack, et al., 1997). Little research exists on the implications of medical professors providing opportunities for personal growth and awareness of these issues for medical students despite the fact that research indicates this would help avoid developing maladaptive coping mechanisms (Rabow & McPhee, 2001).

Specific pedagogical practices that help nurture personal growth, self-awareness, and empathy include having students share their personal and professional stories with each other and engage in reflection exercises that can be adapted to use in different clinical and life situations (Spiro, et al., 1996). Raising levels of personal awareness, developing the ability to

monitor signs and symptoms that might lead to maladaptive behaviors, could help develop practical means for responding appropriately (Shapiro, et al., 2006).

Physicians work on a daily basis with patients and families who are struggling with illness and loss, and this work has an emotional impact on the physician as well. It is important to learn strategies that help the physician identify and assess their own feelings as well as those of the patient they are helping towards improved health (Meier, Back, & Morrison, 2001). Meier (2001) indicates that emotional detachment and disengagement are forms of abandoning patient needs that lead to poor patient care. This might include mistrust from the patient and family, poor quality patient care, inability to identify values important to the family or patient that influence decision, lack of clarity of health care goals, and failure to engage in time-consuming decision making processes. The impact on the physician includes loss of meaning, feelings of helplessness and frustration, cynicism and professional loneliness, depression, anger about the health care system, and loss of empathy and humanism towards the patient.

An indication that the value of reconnecting with one's own feelings in the health care field may be changing is the fact that several hospitals nationwide have implemented what is known as the "Schwartz Center Rounds" named after Kenneth Schwartz, a successful Boston lawyer. Before he died of lung cancer, Schwartz experienced compassionate moments with the medical staff in what seemed to him to be a very cold and sterile medical environment. Months later, before his death he founded the Kenneth B. Schwartz Center at the Massachusetts General Hospital to promote and support compassionate health care for patients and health care workers alike. These "rounds," use an atypical process that give health care workers the opportunity to discuss their own personal feelings, such as their

concerns and fears surrounding their day to day experiences on the job. Research suggests that the health care staff gain insight into their own feelings, when medical professors “help them make personal connection with their patients,” thus improving the healing process for both patient and staff (Goleman, 2006, p. 262).

Reflection as a Learning Process

The science of learning is constantly evolving and growing. One major goal is to provide understanding of complex subject matter and how to better transfer what one has learned to new settings and problems. Bransford (2000) states this type of learning is active learning that includes helping people take control of their own learning. Processes for doing this come under the heading of “meta-cognition,” a topic that refers to people’s abilities to monitor their levels of mastery and understanding as well as predict their performances on various tasks (Bransford, 2000).

Teaching strategies that use a meta-cognitive approach include those that practice sense-making, self-assessment and reflection, and question what worked and what needs improvement (Bransford, 2000). Using reflection for learning falls under the constructivist view of learning (Marsick, 1990). Constructivist learning refers to learning that occurs by a process in which students engage in meaning making by making sense of an experience. Though several views of constructivism exist, a common thread is that sense making and meaning is made up by the individual, contingent on their past experience, assumptions, and on their current level of knowledge (Merriam & Caffarella, 1999).

A change in the self-awareness process often begins with questioning core beliefs and values and exposing and reflecting on currently held assumptions and mental models (Huy, 1999; Mezirow, 1990). A similar reflection process has been successfully used in

educational curricula as a means to move the learner beyond the simple critical thinking process into the knowing, acting and being realm (Barnett & Coate, 2005) in order to equip them for the challenges of our fast and ever changing world. Epstein (1998) notes that a valid way of assessing a medical student's communication skill level is by evaluating their written letters seeking admittance into residency programs. Reflective written evaluations on the presentation of new knowledge that measure a student's capacity to organize and link new information help to predict clinical reasoning skills as long as two years after the evaluations (Brailovsky, Charlin, Beausoleil, Cote, & VanderVleuten, 2001).

Self-reflection is a catalyst for possible transformational learning in individuals (Mezirow, 1990; Schon, 1983). One method for this kind of learning includes reflection papers or journal writing that stimulate the writer to examine their own thought processes and reasoning (Marsick, 1990). Reflection is one process that enables individuals to integrate mental models, or to integrate old experiences with new ones (April, 1999).

Mezirow describes three types of reflection: 1) content reflection that involves thinking about the experience; 2) process reflection, thinking of how to deal with the experience; 3) and premise reflection, thinking about the assumptions, values and beliefs that one previously held about the experience (Merriam & Caffarella, 1999). "Effective learning does not follow from a positive experience but from effective reflection." [As stated in Merriam & Caffarella, 1999 (Criticos, 1993, p. 162)]. Because reflection can be instrumental in the development of knowledge that takes place in a practice based setting (Niemi, 2003), it does not come easily to medical students as it is not embedded in the medical curriculum itself (Pee, Woodman, Fry, & Davenport, 2000). It seems fitting to expose the students to this mode of learning as much as possible.

The didactic teaching mode of medical school curriculum supports learning through memorization of facts and information. Although useful in learning important basic concepts, facts change, and information becomes readily available through technology. Inquiry based learning, where students learn new concepts by actively doing and reflecting on what they have learned, has proven effective in stimulating critical thinking skills (Hastings, 2006). Learning to shift from the method of being told what to learn into assessing what is needed for learning is important for an understanding of how a learner gets and make sense of massive use of data, which is the daily experience once students graduate. By using the process of reflection, inquiry based learning supports the need to go beyond data and facts accumulation and move toward the generation of useful and applicable knowledge. Through this process, students construct much of their understanding of the real world and develop appropriate attitudes and habits that equip them in becoming life-long learners. Higher education instructors, including those in medical schools, can create learning experiences that are at the “transformational” end of the learning spectrum that promote deep as opposed to surface learning (Brockbank & McGill, 2007).

When students transition from a learning environment to a real world environment, they often transfer what they have learned to everyday practice. Two skills needed in order to adapt their acquired skills in a new environment are feedback and reflection (Bransford, 2000). Branch (2000) suggests that very few places exist in the medical student’s experience, in which the faculty wins the student’s trust enough to enable them to personally disclose and engage in a personal reflective process.

A strategy for the design of the communication class used as a foundation for this study was based on the active learning concept that helps learners take control of their own

learning. The class was a combination of lecture based facts and scientific principles on the field of influence with class activities to stimulate self-awareness. Content about how students can influence others was based on research from Robert Cialdini (2001). The activities used to stimulate self-awareness in individuals were taken from various training exercises the researcher had been exposed to in the past. Activities that support active learning come under the heading of “meta-cognition,” a term used to describe several abilities, one being to assess their own understanding and determine where they stand in their own learning process (Bransford, 2000). Specific activities that address this type of learning involve personal awareness, self-assessment, and reflection, all components of transformational learning. Each type of learning is incorporated into the class to bring about change in the individual student’s way of thinking. Teaching reflection is difficult because it involves information that students often do not understand (Bransford, 2000). The inability of medical students to reflect when called upon can be a way for them to self-assess understanding of new material.

Summary

Medical students begin their education with the concept of a “healer’s mentality” in mind, and often times graduate out of their training characterized as “cold and aloof” physicians (Branch, Hafler, & Pels, 1998). This causes other educators to question what happens to these students in their transformation into physicians and to examine the curricula of medical education and the impact it has. Medical education uses a didactic teaching approach, with goals of producing physicians who have both technical knowledge and practical and humanistic medical skills. As this literature review has shown, a gap exists because many new physicians graduate with an inability to interact interpersonally and with

compassion towards their patients. Medical school programs advocate a need for more humanistic, or patient based, classes placing a priority on subjects such as communication skills in order to enhance the effectiveness of physicians' interactions with their patients. General communication skills are the preferred skill to measure because they are easier to define and observe over interpersonal skills (Grewal & Davidson, 2008) and research continues to support evidence that effective communication skills are related to positive health outcomes for both patient and physician (Yedidia et al., 2003) . Medical educators agree that good communication, cognitive and technical skills, used with compassion, wisdom and integrity is what turn out an effective and competent physician. These accomplishments depend on medical instructors teaching students about personal growth, specifically in awareness and management of feelings, attitudes, beliefs, and life experiences (Kern et al., 2001).

A strategy for accelerating change in medical school curriculum is to encourage individual learning and change in medical students within the medical school organization. One of the benefits of individual organizational learning is that it increases what is called 'generative capacity,' the ability of individuals to develop solutions for their own organizational problems (Porras & Silvers, 1991). As individuals develop generative capacity, they change their on-the-job behaviors, which enable the organization to change over a longer term. Building this learning capability in individuals improves an organization's ability to respond faster and more efficiently to the constant and continuous change, thus making it competitive in the current marketplace (Merriam & Caffarella, 1999).

Medical students who have been guided through a class process that incorporates self reflection can benefit from personal growth and transformational learning and can become

more self-aware, more empathic, compassionate and caring (Shapiro, et al., 2006). Courses such as these help provide a balanced approach in the medical education curriculum by moving from the more highly technical and scientific approaches that are the norm in medical school curricula, to a humanistic approach based on communication skills.

Chapter 3

Methods and Procedures

This qualitative methods case study looked at how self-awareness and professional competence skills were impacted in medical students who participated in a class that incorporated reflection as a skill development process. This chapter discusses the methodology used to answer the following three research questions.

Research Questions

1. How are medical students affected by personal reflection to promote self awareness?
2. In what ways do medical students experience a heightened level of self-awareness through reflection?
3. How is professional competence impacted in medical students through self-awareness and reflection?

Background of the Class

In the Fall of 2005 I began teaching a communications class entitled Ethical Influence to second and third year medical students at a medical school located in the southwest. The class was designed to teach students communication skills based around six persuasion and influence principles as identified by Robert Cialdini (2001). The objectives of the class were: to introduce communication strategies that are effective in compliance gaining techniques to improve a physician's professional competence skill level, 2) to inoculate the students on being unknowingly influenced by others, and 3) to enhance student's levels of self-awareness. Assessments initially used to measure the results of the class were two surveys, a compliance gaining instrument and an organizational communication conflict instrument.

Pilot Study

In order to assess the results of the class, two pre/post test surveys were administered to each medical student attending a communications class on ethical influence, each at the beginning and at the end of the class. The two assessments used were the Compliance-Gaining techniques survey and the Organizational Communication Conflict Instrument. The use of quantitative class assessments were in keeping with the culture of the organization. The Compliance-Gaining techniques (CGTs) survey by (Marwell & Schmitt, 1967) presents four different scenarios with 16 identified power-based compliance-gaining techniques: promise, threat, positive expertise, negative expertise, liking, pre-giving, aversive stimulation, debt, moral appeal, positive self-feeling, positive esteem, and negative esteem – and asks respondents how likely they would be to use each in the following different situations: job, family, and school. For this study, each of the scenarios involved were specifically re-written to depict a similar example to the original assessment, but appropriate to the life of a medical student.

Reliability for this assessment was a score of .89 for Kendall's W that assesses agreement among raters was found. Kendall's W ranges from 0 (no agreement) to 1 (complete agreement) (Lamude & Lichtenstein, 1985). A test-retest reliability of .53 for "likelihood of use" ratings among the four scenarios was found. For validity purposes, this assessment has undergone a variety of replications to discover variables that might predict strategy selection. In one assessment, the size of the request was varied in an interpersonal setting. In another, the interpersonalness and the long vs. short term consequences were varied, and in another, personality variables that might influence strategy choice were varied. The Marwell-Schmitt (1967) CGT assessment has been used in many studies.

The second assessment used in the pre/post test was the Organizational Communication Conflict Instrument (OCCI) developed by Putnam and Wilson (1982). This instrument was designed to measure the management of strategies about choices one makes when in conflict across an organizational context, such as a health care facility. The flexibility of the OCCI denotes several strengths in that it has been used to measure: a) vertical vs. horizontal communication in organizations, b) different conflict topics, c) different levels of conflict, d) customer satisfaction, e) different gender and cultural differences (Downs, 1994). The assessment contains 30 situations and respondents have a choice of responding on a 7-point Likert scale from Always = 1 → Never = 7. Low scores represent most frequent use. Most alpha coefficients for this assessment test above .80 indicating high reliability, and are deemed as good as any other scores obtained for other measures of conflict (Wilson & Waltman, 1988). The construct validity for the OCCI is adequate showing that “the OCCI generally shows the expected pattern of correlations with other conflict instruments, but degree convergence is moderate, reflecting different conceptions of the same style across instruments” (Wilson & Waltman, 1998, p244)

The purpose of the administration of the pre-post test surveys was to evaluate whether any change in the use of communication skills or strategies in medical students occurred from participation in the class. Because quantitative assessments were in keeping with the culture of the organization, this was done to make the students feel comfortable with a process they were already familiar. For the first three years of teaching this class, I noticed there was little, if any change in the pre/post assessments results. Based on the responses from the assessments, the students seemed to not change their personal strategies or behaviors they would use to resolve conflict situations, or how they would attempt to

influence others. However, I received emails from students who had taken the class, thanking me for the lessons learned and letting me know that what they learned and had applied had a major impact on them. I received communications from former students that indicated they had been helped with various issues including: clarification in personal values held; new levels of self-awareness based on personal assumptions previously held; help in selection towards a field specialty; and improved interpersonal relationships such as successful strategies for interactions with faculty members whom they had previously found intimidating and unapproachable.

After careful review of the surveys, I concluded that the pre/post assessments provided inadequate measures of what the students had learned. They learned different concepts, other than professional application of the subject matter.

During the fourth year of teaching the class, a reflection paper was incorporated as a formative evaluation that each student wrote as a class assignment at the end of every session. Originally, the papers allowed the students to have a 'voice' since I found these groups to be very reluctant about sharing personal ideas or any kind of self-disclosure. I wanted to create an atmosphere of trust, and I believed that having them fill out the reflection papers privately would help. I wanted students to be free to tell me what they liked or disliked from the class and what made an impact on them. What provoked the most reactions were a series of short exercises incorporated into the didactic portion of the class that were designed to encourage students to examine their assumptions and biases. As I read their papers, I began to see that the reflection papers provided a window into a personal growth process that occurred in some students.

Some students valued the learning experiences more than others did as reflected in the following quotations from two separate students. After the first session of the class, two students provided a self-assessment on their own personal ethical style in response to the following question:

What would you change about today's lecture to make the information more applicable to you?

Student 19 responded: "I really appreciate the opportunity to get to know myself better. I had no idea I fell into the ethics of care style. I'm pleased because I feel myself changing and I'm resisting taking on a cynical attitude towards the patients we can't help. I really wish there was more info on this subject taught. I couldn't write it all down fast enough. It was all very useful and I can see how the two different perspectives (ethics of care vs. ethics of justice) would influence someone's perspective and decision making. I want to learn more to help my patients."

Student 23 recommended: "Minimize the extra information and only include the content that we need to know to pass this class. I don't think we need to know what the barriers are for strategies not working or how to better understand ourselves, just tell us what does work so we can memorize and do it. We don't have time for the rest."

The purpose of this study was to explore how the use of reflection impacted self-awareness and development of professional competence skills in second and third year medical students.

The review of current medical school curriculum and a national call for change in medical education demonstrates a strong need to study how learning occurs when medical students are exposed to methods other than the traditional lecture and pre/post assessments. This qualitative methods study provided insight into what learning took place in a communication class in which a specific skill set was taught and reflection papers were used as a class assessment.

The following section describes the method used for the study.

Study Design

This study used a qualitative case study research approach looking at data from reflection papers and interviews to arrive at medical student's phenomenological experience. Extant data, data that was previously gathered from formative class evaluations in the form of reflection papers, written by 46 students over three semesters, 230 papers, was used.

The case study design is appropriate when analyzing the specific data, such as transcripts of conversations or written material, for a specific period of time and for the purposes of discovering patterns or themes (Leedy & Ormrod, 2005). It becomes useful when looking at a little known or poorly understood situation or when wanting to look at the result of an intervention to make generalizations or future changes. Moustakas (1994) stated that the analysis of a phenomenological experience is involved when analyzing individual statements, generating meaning from categories or units of information, and the development of a description of an experience or event. Creswell (2003) p, 15), identifies a phenomenological experience as being one where the researcher "identifies the essence of human experiences concerning a phenomenon, as described by participants in the study." This approach is also appropriate as it involves examining particular characteristics with a

goal of uncovering other patterns or nuances particular to a group (Berg, 2004), such as attitudes medical students have towards reflection. A qualitative case study design based on this approach lends itself to other discoveries about how students learn (Berg, 2004).

This was a case study of a group of medical students at a university in the southwest, who went through the experience of reflection, and the impact reflection had on them. This approach involved categorization of data to help cluster the information into meaningful groups, developing patterns and relationships of meaning and synthesis and generalization of the information to draw implications for understanding of the phenomena for future study (Creswell & Plano Clark, 2007). The qualitative method was deemed appropriate and used to understand how students used what they learned from an event, and how their organization either supported or inhibited individual, team, and organizational learning and change (Russ-Eft & Preskill, 2001). In an organizational setting, such as a medical school, where changes in curriculum are currently being suggested, this design could lead to useful discoveries for further research.

Study Constructs

This study explored how levels of self-awareness and professional competence skills were influenced in second and third year medical students, who participated in a communications class that incorporated reflection as a learning exercise. The relevant constructs for this study are self-awareness, reflection, and professional competence skills.

Self-awareness in medical students is defined as: 1) being aware of the emotions that are evoked in the context of a patient interaction; 2) being aware of the communication skills that one has used; 3) being aware of one's values, beliefs, history, needs, and culture; 4) being aware of how the above self-awareness points affect one's interactions with and care

of the patient; and 4) using this information to improve one's care of the patient and achieve mutual benefit (Branch, et al., 2001).

Reflection, as defined by Atkins and Murphy (1993), is a process of internally examining and exploring an issue of concern, triggered by an experience, which creates and clarifies meaning in terms of self, and which results in a changed conceptual perspective.

Professional competencies in medicine is defined by (Epstein & Hundert, 2002, pp. 226-7) as the “habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in the daily practice for the benefit of the individual and community being served.

Research Site

Data was collected from an ethical influence communications class taught at a medical school in the southwest. This school was established in 1961 and currently admits 80 students per cohort. The medical school was ranked second in the nation for its Rural Medicine program and ninth in Family Medicine according to the *U. S. News and World Report* “America’s Best Graduate Schools” ranking survey 2008. (<http://hsc.unm.ed.som>, May 2009). This school is committed to racial and ethnic diversity and pays special attention to include students who are in under-represented groups from the home state. This school of medicine has received national recognition for their innovative curriculum design, which tries to adapt adult learning theory to medical education.

Participants

Participants in this study were second and third year medical students who self-selected to enroll in an ethical influence and persuasion class as part of an elective curriculum. A small number of these students were assigned to the class. The class featured

six principles of ethical influence as described by Cialdini (2001) in order to discern how doctors gain compliance and influence in interactions between doctor/doctor, doctor/patient, doctor/staff and other stakeholders. The class also included examples of how these ethical principles are taught and used by others to manipulate physicians. Activities in the class stimulated the reflective thinking process for learning purposes. Elective classes are required for all students in Phase 2, Phase 2-3, and Phase 3 medical school. The goals for these elective classes are presented as follows in the student brochure: 1) Providing a venue for discussion of difficult issues that face doctors and patients; 2) giving students at different levels of training an opportunity to learn from each other over time; 3) providing a safe place to talk about the medical school socialization process; 4) forcing all of us (in medicine) to confront our own values as they affect our learning and practicing medicine (<http://hsc.unm.edu/som/ume/pim.shtml>, Nov. 2009) .

Protection of Human Subjects

This study posed minimal risk to the participants because their participation in this study was strictly voluntary. All reflection papers analyzed were completely anonymous including exclusion of any demographic data in order to protect the students. The students were asked to assign the last four digits of their social security number to each reflection paper they wrote in order to group together the series of papers answered throughout the course. During the last class session, the students were advised that the papers could be used for future research. They were given the opportunity to opt out of having their papers used by writing their numeric identifier under a “permission to use for future research, ‘yes’ or ‘no’ ” column. Only data from reflection papers from students who gave their permission to be used were analyzed for this study.

Data derived from the personal interviews were conducted over a private phone line and initially audio taped using a Sony ICD-ST25 digital recorder and a Sony wireless phone controlling recorder. Following each interview, the recorded interview was immediately downloaded onto one main private desktop computer that was password protected, and maintained in a locked office, that only the interviewer could access. Following the interview download, the recordings were immediately erased from the recorder for security purposes.

For transcription of the data, a Sony digital voice recorder transcribing kit was used. For analysis and interpretation of data, each participant was assigned a number and was identified as such for reporting purposes. The name and code number link was kept on a separate Excel sheet in a lock box in a locked office, only until the participants had the opportunity to review their transcribed interviews. Following each participant's approval of the transcription, the Excel sheet linking the participants to the data was destroyed. The downloaded recordings on the main computer were maintained and used only until transcribed and were then erased so the voices of participants could no longer be used to identify the individuals. All transcriptions were held in a lock box separate from any other forms or data collected. To prevent loss of data, a weekly back-up of all data and reporting was saved on a portable hard drive. The hard drive was kept in a lock box in a locked office. Upon completion of the study, all data that lead to identification of participants was appropriately destroyed.

Procedures

In this study, data collection occurred in two separate stages: Phase 1) reflection papers gathered concurrent to the class; and Phase 2) individual interviews several months

after the class. Researcher field notes were taken during the phone interviews. The stages of data collection are outlined in Table 2.

Phase 1 included the gathering, transcription and analysis of reflection papers administered as a class assessment during a communications class on ethical influence, over three semesters. Phase 2 consisted of interviews done with volunteer participants who had previously attended the class. The interviews were conducted and recorded over the phone as several of the students had relocated. The interviews were transcribed and analyzed for patterns and meaning and as a comparison to Phase 1 and to learn how the students experience from using reflection had been impacted.

Table 2. Stages of Data Collection.

Phase 1 – Concurrent to the Class Phase 2 – Post class attendance			
Method	Description	Reliability/Validity	Analysis
<i>Phase 1</i> Reflection papers/ Participant program evaluations	Five reflection questions after each class session to determine perception of session value	These four methods of qualitative data collection were validated through triangulation of measures using member checking, peer review, disclosing researcher bias, and using an external auditor. (Creswell, 2003)	Qualitative content analysis using Atlas.ti6.2 software
Final Reflection Paper	Five reflection questions to determine overall impact of class		Qualitative content analysis using Atlas.ti6.2 software
<i>Phase 2</i> Participant program interviews	30 minute phone interviews with past participants on perceived impact of the class		Qualitative content analysis using Atlas.ti6.2 software
Researcher field notes	Written notes collected during and immediately after each phone interview. What was the perceived value of the class? How did participants respond to training content and the use of reflection?		Qualitative content analysis using Atlas.ti6.2 software

Methods/Qualitative Data Collection

Development and collection of reflection papers. Reflection papers were distributed, written, and gathered at the end of each class session over three semesters, a total

of 265 papers from 53 students. For anonymity purposes, no names were assigned to the reflection papers. The only identifier each student provided were the last four digits of their social security number on each paper. Students were informed that the reflection papers could be used for future research. At the end of the course, the students had the option of giving consent to use their data for this study by assigning their four digit identifier under a “yes or no – permission to use data for research” column. A total of 230 reflection papers from 46 students, who gave consent to analyze for future research, were collected and analyzed for this dissertation.

The questions and the order of the questions follow the categories for cognitive domains from Bloom’s Taxonomy of Educational Objectives. Developed in 1956, Benjamin Bloom’s tool serves as an aid for measurement, developing common language surrounding learning goals, and determining whether a course met it’s standards and objectives (Kratwohl, 2002). Bloom’s domains are: knowledge, comprehension, application, analysis, synthesis and evaluation (see Figure 1).

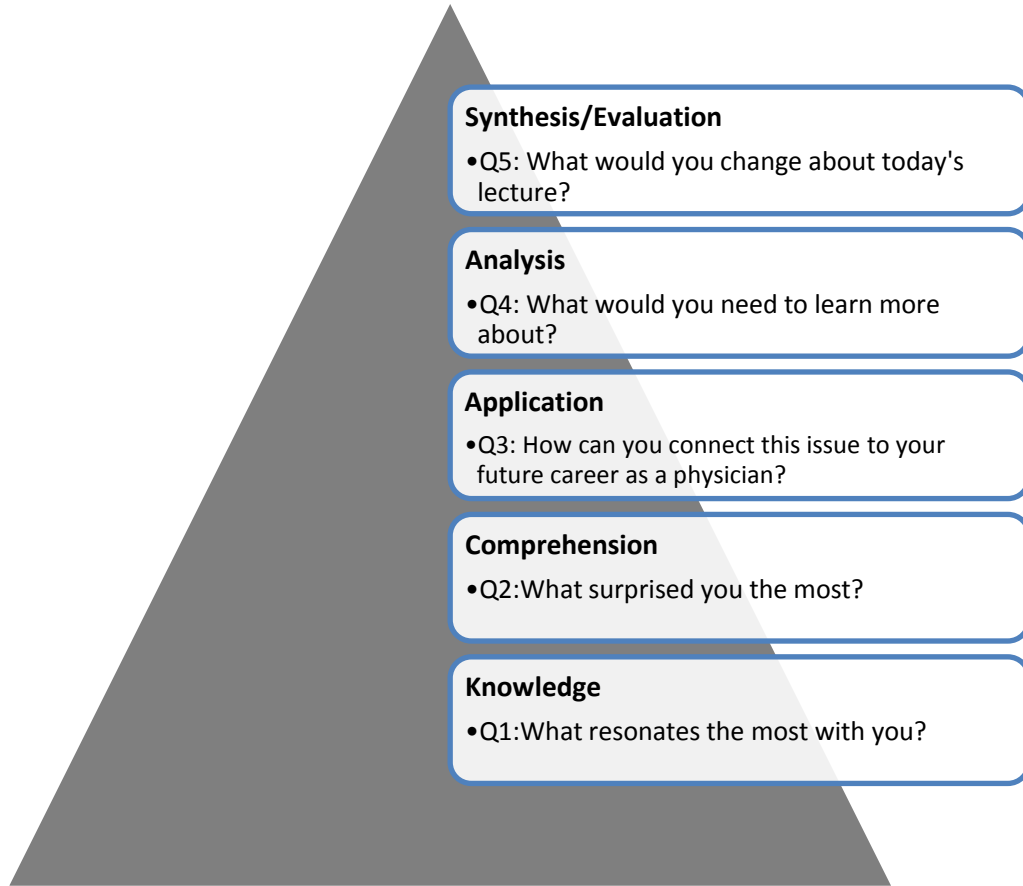


Figure 1. Bloom's Taxonomy for Educational Objectives: Model for reflection question development.

The questions on the reflection paper for the first four classes were as follows:

1. After listening to today's lecture, what is the one issue that resonates most with you?
2. What surprised you the most?
3. How can you connect this issue to your future career as a physician?
4. What would you need to learn more about in order to feel you can make a difference in this area?

5. What would you change about today's lecture to make the information more applicable to you?

Questions on the final reflection paper were as follows:

1. After attending the Ethical Strategies for Influence PIM class, was this class MORE or LESS than what you expect? Please elaborate.
2. What surprised you the most from this class?
3. How do you think this class has impacted your skill level as a future physician?
4. How have you CURRENTLY been able to apply the concepts you learned in this class?
5. If you had NOT taken this class, what results do you think you would be experiencing now in your influence/communication skill level?

Participant Interview

Phase II - Interview design. The purpose of the individual interviews was to collect data from medical students who had attended the ethical influence class from the past three semesters. The questions centered on the current use of the content of the class, how they had applied the use of ethical influence, and how they viewed the process of reflection after the fact. The questions followed recommendations for qualitative interviewing that included being semi-structured, and to obtain descriptions of the participant's life with respect to "interpreting the meaning of the described phenomena" (Kvale, 1996, pp. 5-6). These interviews were conducted over a 30 minute period over the phone. Each interview was digitally recorded and the data transcribed to be analyzed. In order to recruit participants, an email requesting volunteers for an interview was sent out to all past participants from the

class over the past three years. Because the researcher did not have the ability to connect the students who consented to having their data used for future research during the class session, and the actual names of the students, all participants who volunteered for the interview by responding back to the email invitation, for a total of 11, were selected as participants. The data was kept confidential and each participant was coded for data collection and analysis. A consent form read over the phone to each participant was administered with verbal consent accepted and recorded in each case. The participants were given the option of withdrawing from the study at any time with no consequences. A small gift in the form of a coupon to a restaurant was offered to the participants in exchange for their time and efforts in participating with this phase of the study.

The following questions were asked of students in phone interviews to clarify responses given in the reflection papers. The questions also clarified the impact of variables from the professional competence category.

Interview questions.

1. What was different in this class in the learning process than what you were normally used to?
2. What skills did you learn that are presently useful to you?
3. Are there ways in which you feel this class helped you for your future? How so?
4. There were several opportunities to learn about yourself in the class using the Values in Action Survey, exploring your Ethical viewpoint of Care or Justice, watching the gorilla video and noting your personal distortion of perception, learning about mindfulness vs. mindlessness. What surprised you the most that you learned about yourself?

5. There are many areas of life that we can use these strategies for ethical influence: personal, work life, as a student, with your peers. In what ways have you been able to use these strategies?
6. Can you describe a situation where you recognized any of the strategies being used on you?
7. One of the assessments we used in class were reflection papers. In what ways do you feel writing the reflection papers contributed to your learning process?
8. What did you like the best about the reflective process?
9. What did you like least?
10. What do you do differently now in life because of what you learned in class?
11. Would you recommend this class to other medical school students?
12. If so, why? If not, why not?
13. Is there anything that comes to mind about the value of self-reflection?

Researcher field notes. The phone interviews were conducted using a headset which allowed the interviewer to take notes while the conversations were being recorded. No body language or facial expressions were able to be observed on the part of the interviewer, therefore the interviewer wrote notes on expressions they thought they could perceive, such as “seemed frustrated, surprised, happy,” then clarified those perceptions with the participants. Questions such as: “how did that make you feel,” “You sound happy that this happened, is that correct?” were asked to clarify and record the responses of the participants.

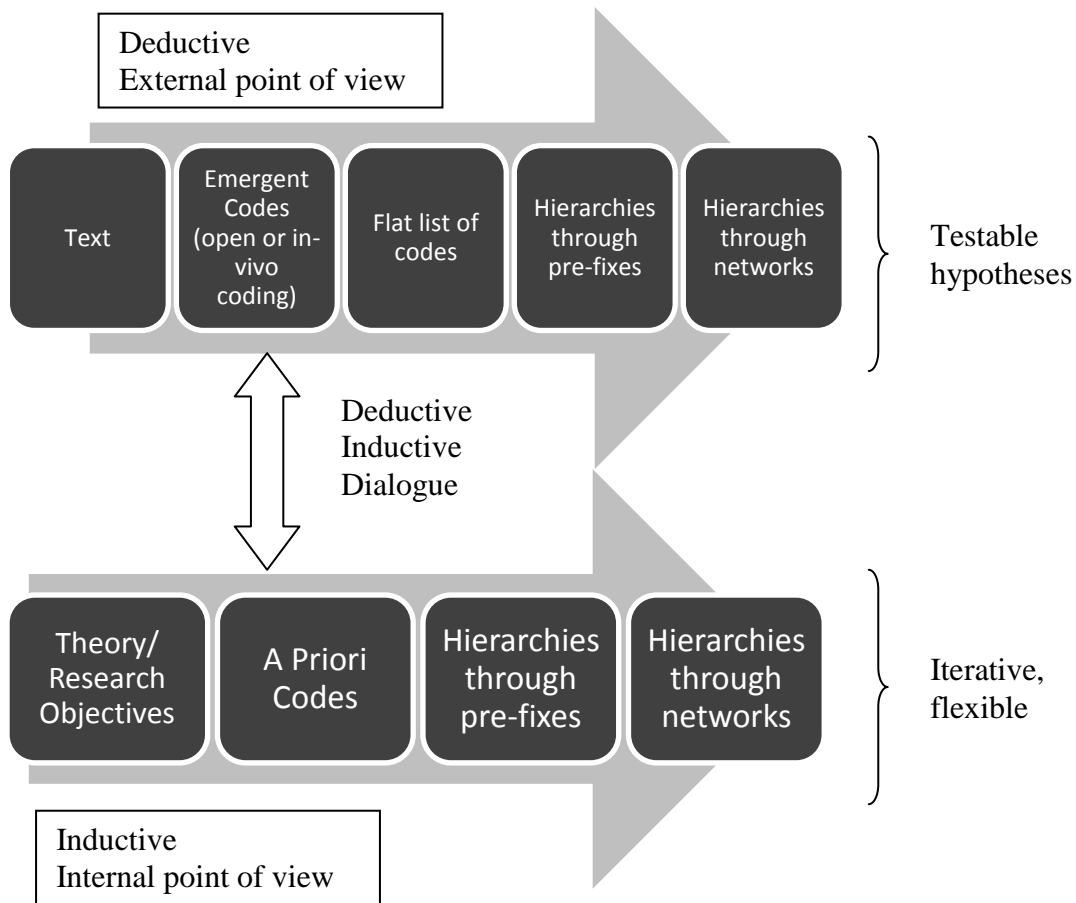
Data Analysis

Coding. All qualitative data were coded using CAQDAS – computer assisted qualitative data analysis software – in Atlas.ti 6.2. Each reflection paper and interview was

transcribed into MS Word and uploaded into Atlas.ti 6.2 as a primary document. The documents were arranged into families for easy categorization or comparison at later stages. The following documents were grouped together: Students: Year 1, Year 2, Year 3; Reflection papers; Final reflection papers, and Interviews. A coding methodology developed by Susan Frieze (2011) of NCT - Notice, Collect, Think - was implemented over all the documents to develop an in-depth coding structure. This strategy used a content analysis strategy for an initial category development of codes used with frequency. Initial codes were used for applying codes and analyzing the words, themes and concepts described in each of the documents. An open coding process, followed by the application of coding frames, also known as coding hierarchies in Atlas.ti 6.2, was used to categorize the data. The query tool was used throughout the coding process to check for codes with high levels of frequency. These were revisited several times over the coding process to develop sub-categories of codes. Any code that was deemed as high frequency, 3+ applications (Lewins & Silver, 2007), had a code label or category assigned to it. Codes with low levels of frequency (under 3) were checked to see if they could assimilate into another similar code, or if they could stand on their own. Several coding passes were done over several days until no new codes were added to the list.

Analysis. A code and retrieval process was used to analyze the data for the following purposes: “1) take note of relevant phenomena; 2) collect examples of relevant phenomena; 3) analyze phenomena to find commonalities, differences, patterns and structures” (Coffey & Atkinson, 1996, p. 29). An inductive-deductive dialogue model developed by Ricardo Contreras (2011) was used as the process for analysis of the codes. This approach was appropriate as a set of research questions guided the process, while also attempting to

discover other underlying themes in the data. This two pronged approach allowed for starting from a deductive approach from the perspective of the research questions guiding the coding and developing a set of a priori codes, grouping codes into hierarchies using prefixes as they emerged and finally into networks to view the connections and test for assumptions or a hypothesis. Memos were created from findings from previous studies and linked to data segments that emerged supporting those findings. The inductive process followed by looking at small segments of text and developing emergent codes from open coding or in-vivo coding, developing a flat list of codes, grouping them into hierarchies through pre-fixes and then into networks. Memos were created at this stage that included thoughts and interpretations on the emerging data. These memos were linked to data segments that supported the findings. This process allowed for findings of patterns and relations in the data and how they could be linked. Throughout the analysis process co-occurrence queries were run to examine the strength of the codes that emerged along with codes that co-occurred. The dialogue between the two approaches was on-going throughout the coding process. (see Figure 2).



(Contreras, 2011)

Figure 2. Model for Deductive-Inductive Coding Process.

Description of the class. The school of medicine in which this study takes place offers electives for advanced students during their second and third year of undergraduate studies. Following is the course description in the student brochure that attracts students to the course:

“Do you know what strategies of influence and persuasion are used on you on a daily basis within the health care system? Do you know ethical influence and persuasion strategies you have the opportunity to use for successful outcomes? Powerful influence and persuasion skills are used daily for or against individuals. This course

will provide information on what influence and persuasion strategies are used within different relationships such as: doctor/doctor, doctor/nursing staff, doctor/administration, doctor/patient and family, doctor/drug reps, and doctor/personal family relationships, among the many possibilities. Learn useful skills for successful outcomes from influencing patients and their families to comply with treatment plans to awareness of how drug reps and other stakeholders influence for compliance purposes.”

Course objectives described in the brochure are as follows:

“Students will learn six influence skills used for persuasion and influence; the ability to recognize when they are being used and how to ethically use them in the health care setting; and strategies to determine when these skills can be used for mutual benefit. Dialogue for achievement of personal and patient satisfaction & compliance will be emphasized.”

Strategies for this class on ethical influence were taught using the persuasion Theory of Planned Behavior (TPB). This theory is the underpinning used to influence behavior change, such as disclosing personal information, thoughts and beliefs, in an environment such as a medical school, where personal disclosure is not the norm.

TPB includes an element – perceived behavioral control (PCB) - which is the perception of the level of ease or difficulty that a person would have in performing a task or assignment (Ajzen, 1991). This concept is related to self-efficacy (A Bandura, 1977) which describes a person’s perceived ability to perform a behavior (O’Keefe, 2002). Medical students often complain that learning and developing communication skills does not come easy to them. They come from a background of achievement and competition therefore it was important to

develop an atmosphere of trust in the class in order to facilitate the disclosure needed for the self-awareness process to take place during discussion, and for the writing of the reflection papers.

Following are descriptions of the use of PCB as stated by O'Keefe (2002) that show its use in the design of the class:

1. Remove obstacles to behavioral performance. These obstacles are described as 'uncertainty,' and by letting the students know exactly what to expect in class, what assignments they are responsible for, what the final project is, and give them the feedback and time (since time is at a premium) for them to complete the assignment in incremental ways throughout the course.
 - a. To mitigate uncertainty the students were sent a list of assigned readings one month ahead of the first class meeting. This gave them the opportunity to start the readings or schedule time to read them well ahead of when they were due. During the first day of class, a syllabus was distributed and an overview of the assignments due in the following weeks were discussed. Students could complete any homework ahead of time and at their convenience. The final project was discussed on the first day and students were told that during each class session they would have time to work on the final assignment in order to complete this during class time if they chose.
2. Create situations and opportunities of what the lecturer describes as successful performance. Since dialogue and discussion, and sharing personal information with no repercussion of judgment is the intended behavior, ample opportunities are given for the students to practice this during the course of the class.

- a. The second hour of the class was designed to discuss realistic scenarios that the students might encounter during their careers as physicians and to practice the strategies for influence they would learn during the first hour. During the first class the students were asked to write on index cards the top three people or groups of people they would like to influence in their lives. This information was submitted anonymously. The instructor then reported the findings to the class and showed the students how much they had in common with each other. During seven years of teaching the class, the findings have been consistent in this order: “Who are the top 3 people or groups of people you would currently like to influence the most?” Responses: 1) family, 2) faculty, and 3) patients. (These findings would expect to change as the students move towards a more interactive role with patients in later years.) During the next class session, the instructor reported the findings and had the students break into small discussion groups. This began the process of students realizing they had issues in common and building an atmosphere of trust in which they could feel safe to discuss personal issues.
3. The instructor provided models or examples of others performing the task in a successful way. This created the internal message that “if they can do it, so can I.”
 - a. The instructor provided real life examples of how the strategies had been used in a medical student’s experience, a physician’s practice, how they were used in interpersonal relationships with family or peers, and how for marketing and advertising purposes, these strategies had been used in the business world to influence others.

4. The instructor provides encouragement along the way – “you can do it!” Let the students know that previous classes performed very well with the assignments as this helps enhance the students’ level of self-efficacy.
 - a. The instructor interacted directly with the students working with each group for a few minutes at a time and guiding the students by suggesting words and how they could think through the strategies to obtain the desired results. Students were praised when appropriate and encouraged to practice these strategies on each other outside of class.

The Class Content Design

The outline for the content of the class, designed by the instructor, was taken from the book: *Influence: Science and Practice* (Cialdini, 2001). The class consisted of five sessions of two hours each. During the first hour, theories on the topics discussed were presented along with published research to support the science behind the theories. The content was delivered in a didactic manner with PowerPoint slides and handouts for the students. The second hour consisted of activities or exercises that were designed for self-awareness and encouraged the students to be introspective as to their beliefs, assumptions, and values. During this time, the students were given scenarios where they were required to discuss in small groups what strategies they might use for influence according to what the lecture portion covered. The class activities to promote self-awareness were a compilation of exercises the instructor had been exposed to in the past from attendance at various conferences, lectures or demonstrations.

During the last 30 minutes of the second hour, the students worked on their final assignment that involved giving a speech requesting admittance into a residency program

using the influence strategies explained in class. This gave the students opportunities to interact with the instructor and ask questions they might have in regards to the assignment. During the final 15 minutes of the class the students filled out the reflection paper giving them ample time to think about what they had learned and how they might apply the information (see Table 3).

Table 3. Class Content and Activities.

Session	Lecture Topic	In Class Activity	Homework/Assignment
#1	Barriers to influence: cultural issues, personal assumptions	Index cards: Who do you wish to influence? Tell me the story – tests personal assumptions based on pictures Reflection paper #1	Journal article Research different residency programs student might be interested in to begin on the final assignment. Final assignment consists of students requesting admittance into a residency program using principles of influence. They will read this request in class.
#2	Principles of Influence: Reciprocity & Consistency Contrast Phenomenon	Personal Assessment: Ethics of Justice vs Care Write introduction in final assignment using Contrast phenomenon Reflection paper #2	Journal article Write intro for final assignment using contrast phenomenon and one paragraph using principles of reciprocity & consistency. Turn in or email for feedback.
#3	Principles of Influence: Social Proof & Liking	Personal Assessment: Values in Action survey DISC personality discussion Group work: What is one strength of value to you? Write Reflection paper #3	Journal article Write two paragraphs for final assignment using principles of social proof and liking and describing personal strengths. Turn in or email paper for feedback.
#4	Principles of Influence: Authority & Scarcity	Watch perception video Mindfulness vs Mindlessness Survey	Journal article Add two more paragraphs for final assignment using principles of authority and scarcity. Turn in or email paper for feedback
#5	Speech by students reading their influential request for admittance into residency program		

Class topics. The following section describes the topics covered during the class sessions:

Session 1 –Barriers to influence: intercultural issues, ethical view point, and assumptions

Session 2 –Reciprocity and Consistency principles (Cialdini, 2001)

Session 3-- Social Proof and Liking principles (Cialdini, 2001)

Session 4--Authority and Scarcity principles (Cialdini, 2001)

Session 5--Application to program for residency using Principles of Influence

Special class activities:

Session 1:

A) Who do you wish to influence the most?

At the beginning of the class session, after going through the syllabus, the instructor asked students to think about situations in their lives that they wished to influence or change. They were asked to list anonymously three individuals or groups of individuals they wished they had more influence over and privately write them down and turn them in. The results were tabulated and reported at the next class. This exercise was done to demonstrate to the students that they have similar issues in common.

B) Tell me “the story” (this tests assumptions based on pictures).

During the lecture portion, the students were reminded that as physicians their powers of observation were important and would always be tested. A series of action photographs were given to the students to work with in groups. Each group was asked to select a photo and based on what they observed to tell what the story was behind the photo. They were given 5-10 minutes to discuss this and arrive at a consensus as a

group. After each group reported the story to the class, the instructor disclosed the real story, which was far from what the students thought it was.

Session 2:

A) Ethics of Justice vs. Care – personal assessment.

The students took an ethics survey that categorized whether they fit into the personal ethics category of justice or care. The instructor took care to let them know that there was no wrong category and both were of value. The students were then asked to select another student who fell into a different category from theirs to discuss how perceptions might differ.

Session 3:

A) Values in Action survey – disclose and discuss your strengths

<https://www.viasurvey.org>

This online character strengths self-reporting survey discloses one's personal strengths. The students were asked to take this survey and bring the results to class. During the lecture portion of the class the instructor selected a strength of personal significance and discussed how this strength may have developed and come about. The students were then asked to do the same and discuss in their small groups. The instructor disclosed personal information first and modeled the desired behavior for the exercise. This helped develop trust within the participants followed by personal disclosure. This exercise allowed for recognition of each others differences and commonalities.

B) An overview of the DISC personality assessment was introduced, an assessment developed by John Geier (1967) and based on the work of psychologist

William Marston . A brief overview clarified how the assessment had been used to explain human personalities through the use of the DISC profile and “the integration of temperament, character and behavior,” (<http://www.geierlearning.com/author/html>), and explained that this exercise was superficial and there was more to the assessment than what was covered in class. The overview described how the profile could be used to improve interactions during patient interviewing or patient encounters. A short exercise that demonstrated how one could get a quick idea of what a patient’s personality might be and adapt a communication style that might be best to use with them was introduced.

Session 4:

A) A video was shown – Did You See the Gorilla?

Video: Surprising Studies of Visual Awareness – The Selective Attention Task. (2003). A video demonstrates what happens when a request is made to direct someone’s attention in a specific direction.

B) Mindfulness vs. mindlessness survey was given.

Assessment of Mindfulness by Self-Report: The Kentucky Inventory of Mindfulness Skills <http://asm.sagepub.com/cgi/content/abstract/11/3/191>

During the lecture portion students were asked to assess their levels of mindfulness. Most students believed that being focused was the same as being mindful. They then took the inventory of mindfulness skills to determine their current state.

Session 5:

A) Tell Us Your Story-- an application to a residency program.

This final assignment pulled together all the strategies of influence and the activities the students had taken during the course of the class. After doing online research of different residency programs, the students wrote a request for admittance into that program. They incorporated the influence strategies they learned into their request, along with their personal strengths defined from the survey they took. They then read their speech to the class and to a group of invited faculty members who attended and gave pertinent valuable feedback to the students. The class was able to learn and observe how the use of these strategies influenced and gained compliance from a hypothetical audience.

Validity and Reliability

Lincoln and Guba (1985) describe four characteristics for considering reliability and validity in a qualitative research study: trustworthiness, credibility, dependability, and confirmability. A problem that jeopardizes reliability in a qualitative study is the use of content analysis. The single most serious weakness of content analysis is that it deals with material that is written down (Berg, 2004). This limits the ability to analyze inconspicuous meaning behind the messages, thus limiting its reliability (Berg, 2004; Creswell, 2003). Validity and reliability were measured using method triangulation, or collecting data from two different sources: reflection papers and personal interviews (Russ-Eft & Preskill, 2001). Using method triangulation and involving a second form of data collection in personal interviews helped increase reliability of the data. Studies that use multiple methods of data gathering generate different types of data which provide cross-data validity checks (Patton, 2002). Examining the data and results from both sources helped build a justification for the emerging themes and findings (Creswell, 2003).

Investigator triangulation or peer review offered an added level of reliability along with an outside external auditor, unfamiliar with the project, who reviewed and asked questions in order to help clarify the information. Nine peers participated in an online card sort that involved student quotations and selected categories they would fit into. Eight of these volunteers had PhDs; one a Master's Degree; four came from the training and evaluation field; three had a medical background; and five were involved in adult education. Consistency in the interpretation of the replies corresponded 70 % of the time with the researcher's results obtained.

Limitations of the Study

The convenience sample of this study, limited to a group of medical students who self-selected to take a communication class at a university in the Southwest, decreased the generalizability of findings. The lack of specific demographic data made the ability to analyze variables such as age or gender impossible. The students who elected to be part of the personal interview phase were, for the most part, positive towards the class. Because the personal interviews were conducted over the phone, nuances such as body language or facial expressions were not documented.

Researcher Bias

Bias in research is defined as any influence, condition or set of conditions that distort the data (Leedy & Ormrod, 2005). It would be disingenuous to ignore several possibilities of researcher bias in this study.

The study began with assumptions that self-awareness and professional competence skills in medical students would be impacted. This assumption could have made the researcher more focused on these findings when reviewing the data.

Another problem for this study is the researcher and the instructor of the class is the same person therefore the findings could be subject to other interpretations. There was limited familiarity between the researcher as the instructor and the students. There is a possibility that during the personal interviews the students could have given responses in order to please the instructor. Because the personal interviews were conducted over the phone, even the tone of the interviewer's voice could have influenced responses of the participants.

Students who selected to attend the class did so with a desire to learn communication skills. This may have skewed the results towards those interested in listening and speaking experiences. Students who responded to the invitation of participating in the interview most likely had a favorable impression of the class. As a result, the interviews could reflect a more positive bias toward the class and to the results that the students reported.

A strong potential for bias existed because the researcher has been involved in the health care field for over 30 years, served as an instructor at the medical school for several years, and is married to a physician. However, care was taken to remain as objective as possible and allow the data to guide and dictate the findings, while taking into account that the perspective of the researcher was a main component of the qualitative research (Coffey & Atkinson, 1996).

Summary

This chapter describes the methodology used to carry out a qualitative study designed to explore the impact of reflection on self-awareness and professional competence skills in medical students. This methodology consists of a case study design using reflection papers and personal interviews with second and third year medical students who elected to take a

class in ethical influence at a medical school in the southwest. The reflection papers and interviews were analyzed using CAQDAS – computer assisted qualitative data analysis software, specifically Atlas ti 6.2. A deductive-inductive coding model (Contreras, 2011) was used to develop an in depth coding structure and an analysis of quotations and relationships within codes. Chapter 4 continues with the findings from the analysis of the methodology described in this chapter.

Chapter 4

Results

Using a qualitative case study approach, this study investigated how self-awareness and professional competence skills were impacted in medical students who participated in a class that incorporated reflection as a learning tool. This chapter presents an analysis of the data and is divided into four sections. The first section briefly addresses the study sample and presents the overall results of the study. This is followed by results from Phase 1: the final reflection papers filled out by medical students in a communications class, Phase 2: results of the individual interviews, and the final section responds to the research questions that guide this study.

Study Sample

Convenience sampling was employed to obtain data for this study. Phase 1 of the study consisted of reflection papers from three different semesters from medical students who had selected to take a communications class on ethical influence. The reflection papers were a learning tool used to give students a “voice” to express themselves, to assess what they were learning, and to serve as a formative evaluation for the class. Fifty-three students took the class and 46 (87%) gave permission to have their papers used for analysis. Phase 2 of the study consisted of interviews given by students who had previously attended the class and self-selected to be part of the interview process. An email was sent by the researcher to all 53 students explaining the project and outlining the requirements to participate. Upon receiving the solicitation, 11 students expressed an interest in participating in the interviews. Each student who responded was provided further information on the project, the requirements for the interview, and a request from the researcher to be contacted at their

convenience to set up the interview. All 11 students followed through and completed the interview process, representing 21% of the students who participated in the class using reflection.

Table 4. Overview of sample.

PHASE 1		PHASE 2
Total Students who took class	Gave consent to use papers	Students interviewed
53	46 (87%)	11 (21%)

Demographic Data of Participants

Phase 1. Demographic data is collected to document characteristics of participants in a study. In Phase 1, reflection papers written by medical students were collected throughout a class and used as data analysis for this study. The students were 2nd and 3rd year medical students, a combination of males and females, some with clinical experience, and others with none. All had past participated in a standardized patient program where they interacted with patients, some of whom were actors playing the part of a patient, to test for student competencies. The students were promised confidentiality and anonymity from their responses on the reflection papers in order to develop an atmosphere of trust within the class, therefore no identifying information was collected.

Phase 2. In Phase 2, individual interviews were collected from 11 individuals or 21% of the students who took the class using reflection. These participants consisted of seven females and four males. Five individuals (45% of the interviewed group - 10% of total participants), three males and 2 females, had graduated from their undergraduate medical program and had been accepted into various residency programs as follows: Males: Emergency Room medicine; Pediatrics: Family Medicine; Females: Psychiatry; Internal

Medicine. The remaining six individuals from the interviews were completing their last year of the undergraduate medical curriculum.

Overview of codes and quotations. A final code count of 277 codes was developed from all reflection papers, with 1,758 quotations analyzed. These codes were paired down from an initial code count of 303. Codes similar in theme were merged and a code analyzer was used in Atlas ti.6.2 to search for redundancy. Codes that overlapped or were found to be redundant were discarded to develop a clean code list. The breakdown of codes and quotations for the categories analyzed are depicted in Table 5.

Table 5. Overview of Codes and Quotations.

Document	No.	Quotations	Codes
Phase 1 - All reflection papers	230	1,758	277
Reflection papers class 1-4	184	1,322	107
Reflection papers Final	46	387	93
Phase 2 Interviews	11	704	140

Phase 1- Reflection Papers

The reflection papers were sorted and analyzed in two categories: 1) reflection papers that covered the learning that took place over each class; 2) the final reflection paper that covered the overall learning that took place over the entire class.

For this study, because the results from analysis of the individual reflection papers from classes 1-4 and the final reflection papers closely matched, the decision was made to only report on the findings from the final reflection papers and the interviews.

Final reflection papers. The top five themes that emerged from analysis of the final reflection papers according to a code count were as follows: 1) an increase in self-awareness; 2) an increase in awareness of personal communication skills; 3) insight into medical school culture; 4) an increase in mindfulness 5) and increase in confidence (see Figure 3).

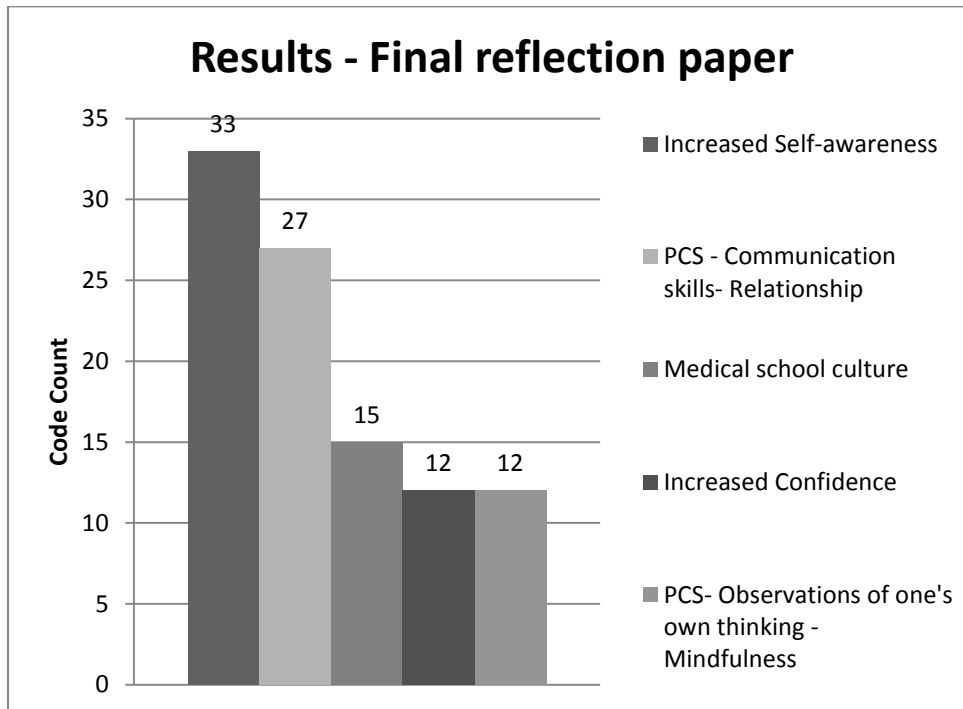


Figure 3. Results – Final reflection paper.

Increased self-awareness. An increase in self-awareness, with a code count of 33, emerged as the highest category from the final reflection papers. This coincided with the analysis results from the reflection papers classes 1-4. Students reported an increase in their levels of self-awareness across several categories, including assumptions they held; awareness of their personal strengths; their communication style and how it was perceived by others; and increased confidence in their abilities to make a difference professionally. For example:

Examining personal assumptions was a sub-category of self-awareness that respondents rated was important to them. Several students seem surprised to learn that not everyone has the same point of view.

Respondent 8 said: Learning the different ethics viewpoints I have is enlightening and which one I fall into; and learning about my personal strengths I have and the drawbacks it carries. It is eye opening realizing not all of us see life through the same “lens.”

Respondent 11 wrote: I was surprised at how different the true story of the photograph we were shown was as to what we thought it was. I learned that I make a lot of wrong assumptions.

Students’ individual communication styles and how they were used to disseminate and interpret information was eye-opening for many students. Learning and applying these skills seemed to increase some students self-confidence.

Respondent 5: Thinking about it, I have learned to be more sensitive to people’s different needs based on a lot of verbal and nonverbal characteristics I have learned about. Also, being made aware of myself and what I am like to others has made me realize that maybe I don’t come across like I think I do.

Respondent 6: This class was a real eye-opener as far as not only talking to patients, but how much I can actually impact their lives, mainly by understanding how I communicate with them. I never even thought that HOW I communicated would make a difference, I always thought it was WHAT I said that counted.

Respondent 26: Just because we have an MD after our name, that won’t be enough to influence people to follow our suggestions. This might mean I have to

change my techniques of communicating with others in order to create credibility or change.

Respondent 46: The opportunities we had to learn about ourselves in this class were invaluable, and this wasn't even a psychiatry class. It was woven in with situations that we encounter in everyday life. I have been using these methods in my personal as well as professional life. I didn't realize how important developed communication skills were until I took this class.

Respondent 26: I would be using the same strategy on every person vs. trying to take each individual into consideration had I not taken this class. This will require me to focus on individuals instead of focusing on the problem, disease or issue at hand. We are not taught to do that, but I can see the value of doing this and how this would bring a higher level of personal satisfaction from the job for me.

Respondent 43: Had I not taken this class I would be less confident and less eager to engage with another person in order to attempt to influence them at all. Maybe not even want to pursue a conversation with them.

Improved communication skills. The second category of findings revealed that students felt an increase in their awareness of their personal communication style. Out of 46 final reflection papers, statements referring to an intention to improve their communication skills occurred 27 times. Several students stated they felt what they were learning helped develop listening skills that led to treating patients with respect and as individuals, an improvement with interpersonal relationships, and insight into different personalities or cultures.

Patient benefit—several students reported that their enhanced communication skills helped to view the patients their perspective.

Respondent 4: My main goal after this lecture is attempting to be mindful on initial visits with patients and trying to listen to what they are really telling me. Not just focus on the disease but focus on the person. I think that will benefit us both.

Respondent 26: As a physician I need to look at the big picture, and then at each patient as a unique puzzle. I think this helps me not lump everyone into the same category and to try and listen to each individual and what they say in order to find the missing piece that helps them improve the quality of their life.

Respondent 29: I feel I can employ these principles of communication with future patients. I always thought that because I was the doctor and they were the patient I would have influence over them. But now I see that there is more to it in order for me to influence them in a positive direction.

Respondent 40: If I could be a physician that practiced all of this well, I believe I could be very effective in a positive way. I would like more training on this subject. It's not just our technical skills that count!

An improvement in interpersonal relationships was noted with some students.

Respondent 51: I am finding ways to utilize these concepts in my home life, not just my professional life. Not only does it allow me to influence my family members, but it allows me to hone in when others are using these strategies on me and thus I am aware of the importance the issue holds with them. I always felt that when someone kept repeating themselves it was because they weren't very articulate, but now I

realize it's because of how I come across, that they think I don't get it. I need to work on that.

Cultural differences were recognized and respected.

Respondent 46: What I was surprised to learn was the importance of understanding the differences between individualistic and collectivistic cultures and how they view a message or decision making in different ways, and how what I might do matters when communicating with them or attempting to influence them.

Medical school culture. Using reflection as a learning tool gave some students an insight into a different learning experience and how this contrasted with the didactic learning style they were used to in the medical school curriculum. References to the medical school culture occurred 15 times within 46 reflection papers. Several students used the reflection papers to voice an opinion around the organizational culture they were immersed in and what was considered of value, including the lack of personal development experiences, the communication style practiced and the value placed on time.

Respondent 18: This is the first time I've learned about myself and how I react to others. We only learn about the action/reaction of others.

Respondent 39: We don't spend time learning or thinking about ourselves or categorizing ourselves much, only others, such as patients. It's been helpful to learn about my strengths and how to handle certain situations based on how I think. It makes this journey more personal.

Respondent 42: I've learned about myself and I believe that the better I learn about myself, the better I will be at helping others and understanding what their individual situations might be. This is not something we are taught here. We never get

to analyze ourselves in medical school. I believe we are encouraged to put “our selves” away for the sake of being objective.

Respondent 33: In med school, the only time you spend getting to know yourself is if you go into psychiatry.

Some students noted that they had little opportunities for discussion around issues, and did not feel they were encouraged to speak up if they had questions.

Respondent 17: We’ve never studied how different people would react in different ways before. It’s always been one way, one right answer. Differences in others are not acknowledged so I hold back from speaking out in fear of not having the right answer.

Respondent 20: I was very surprised that the instructor allowed us a high level of freedom of expression in the classroom discussions. We are not used to this and this makes for a more interactive learning process among my peers.

Respondent 25: We don’t get too much of a chance to practice this type of discussion and communication work in our program. Sad since we’re expected to know it when we get out. The one on one exchange in this class helped us create understanding.

Respondent 38: The message I’ve always received in this program is that docs know best and some patients just don’t listen or care. It’s no use trying to communicate or understand them, they will just thwart your desire to help them.

Value of time and time management--some students voiced their frustration over the time and different thinking process that was required in this class. During the lecture portion of the first class, the barriers to effective communication were discussed and students took a

self-assessment on their personal ethical style. Some expressed their opinion on the time and thinking required around the experience and wanted a more straight forward approach to learning.

Respondent 23: I don't think we need to know what the barriers are for strategies not working or how to better understand ourselves, just tell us what does work so we can memorize and do it. We don't have time for the rest.

Respondent 31: The facts, ma'am. Just give us the facts. Learning principles is too hard.

Increased confidence. The fourth significant finding, 12 occurrences within 46 final reflection papers, was an increased level of self-confidence the students experienced in taking the class. As the class progressed and the students realized their answers were respected and remained confidential, they began to express themselves on a personal level.

Respondent 37: I think what I've learned in this class will allow me to more easily request & support patient compliance. I think it will help me "get them onboard" with suggested changes. Not just tell them and expect them to do it because it's coming from a physician, but taking the person into account, their personalities and maybe the challenges they are going through. The strategies I've learned have made me believe I can be effective.

Respondent 42: I believe I will be able to better understand how important patient communication can be. This class reminded me of WHY I wanted to attend medical school in the first place. I have had serious thoughts of discontinuing the program, however, I can see how I can make a difference in influencing people in a positive direction. Also, I've learned about myself and I believe that the better I learn

about myself, the better I will be at helping others and understanding what their individual situations might be. This is not something we are taught here.

Observations of one's own thinking – Mindfulness. The fifth finding in the final reflection papers, 12 occurrences within 46 papers, indicated an increase in mindfulness. Previous to the assessments students took, they indicated that as a group they believed they had a high level of mindfulness. Discussions centered on their belief that their achievements must correlate with a high levels of mindfulness. Following are some of the observations they made into their own thinking:

Respondent 10: I thought I was a mindful person, but after reading the articles and the discussion we had in class, I realize I am always making judgments and assumptions way before I should, causing me to make opinions before I should. A solution on how to stop this way of thinking would be beneficial as this seems to be the thinking process we are taught just to get through the massive amounts of information in our program.

Respondent 22: What resonates with me is the assessment we took, the care vs. justice ethics model. I never would have given this a second thought about thinking that how we see the world would affect how we react to information. This will make me evaluate my conversations with others, trying to look at it from their point of view.

Respondent 39: This class has allowed me to take a step back and analyze my conversations with patients more. This has allowed me to evaluate my weaker areas and try to improve. It's also been very helpful in helping me to ID where things might

be going wrong in conversations with patients. And I've used this with my significant other too. It works.

Respondent 42: Obviously, I wasn't aware of others and their differences before (or I didn't care), but now that I see how trying to see issues from their point of view and taking this into consideration can help. I believe this can help me influence them into healthy decisions.

Phase 2 – Interviews

In order to substantiate the findings from the reflection papers, students who had taken the class were issued an invitation to participate in a personal interview to find out what the effects of a class that incorporated reflection had on them. Interviews were conducted with 11 students, representing 21% of the students who had previously taken the class using reflection. The time that had elapsed between the class and the interviews varied from three years for five of the students (45%), two years for four of the students or 36% of the group, and six months for two of the students, 18% of the group.

The top five coding themes that emerged from the analysis of the interviews were as follows: 1) a recognition of increased self-awareness; 2) recognition of the value of reflection; 3) an awareness of the perceptual experience of medical school culture; 4) an increase in effectiveness of student's communication skills; and 5) a recognition of differences in others (see Figure 4).

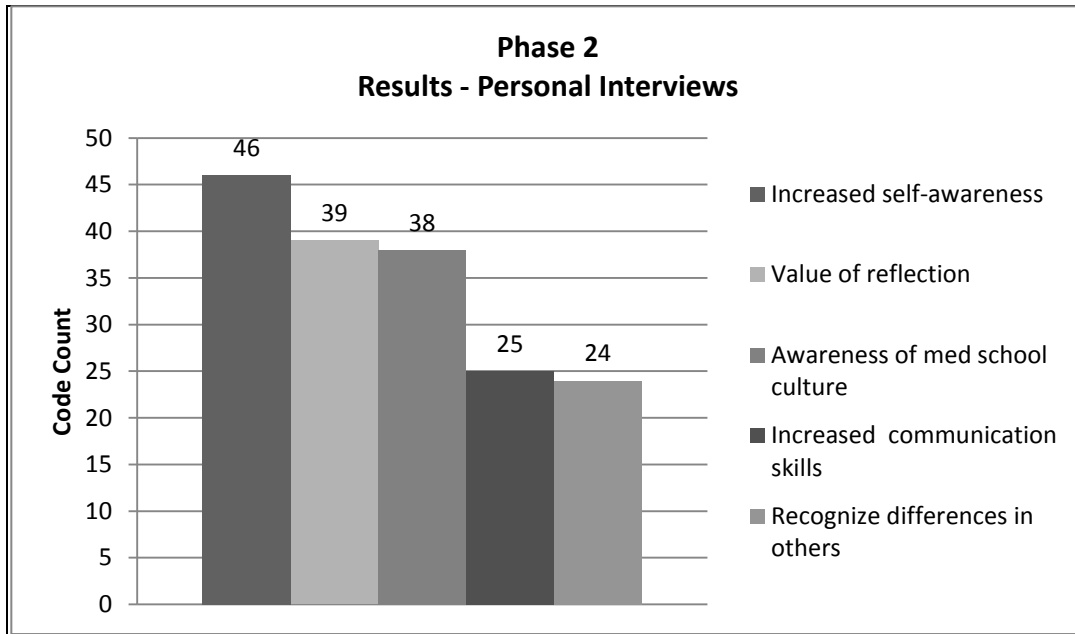


Figure 4. Results of personal interviews.

Increased self-awareness.

The increase in self-awareness, indicated from analysis of the personal interviews, follows the results that were generated from analysis of the final reflection papers. This code appeared as the predominant theme throughout the entire data analysis. From 11 interviews, 46 references to an increase in self-awareness were noted.

Respondent B: What I most benefitted from was being able to quickly assess the type of personalities I'm talking with. Even if it's not right, at least it makes me aware that I might be talking to someone who might not think the same as I do. I think that's really useful.

Respondent B: The heightened awareness of self and the dynamics, or the ability to change [communication] dynamics in a situation makes it worth it. You hear all the time from people who don't feel like their physician has a good bedside

manner, and thinking about this, it's probably that the patient doesn't feel like they are heard.

Respondent E: I do think I became more self-aware through this process. This helped me interact with the other types of personalities because now that I know who I am, it kind of took the stress off of wondering whether I was normal or not, and then I could just focus on learning how to interact with the different personalities.

Respondent F: We have been taught to take information from a very objective and scientific perspective. This class offered that because [the instructor] talked about the studies that were done around the subject and a lot of the objective data, but this class pushed us to step outside of book learning and also pushed us to look inside of how we each learned as individuals. And this helped me recognize that my patients might learn differently than I do.

Respondent I: Throughout the class, I realized that no matter how much I think I'm being open to new information or new ideas, I have to be mindful of my own biases, or I will quickly slip back into the place of where I allow what I think and believe is reality vs. what is reality. It would then cloud my judgment and have my own personal cultural lens define how I see things.

Respondent J: A big-eye opener for me was that I realized that what I was learning were things about myself, and once I got that straight and realized that this was happening in a non-threatening environment I was able to understand how to use the principles of influence we learned. Until I could get comfortable with that concept, the information was difficult to grasp. I have been able to use these concepts in everyday life.

Respondent K: What I learned was to not interpret everything from my own point of view, but to try and think about how others might be viewing what I'm saying. And it made me wonder how many times I've missed information or something happening because I was only focused on what I believed to be true.

Value of reflection. The second predominant category that emerged from the interviews was the value reflection had on the student's experience in the class. Many of them had never written a reflection paper, and as the class progressed, they elaborated more to express their points of view. Several expressed the act of reflecting had helped not only with personal development, but with information and time management.

Respondent A: It's nice when it's [reflection] immediate. You learn something and you are able to immediately reflect back on it, it's useful. It helped me remember the information. If you have the opportunity to do it immediately, then I do think it is valuable.

Respondent E: Reflection helped sum up everything and bring the concepts we were learning all together. It provided a summary of what I understood and prioritized what was most important and what I could apply to myself right away.

Respondent F: The reflection papers were a valuable tool I learned to use in this class... at the end of the day I need to reflect on anything new that I've learned and summarize it in a way that makes sense to me so that I can remember the information. As opposed to just leaving the class and just forgetting it so I can replace it short term with the information from the next class. I was learning information I wanted to integrate into my own communication style, so the reflection papers helped me to do this by forcing me to think about what we had learned and how it applied to

me. At the end of the class when we summarized the information, I think it was a great tool because it gave me a chance to reorganize all the information in such a way that it was most useful for me. We can't always remember everything, so re-organizing it helped me categorize in ways I could best recall it and decide if I have opportunities to immediately use the information.

Students expressed their opinions on the opportunities they had for personal development experiences in the class:

Respondent B: You can't really develop a full sense of awareness unless you do reflect on things that happened and then how what you're learning affects you. Personally, I think that to learn fully and to develop self-awareness, you need that ability to reflect.... I think I gained insight in just being able to see how I personally fit into the medical field, and also being able to have more time to be able to think about what I envisioned for my own career....being able to prioritize immediately what things were the most important, like what surprised us and how we could immediately apply it, or how we thought it would make us a better physician, that made a huge difference. We weren't just hearing it in a PowerPoint but then you were also applying it in the group discussions, and then when we wrote the reflection papers we had to apply it to ourselves and really having to think about WHY and HOW it was important to us personally. That was really great. I feel like we revisited the same concept several times in different ways during the class and that really helped solidify what I was learning.

Respondent C: It [reflection] gives you time to apply it to your own life and just think about where and how you can use every tool to help you along. Probably

what I liked best is that I had to think about WHY something was important and it wasn't just because the instructor said it was. Why should I use this and why am I not using the concept?

Respondent F: It gives me the opportunity to evaluate everything that was said, categorize the information that was most important to me, not just because the lecture stressed certain points, but forcing me to think about how the information shared impacted me as an individual.

Respondent K: ...the format of the class which focused on reflection, I believe, was invaluable. The images, along with the lessons, asking us questions and because all of our answers were respected, even though they were wrong, gave us the chance to explore how we think and opened us up, or at least opened me up to listening to the right answers. In medical school, you don't even want to come up with the wrong answers, so most of us don't say anything at all.

Awareness of medical school culture. The third coding theme that emerged, with 38 references from 11 interviews, was illumination into the medical school culture. The statements the students expressed revolved around the teaching and learning style that was commonly used in the medical school curriculum, how it compared to this class, the values placed on time and the act of reflection, and the limited opportunities for personal development available.

Respondent F: Reflection papers are not normally used as a learning tool in medical school. I absolutely think that this would be a valuable tool to use in other classes. However, I think the culture of the medical school would be very reluctant to do so because they take a little bit of time at the end and a lot of people view this as busy

work. And I also think, how can I put this in a nice way, that there is a certain kind of arrogance that exists in the medical school environment, maybe that people want others to think that they don't need the time to think about something to learn it, or that they don't need to ask questions or ponder a situation, because it's implied that someone in medical school is smarter than the average person. If you had to think about something you're learning about, or if you asked questions it implies you don't get it as quickly. And so I think that might be one of the reasons that the culture might resist using this type of learning tool.

Respondent G: There are not enough of these types of learning experiences in medical school. Everything is lecture, lecture and it's all about the talking head professor. They want you to write down as many things as you can as quickly as you can. So they don't give you the time to reflect, nor do they value the time to reflect. Everything is very guided and has an agenda and many things that I've tried to express myself on have had to be anonymous because those in charge just don't want to hear it...because everybody is so pressed for time, it's like what everyone's main topic is: no time for this, no time for that, not even time to get to know your name or who you are. And then this spills over into the physician's life AFTER medical school, you always hear about how no one ever has enough time.

Respondent I: Because time is at such a premium, in the medical school curriculum we are pretty much told what to believe, what to learn and constructing knowledge is not appreciated or encouraged. There are some exercises here and there that we engage in, but there is no direct comprehensive opportunity that addresses

communication skills at a more advanced level that we have the opportunity to engage in.

Respondent H: Normally we aren't allowed the time or even the opportunity to discuss what is being taught. We are pretty much told what is important to learn and there is little opportunity for us to process what the learning is all about.

Learning about self seemed to be a significant experience they students gained from participating in the class:

Respondent G: ...in this environment it gets easy to forget the information and to let it go - to not make the effort to reflect and question yourself, or to get yourself to think about issues personally. These types of exercises need to be incorporated into more classes in the medical school curriculum, I believe, because it helps you stay in touch with who you are. It becomes very easy to lose yourself in this environment, particularly because we aren't given the opportunity to explore who we are, and perhaps because part of the goal is to depersonalize the individual. ... The culture in medical school supports always being in "your head", thinking about others and their problems and illnesses, and not thinking about yourself. I do believe that the better you know yourself, the better you can relate to others, but that is not certainly anything we are taught or encouraged to do...

Respondent H: The content of the class was different in that we've had ethics courses in the past but it was always about what we would do about a patient issue. This is the first time I've been in a class where we had to reflect on what our own ethical viewpoint was and explore how that was connected to possible outcomes with

our behavior. In medical school we don't spend anytime or focus learning about ourselves. It's all about learning about disease and clinical skills.

Respondent I: Reflection does make you think about yourself and it does give you the opportunity to question yourself and your actions and that is probably a negative thing in the medical school environment... I think if you are given the opportunity to reflect too much, you might start to question why they ask you to do such crazy things that could have a negative impact on your health, or at least your mental health! And I'm sure they don't want students questioning anything. They are just pushing us through the system.

Improved communication skills. The class using reflection had an impact on student's communication skills as noted by 24 references to this in 11 interviews. Students cited examples of how the medical learning culture encouraged reticence, how the opportunity to discuss issues and practice skills in the class impacted their learning process, and how effective and efficient communication skills could help with their time management and develop rapport with patients.

Reticence.

Respondent D: In other classes we were pretty much told what the solution or right answers would be, but for us to think towards the solutions ourselves was different in this class. One of the benefits of the class is that we would discuss the situations or the scenarios and what our solutions were immediately, so if we were on the right track, that would confirm it and if we weren't applying correctly, [the instructor] would guide us back to what a better answer was. I don't recall the learning process being that way in any other class.

Respondent F: ...[in medical school] you are 'expected' to know the right answer all the time, or it's not appreciated if you don't know the answer all the time. So when you ask questions, it's implied that you don't know something, and that's a negative in this environment. I mean, I know there are some classes that I've been in that I've been completely lost or not understood the information and I wouldn't dare ask questions. No one else asks. You have lots of questions because everything is new to you. But you don't dare ask. The attending and the residents look down on you if you ask, or even if you're just curious and want to learn more. So you keep your mouth shut.

Respondent G: In most classes we are told what the right solutions are. We aren't asked to solve any problems based on what we've learned, or to even try solving any problems. We aren't asked for our ideas about anything. I remember one thing that happened in our class...., the fact that [the instructor] asked us to try and come up with the words ourselves, without giving us the answer made so much of a difference that I remember the scenario 3 years later. People got really involved trying to come up with the answer to the problem [the instructor] posed, and while other classes in medical school do try to group you up to come up with ideas, this was one time where it was fun and [the instructor] gave us the time to think things through to come up with possible solutions.

Time management.

Respondent C: ... being able to stop and think about what I'm going to say, assessing the personality I think the person I'm speaking with has, and then tailoring the information for them has been really helpful. It only takes a few seconds to do this

once you get into the habit of trying to see it from that person's perspective. Not only that, but I've actually caught myself, before I have to phone patients back with results, just stopping and thinking 'if I present the information this way, they won't have as many questions and I can save time.'

Respondent H: This [practicing ethical influence skills] could help me adjust my communication style in order that patients might be able to understand me better, or me understand what they were trying to tell me. I feel we need these skills because our time is limited and the more efficient we can be with our communication skills, the better quality interaction we have with our patients.

Increased rapport with patients.

Respondent E: When I see a patient who looks hesitant or doubtful with something I'm telling them, I've learned to stop and re-phrase something in a way they might understand it better. I think that helps and I think I've been able to build better rapport and relationship with them, and building stronger bonds with them. ...what I learned is that the skills we learned in the class work, and before I don't think I dwelled that much on if the patient was lost or not. It was because I really didn't know what to do about it.

Respondent I: Some of my patients are big picture thinkers, like my Dad. So I learned from this class that if I speak to them in big picture terms and I explain to them the big picture consequences of getting diabetes, they seem to respond much better. And it seems to be motivating them [patients] to co-operate with me.

Respondent J: I think I learned to take myself back and not focus on my training and how right my information is, but rather focus on how my patients learn,

how my patients think, how my patients categorize information, and what my patients motivation might be, and to fit my teachings to fit my patients needs which would make me a more effective physician. How to talk to them so they don't feel like I'm talking above them, but to talk to them like a human being.

Recognition of differences in others

An increase in a recognition of differences in others emerged as the fifth coding theme with results of 24 references from 11 interviews. The results of this recognition crossed over into categories such as enhancement of communication skills through conflict management, and added respect for peers and patients. The effects of this added interpersonally and professionally to the students' lives.

Conflict management.

Respondent B: I used to get really exasperated when someone didn't communicate with me in my style. But since learning about the different cultures and personality styles and how they interpret information, this has helped me be a better listener and ask the right questions to get them to share information that I feel I need to help them [patients] with.

Respondent D: With my spouse, when we've been on the verge of arguments, just being able to understand that he processes information differently than I do, point by point by point, which is very different than I do, I have been able to diffuse the situation by just allowing him to express himself in the way that is right for him. He feels heard and validated and I'm able to understand him also.

Respect for peers.

Respondent C: The care vs. justice results were surprising because I fell into a category that I didn't expect at all. And then seeing how the class was divided into those two categories surprised me because I would have thought that most of us would have all fallen into the same category. I find it interesting that there are different ways of seeing things even though we have all chosen the same career field. It's made me look at my peers in a different way.

Respondent E: ...with my colleagues too, since I've tried to understand where they are coming from as well as their differences. I learned how to explain my point of view and get them to understand where I'm coming from. That's been easier to do since I understand myself more. I don't think we do that very well amongst ourselves in medicine.

Respect for patients.

Respondent F: I recognized that our patients are human beings who may not always respond to our scientific knowledge. They need to be influenced or taught in a certain way that they are most comfortable with, not just the way we are used to talking among ourselves. And that's something that we don't normally learn or even talk about in our education.

Respondent H: Probably the best way I've been able to use these strategies is by understanding the ways different personalities may process information. I view myself as a teacher as well as a scientist with my patients. If I can understand how they may process information in a different way than I do, I will work harder to

communicate with them. Not harder, but I make sure we have a mutual understanding with what is going on.

Research Question Findings

The remaining findings on self-awareness and professional competencies are reported by each of the research questions.

Research Question One

RQ1: How are medical students affected by the experience of personal reflection to promote self awareness?

The word ‘affect’ is defined as: “having impact upon, influenced, or having been changed in some way; being emotionally stirred or moved by person, place or thing (www.merriam-webster.com). Based on this definition, the data was queried to find out what changes or impacts were made on the students by running a co-occurrence table with instances of self-awareness from all the data and codes that described changes in the students. Thirty three respondents (72%) reported 174 experiences all tied to an increase in self-awareness. The data indicated the experiences that most affected the students were an increase in effectiveness of their communication skills, an increase in mindfulness, an increased awareness of others, increased self-confidence, increased awareness of personal responsibility, and an increased respect for patients. Table 6 represents the top 20 codes, the number of quotations from each code, and the number of respondents that corresponds to the code that are tied to an increase of self-awareness.

Table 6. Results for RQ1: How are medical students affected by the experience of personal reflection to promote self awareness?

Codes	TOTALS Quotes:	No of respondents:	
Increased awareness - self	174	33	72%
PCS - Communication skills - Relationship	138	35	76%
Medical school culture	88	25	54%
PCS - Observations of one's own thinking - Mindfulness	81	27	59%
Benefit to Patients	76	41	89%
Insight	75	37	80%
Class - want more of	68	21	46%
Time - value in med culture	68	19	41%
Reflection - value of	67	20	43%
Increased awareness - of others	66	34	74%
Affected	55	37	80%
Increased confidence	49	17	37%
Impacted personal life	46	11	24%
Increased awareness of personal responsibility	43	13	28%
PCS - Increased respect for patients - Affective Moral	40	24	52%
Thinking process	37	20	43%
Training aid	33	35	76%
PCS - Recognizing gaps in knowledge - Cognitive	33	20	43%
Residency Application	30	24	52%

The students, however, were affected in ways that are more personal. Many went through transformational learning experiences. One student cited that writing the reflection papers allowed their ‘voice’ to emerge which in turn impacted their self-confidence and their belief they could make a difference in their profession. Another student felt affirmed in their future choice of specialty because of insights into what their personal strengths were.

Respondent 44: My previous techniques of not even trying to influence or “have a voice” have been affected. I have had some good results using these strategies with friends and family and I’m surprised they work. Learning about my strengths and how my personality interacts with others has given me insight and I’m actually

looking forward to my clinical experience as I believe I can make a difference with patients. I did not believe this before this class.

Respondent B: Before, my strategy was give everyone the information the same way because I didn't know it made a difference.....I felt the reflection on who I was kind of helped match me up to accomplish my goals. I thought that was the most helpful. I think the insight I gained in just being able to see how I fit into the medical field, and also be able to have more time to think about what I envisioned for my own career was very valuable. Thinking back on it, this was the only opportunity I had to do this in my undergraduate training.

One student decided to learn about a subject they never would have pursued before taking the class, one that continued to encourage the personal development process.

Respondent C: ...the fact that something new I learned in our class made me pursue a different way of looking and thinking about myself, the mindfulness piece, that definitely raised my level of self-awareness. I actually looked for and signed up for a separate mindfulness class outside of this environment because I was so interested in learning about it....In a way it [the reflective process] was a strategy that influenced my behavior immediately. I think that anything that you learn, when you are asked to summarize and prioritize your learning, it becomes effective as a learning tool. I've only used reflection in one other class in medical school, and it was a reflection we had to write at the end of the class, but not throughout the class.

Several of the categories merged together. For example, one student reported that while reflection gave them a sense of 'self', the learning about the different personalities and differences of others was enlightening and a relief to know they were not so different.

Respondent E: So I guess this experience was surprising and relieving at the same time. I was relieved to know that I actually fell into a [personality] category and that the way I am isn't so strange or different, but that others think like me too. The way my personality is, the way I interact with people and what my moral views are were reinforced and I think in a positive way, so that was relieving to know that it wasn't something strange.

Others stated that the reflective process forced 'new connections' while one student reported an awareness of incongruence between thoughts and actions or an increase in emotional competence (Saarni, 2000). This indicates a heightened level of emotional intelligence (D Goleman, 2006).

Respondent F: And it [reflective process] forced me to make new connections, maybe not on information that was said but on information I discovered because I chose to reflect on it. It gave me the opportunity to take all the information that was given to me, decide on the value it had for me, and place it in the context that was relevant to me, on a personal level.

Respondent H: Reflection was a good monitoring device. It made me realize that my thoughts were not always matching my actions. That was uncomfortable for me, but at the same time, it forced me to review what my priorities were and give me the opportunity to change.

The students seemed to be describing a transformation of their perceptual experience of the medical school culture.

Respondent 37: What I'm seeing....medical school curriculum teaches you to gather info and memorize it really well but doesn't do much effective instruction on

understanding your own personal strengths and learning how to apply them to influence change for yourself, patients or colleagues. And they certainly don't give opportunities for discussion around issues. We are pretty much told how to think and what to say.

Several students reported feelings of 'frustration' and of 'being surprised' as affected when describing how they viewed the process of reflection, both in the reflection papers and in the personal interviews. Some added that although these feelings were uncomfortable for them, they came away with insights and an increased level of self-confidence because of the experience.

Respondent I: My thoughts on reflection are that it's frustrating, it's not always comfortable. It forced me to do something that I didn't want to do, or think about. And although I fought it each time, every time I walked out of the class I came away with new insights about myself and what I had learned.

Respondent 22: I am surprised that by writing these responses down this is helping me categorize and remember the information so well. Since I know we will be asked to do this for each class I have been listening in a different way to figure out what is most important to retain.

Respondent J: It's [reflection] different than other ways of thinking that we are used to because when you are studying for a multiple choice exam you really gotta know your stuff, but writing a reflection paper you really gotta know who you are, you really have to dig and you have to know your stuff and how it applies to you. So if you aren't that introspective, I can see how writing a reflection paper would really be frustrating.

Some students stated that the thinking process of reflection was frustrating for them in the beginning because it took up too much of their time. They were not used to this but rather preferred rote memorization because they felt it to be more efficient in learning new material and they could move on.

Respondent 16: Give us more examples rather than making us THINK and come up with answers from our own knowledge. I don't have the time to think about these things. I'd much rather be told what the answer is.

Research Question 2

RQ2: In what ways do medical students experience a heightened level of self-awareness through reflection?

There were a number of ways that opportunities to experience self-awareness was presented to the students. In order to provide a varied learning experience, the class was divided into different teaching components including lecture, stories, self-assessments, training aids to learn new processes, videos, and group discussion. A co-occurrence table run between the components of the class, the number of quotes that corresponded to experiencing self-awareness, and the number of respondents attributed to those quotes indicated the strength of the relationship between the number of respondents affected by self-awareness, and the intensity of self-awareness. The ways that medical students experienced a heightened level of self-awareness is listed in the first column, followed by the number of respondents that indicated they had experienced some form of self-awareness. The third column lists the number of self-awareness experiences for the respondents (see Table 7).

Table 7. Results for RQ2: In what ways do medical students experience a heightened level of self-awareness through reflection?

Self-awareness experiences	No of quotes	N = 46	
Residency application	30	30	65%
Personal strengths survey	28	28	61%
Rescue Triangle	23	16	35%
Reflection papers	67	15	33%
DISC personality assessment	66	14	30%
Systems Thinking Model	17	17	37%
Group discussion	14	14	30%
Video-Gorilla	19	11	24%
Stories	14	5	11%
4 step decision model	4	4	9%
Ad Man's 3 words	4	4	9%
Lecture	0	0	0%

Residency application.

The data indicated the most frequent way the students experienced a heightened level of self-awareness was through the final class assignment of completing an application for their residency. The final assignment required that the students incorporate their strengths, as indicated in their personal strengths survey, into an influential speech for acceptance into a residency program. The personal strengths survey was the second most frequent way self-awareness was experienced among the respondents. Thirty (30) respondents referred to the residency application increasing their levels of self-awareness, followed by 28 respondents who each attributed an increase in self-awareness through learning about their personal strengths. From the 11 interviews and the five students who had graduated (45% of students interviewed, 11% of those who took the class) and were working in their residency programs,

100% of them were admitted into their first program of choice by using their practice application.

Respondent B: I used the strengths to write the final assignment paper and that paper helped me get into the residency program I wanted. I was very surprised that the application worked because I remember when I was doing it, I thought it was a big waste of time and I was resentful because time is not something we have a lot of. But it wasn't a waste. I actually learned something from each of the exercises in the class. It was the most worthwhile [non medical] class I took.

Respondent F: The letter we wrote applying for a residency implemented several strategies that really helped me. I learned a lot about myself through the assignment like how much I hate public speaking and talking about myself, but also what my strengths are. I think I want to go into hospital administration and you have to be able to speak publicly to do that. This helped point out where I could get stronger. Because we had this writing assignment, I went back and reviewed it and actually used a big portion of the letter to apply for residency programs. I ended up getting into the program I most wanted so the letter must have worked!

Respondent H: The exercise of writing the residency application really helped me with the [actual] application to my residency. I was certainly ahead of the game from some of my peers who didn't even know where to start or what to say when we were all applying. There was no other class in my med school experience that encouraged or taught us these skills. And I got into the program I wanted.

Respondent J: As hard as it was to stand up in class and read my application to a future residency, I think it really helped me break the ice with myself. It gave me a

level of self confidence I know I didn't have before the class. I didn't want to do it, I didn't think I could do it, and I thought about not attending class that day. But I thought it was important to complete the assignment and I'm glad I did.....I used the practice application almost word for word for my real one and I got into the residency program I wanted.

Respondent K: The very final assignment, we had to write a residency letter, and back then I had no idea what I wanted to do. I chose anesthesiology out of the blue and that's what I wrote about. It was really hard because I had to list what I was good at and I didn't know what I was good at. But part of the assignment was to list our strengths according to the survey and weave them into the influence strategies and by following that formula I was able to complete writing the letter..... A few months later I found the letter that I wrote for the class, and when I read it back, I thought to myself, "wow, that is really a good letter." It felt good reading about my strengths and I could say to myself: 'yeah, I do have those strengths.' I used it when applying for my residency and got admitted into the program of my first choice.

Personal strengths survey.

Respondent B: I feel like some of these strengths had somehow been forgotten in the process of going through this curriculum. I really appreciated that because I felt like the strengths survey was pretty 'dead on'. In this field, it's all about the hard science. You don't hear anyone talking about how compassion, or wisdom, or the ability to see and recognize beauty is strength, and it was nice to have qualities such as those to be recognized as positive characteristics that make up a human being. This probably sounds really touchy feely, but in a way this class helped make me feel whole. This

curriculum is tough and it makes you toughen up. Sometimes I feel like I've lost a part of myself, and by going through this class it reminded of why I went into medicine in the first place - to help heal people.

Rescue Triangle.

The third experience that heightened levels of self-awareness was the information and discussion surrounding the Rescue Triangle, also known as Karpman's Drama Triangle (Karpman, 1972), a model describing dysfunctional communication or relationship patterns and its effects, with 16 respondents citing 23 examples. The students were asked to put themselves in one of the roles described in this model of victim, persecutor or rescuer. As the students role played scenarios they gained insight into communication patterns of their own, or in the lives of others they knew.

Respondent 30: The simplicity and accurateness of the rescue triangle is amazing to me. I've never thought about how something like this would be studied and applied to everyday life. Communication as a science? I would have thought that I would have known about this.

Respondent 40: WOW – learning about the Rescue Triangle will be invaluable to me. I see I have been in one (triangle) for a long time and this has hindered my relationship with another person who is important to me. I realized I was victimizing myself, but when you taught us that there were three roles in this dynamic, that of rescuer (or enabler), persecutor and victim, it made me open my eyes as to the real role I have been playing. I've taken a trip or two around the triangle. Thanks for sharing this eye opening information. I can see how this will help me with patients too.

Respondent H: The rescue triangle has been invaluable in trying to understand my family and some of the communication issues we have. I completely see myself being in the triangle in the past, and now that I'm aware of this, I don't get trapped in that negative situation anymore. In fact, it has helped diffuse some arguments we've had. I've also seen some manipulation that occurs within the rescue triangle with my patients. And since I'm very aware of this now, I can sidestep this and completely avoid allowing them to become a victim. I think this has really helped with my communication skills.

Reflection papers.

Reflection papers proved to be an effective way to surface self-awareness in students. Fifteen respondents reported 67 instances of self-awareness experiences through the process of thinking and writing their thoughts down.

Respondent 20: I had never thought about the effectiveness of good communications skills until now. Being forced to write our thinking down and not be able to come up with something worthwhile must say something. I'm thinking of how deficient in this area I might be and what I have to do to overcome this.

Respondent 37: I see someone who has the "white coat" that I'm attempting to get and haven't really thought about the content of their message because of their position. This class is making me more aware of how I react to situations and how I can become more conscious of my own activities, not be so mindless. Just admitting this on paper makes me ask, am I so easily influenced?

Respondent 46: Taking the time to reflect on what we've learned in this class has helped me become aware of my needs for better communication skills as a future physician. Not much priority is put on this subject.

Respondent J: The reflection part gave me permission to write and then talk about some of my accomplishments, and in medical school you are always the lowest person on the ladder. It felt good to be able to look at yourself and see that you are on the right track and doing well. I think that is a good quality to have, to be able to sell yourself in a way that isn't too over the top or that comes off as being too full of yourself.

Personality assessment.

The DISC personality assessment, based on the work of William Moulton Marston, a psychologist in the early 20 c., and developed by John Geier (1958) produced interest in the students in learning more about themselves and the differences in others. Students commented that they were able to see themselves within the personality profiles described, gain an insight into the communication role they played with others, and further understand different responses or communication styles that they personally or others had.

Respondent 7: Learning about the personalities was so interesting. I really wish there was more info on my handout. I couldn't write it all down fast enough. It was very useful though. This will help in understanding how I can get along with my relationships in my family and professionally.

Respondent 10: We need to study more about personality types. I can see how knowing about particular personality types can help with the patient interview process

and help with patients understanding and treatment. Why don't we learn more about this in med school?

Respondent 35: I enjoyed the discussion of the personality types as it reminds me of patients and relatives that I have experienced in life. I realize they are not so crazy or stupid. Often times meeting people who fit into any of these categories, other than mine, is frustrating and is usually chalked up to: "this person is irritating or a real jerk." Studying the different personalities allows these different people to be defined and therefore better understood. I can understand now why when patients want to talk to me and tell my "their stories" it's very irritating to me and I want them to stop. I will work more on trying to listen to them and to communicate in their style instead of making them communicate in mine.

Group discussion, video and stories.

Students experienced self-awareness through the opportunities for group discussion surrounding the issues or problems presented in class. There were 14 respondents with 14 instances indicating self-awareness through group discussions.

Respondent D: I learned about differences not just in myself, but also with some of my colleagues. We were put in discussion groups and we had to listen to everyone's opinions, so I may have become a better listener from the experience. I learned a lot about my peers that I didn't know about and we've been through this program together for three years. I may have learned something valuable from them (laughter).

A video on selective attention, designed to demonstrate how distraction can hinder an obvious occurrence, questioned the student's observational abilities. Eleven (11) respondents

made reference to the experience 19 times as to how surprised they were they missed a gorilla walking through a video scene playing in front of them.

Respondent H: When we viewed the gorilla video, that was astonishing to me, that I actually did not even notice it walking through the scene, and I do consider myself to have high observational ability - that was a humbling experience. It was surprising that even though I have a pretty strong idea of who I am, my ethical approach, that knowing that, you still have to put in a lot of effort to make sure that you don't have your blinders on. You have to keep your mind, your eyes and your ears open and not allow your own biases to cloud your judgment. I realized that with patients, I see what I want to see or what you think you see and often times that isn't the reality. That was very revealing to me. That made a huge impact on me because I have a background in multicultural education, and that's my master's degree, I did quite a bit of research in that area, and I really felt like that in a lot of social dilemmas surrounding education. Patients who were my students back then when I was a teacher, I felt that I knew, I felt pretty strongly that I knew where I stood. Throughout the class, I realized that no matter how much I think I'm being open to new information or new ideas, I have to be mindful of my own biases, or I will quickly slip back into the place of where I allow what I think is reality vs. what is reality, to cloud my judgment, my own personal cultural lens, that defines how you see things.

Other ways students experienced heightened levels of self-awareness were through stories. One story about two different men who jay-walked and how the way they were dressed influenced others, and another called the 'Ad Man's 3 words' points out how the power of influence in the advertising and marketing world has a hold over all of us.

Respondent 38: The story about the homeless man vs. the business man crossing the busy street really stuck with me, and how much we are influenced by outside “trappings”. Am I as influenced? I think I may be without realizing it until now.

Respondent 41: The 3 words that helped the “blind man” were “it’s springtime and”. So simple, yet effective. Kind of like these strategies. So simple, yet they work. Could this be an analogy for effective communication?

The 4 step decision model, an ethical decision making tool, teaches a method of making decisions when you come to a crossroads. Four (4) students commented that they were able to implement this model immediately into their own lives with decisions they were presently making.

Respondent 5: A very valuable process I learned was the 4 Step Decision model. I have used it extensively for the past four weeks and it has helped me feel more confident about choices I have made for myself. I think sometimes we are railroaded down a certain path as they “turn us into doctors” and I have not stood up for myself enough. Specifically in situations when I focus too much energy on pleasing someone else. I plan on using this process for other life decisions and teaching my patients how to use it too.

An interesting finding that surfaced is that there were no cited instances of self-awareness quotes occurring from the lecture portion of this class. Lecture is the most common way that medical students learn.

Concept map.

A concept map (Figure 5) using a semantic layout algorithm represents the components of the class and the way students experience self-awareness. The levels at which

the components appear, from top down, indicate the strength of their relationships to self-awareness.

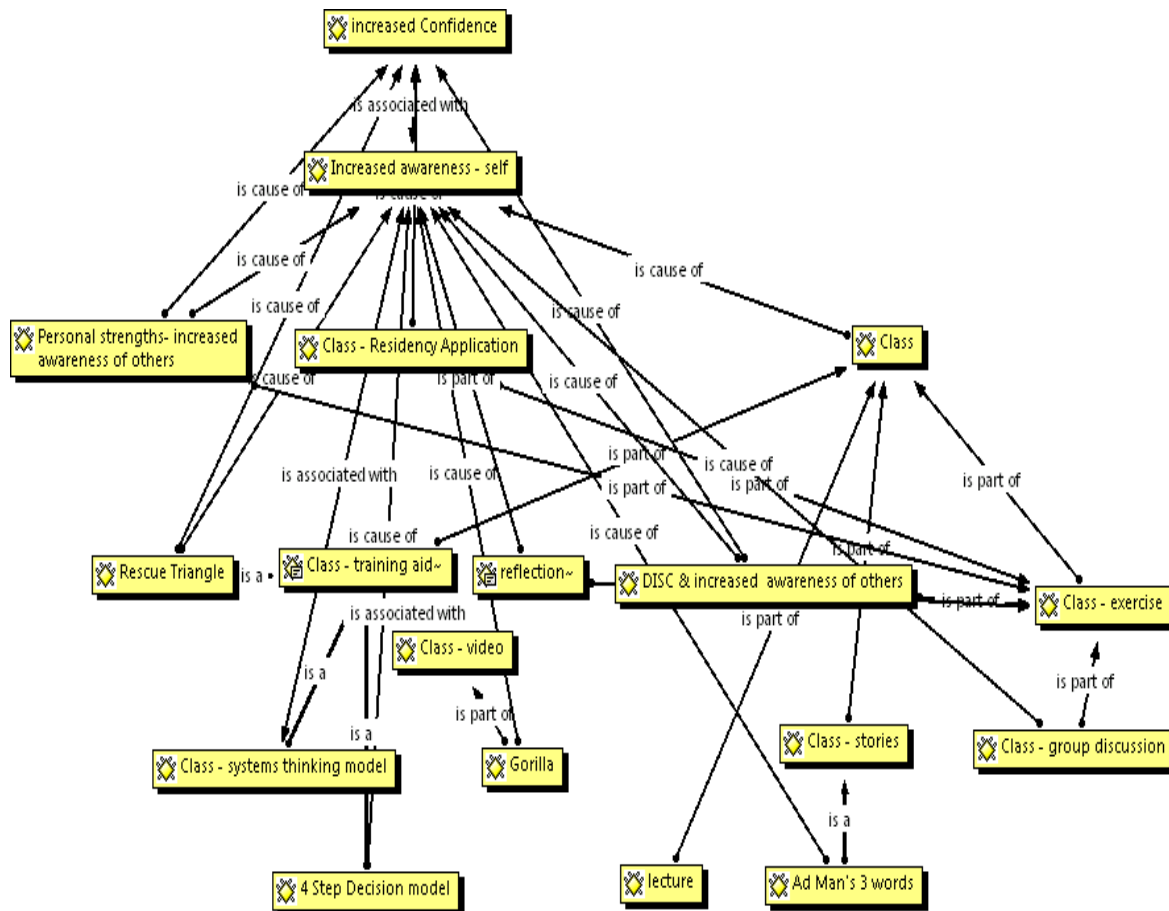


Figure 5. RQ2: In what ways do medical students experience a heightened level of self-awareness through reflection?

Research Question 3

RQ3: How is professional competence in medical students impacted through self-awareness and reflection?

Several professional competency skills were impacted in medical students through self-awareness and reflection. To identify experiences that related to professional

competency skills, the individual competencies were included as codes. Twenty four (24) competency skills out of 33 from the dimensions of Affective/Moral, Cognitive, Integrative, Mindfulness and Relationship, surfaced from the analysis. Several competencies from the technical and integrative skill dimension were not included as they were out of the scope of this study. To test for researcher reliability, an online card sort was sent to 10 professionals who volunteered to sort quotations attributed to professional competency skills. Nine volunteers responded back with results from the card sort. These professionals came from varied backgrounds, eight with a PhD, one with a M.A., several in the adult education or medical field. The results were then compared to the researcher's results. There was a 70% correlation rate between the results from the researcher and the volunteers who tested for reliability. The discrepancy in coding fell within the mindfulness domain. All categories were sorted similarly into the mindfulness domain; however, several volunteer sorters commented it was difficult to tell the difference between some of the mindfulness categories because they were so similar.

A code occurrence table was created between self-awareness, reflection and professional competency skills (see Table 8).

Table 8. Results for RQ3: Professional Competency Skills impacted by reflection.

Professional Competence Skill									
Affective Moral		Cognitive		Integrative		Mindfulness		Relationship	
Respect for patients	40	Recognizing gaps in knowledge	33	Managing uncertainty	9	Observations of one's own thinking	81	Communication skills	138
Responsiveness to patients and society	29	Applying knowledge to real world situations	17			Attentiveness	26	Handling conflict	21
Emotional Intelligence	19	Basic Communication Skills	9			Recognition of & respond to biases	24	Teaching others	10
Caring	8	Self-directed acquisition of new knowledge	7			Critical curiosity	17	Teamwork	9
Tolerance of ambiguity & anxiety	4	Information management	5			Willingness to acknowledge & correct errors	3		178
	100	Generating questions	4				151		
		Learning from experience	4						
		Abstract problem solving	2						
		Using tacit knowledge & real world experience	1						
		Using resources, journals, colleagues, etc.	0						
			82						

The most impacted competency, with 138 quotes, a total of 178 quotes within the Relationship dimension, was Communication skills. There are two categories of communication skills under the professional competencies definition. Basic Communication Skills falls within the ‘cognitive’ dimension, and Communication skills falls within the ‘relationship’ dimension. Statements that included facts about communication skills were categorized under the cognitive domain, and statements that represented statements of communication creating connections or enhancing relationships were sorted into the relationship domain.

Basic communication skills – Cognitive

Respondent 21: This class has helped bring back some of the basic skills we learned from the standardized patient program. Like eye contact and not rushing the patient. Also, some of the skills from motivational interviewing. I think the main one I'm reminded of is to make sure the patient feels like he's heard and asking appropriate questions. I need to brush up on this.

Communication skills – Relationship

Respondent F: not only did this class influence how I interact with my patients but this influenced me in the way I act with my father. My father and I, we have a great relationship but sometimes we don't see eye to eye on things, and now I understand that he's more of a big picture learner. I'm more of a detail learner and just in our interactions, we are able to communicate a lot more efficiently now. I understand how I can explain things in a way that makes more sense to him, and he gets it right away. Before he always thought that I was blowing him off, or not wanting to spend enough time with him to explain a concept. But once I understood that he processed information in a different way, or that he saw things through a different lens, this helped me think about how I would carry on a conversation with him that didn't result in conflict.

Observations of one's own thinking under the Mindfulness category with 81 quotations, and a total of 151 attributed to the Mindfulness category, was the second most impacted category under professional competence skills. This was followed by Respect for Patients (40) under the Affective/Moral dimension, Recognizing gaps in knowledge (33) under the Cognitive dimension, and Responsiveness to patients and society (29) under the

Affective/Moral dimension. Figure 6 shows the top 10 professional competency skills impacted by using reflection for self-awareness in medical students.

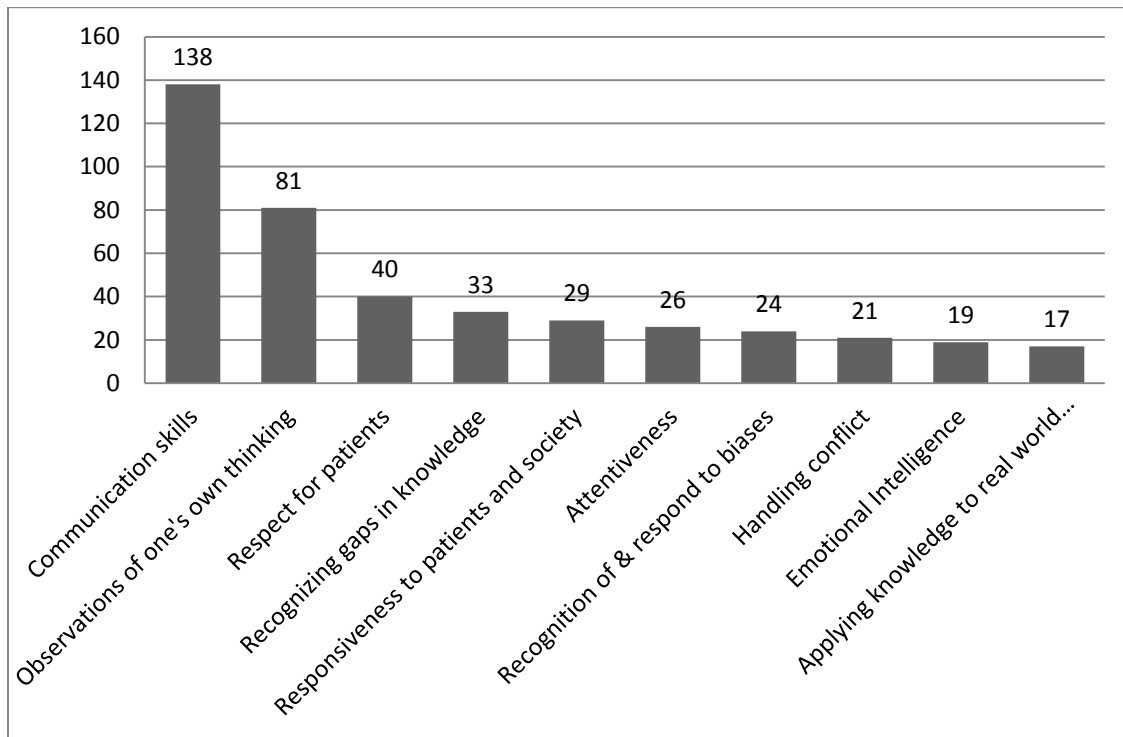


Figure 6. Top 10 Professional Competency skills impacted by reflection.

Many quotes that pertain to these competencies have been previously listed. Below are examples of some different categories:

Observations of one's own thinking.

Respondent 6: The mindfulness paper and lecture REALLY hit home and I've thought a lot about how mindless I usually am...like not listening to my kids when they are talking to me. I do the same when a patient tries to explain something with more detail than I think I need and I already think I know what is going on with them. I never thought that I was being mindless before. I always thought that taking the time to get details would be a waste of my time, which I have very little of.

Respondent 9: I will try to slow down enough to be in the moment with my patients, friends, family, etc. Thank you for pointing mindfulness out to us and making us aware of how this affects us personally. I'm not sure I would ever have been mindful of how mindless I am and the negative effects it can have on my interpersonal relationships.

Respondent 11: I need to learn to stay in the moment and give my patients my full attention. I don't even know their name a few seconds after they say it. That never seemed important to me until now.

Respondent C: It [the reflective process] actually forces me to think about what is going on in the present moment. And one thing I learned about being mindful is how mindless we are, or become going through this program. I think it's because we are being rushed from one class to the next, massive amounts of information we have to learn fast, on to the next exam or activity. It's like how much can you cram into 24 hrs. And I wonder if this is a way to see if you have what it takes, to filter you out of the system. However, it solidifies what I've learned and also identified where some of my weaknesses were.

Recognizing gaps in knowledge.

Respondent 4: I am most surprised that there is a science behind influence and persuasion. Or that there is a science behind communication. That fact that I didn't see the gorilla has "opened my eyes" to maybe other things I've not been aware of.

Responsiveness to patients and society.

Respondent 42: I believe that I can now somewhat recognize WHY someone might not change by being able to identify a specific issue with them. This would help me

possibly talk them through an issue they might have that prevents them from improving their lifestyle or making a positive change. Some people have obstacles in their lives that we don't know about and if I can quickly connect with them or earn their trust, then I believe I can be more effective into encouraging or teaching them about a healthier lifestyle.

Attentiveness.

Respondent 1: I can't believe how my "hyperfocus" made it so that I DIDN'T SEE THE GORILLA. Unbelievable! This makes me notice everything in a different way. How many others things have I been missing?

Respondent 4: My main goal after this lecture is attempting to be mindful on initial visits with patients and trying to listen to what they are really telling me. I think that will benefit us both.

Emotional intelligence.

Respondent K: The reflection process has helped raise my level of self-awareness as to how others see me and also how I view other people, and perhaps that I'm not viewed the way I think I am.

Respondent 10: Learning and implementing the skills taught in this class will help me understand patients better and seeing issues and situations through their eyes. This will also help me react to certain situations appropriately and be a better physician.

Respondent 41: It was insightful to understand the barriers to change and how patients from different cultures or with different personalities will respond to the possibility of change. Knowing this allows me to see that both parties have their own

viewpoints which they think are right and a decision should be made together to invite change. I don't think I would have invited another viewpoint before learning about this. We [medical students] are taught that the information we give people should be right and they either accept it or they don't. Collaboration is not high on the list here.

Respondent H: I felt that being able to identify what was important to us as future physicians helped us be in better tune to what was important to the patient. I feel this helps in daily patient interactions and it was also helpful with me as a provider so I could cater to what the patient needed or be able to understand what they might be thinking. This could help me adjust my communication style in order that they might be able to understand me better, or me understand what they were trying to tell me. I feel we need these skills because our time is limited and the more efficient we can be with our communication skills, the better quality interaction we have with our patients.

Applying knowledge to real world situations.

Respondent H: I worked at a clinic last summer and it was filled with pharm reps. They were trying to give away all kinds of things as gifts and I recognized that they were trying to influence us. I could smile at all of this because I recognized what they were trying to do. I think that before they class I wouldn't have been so aware of their tactics, so thank you for making us aware of that.

Summary

This chapter provided an overview of the results of this study. Descriptive data indicates that medical students' self-awareness was impacted through reflection. The

categories most impacted were personal communication skills and an increase in mindfulness. Students recognized their gaps in knowledge, their biases, and some committed to strengthening their weaknesses in these areas to provide good care for their patients as well as improve interpersonal relationships. Several students had transformational experiences by an increased awareness of the depersonalization and objectification that takes place in the medical culture. The experiences of students' increased awareness came from self-assessments, reflection papers written at the end of lessons that forced the students to think about why new information was important and how it would be applied and through completion of a final assignment where they each disclosed some of their personal life experiences and strengths to their peers. Using reflection to capture the learning of these students proved to be an effective way to assess evidence of dimensions of professional competencies within medical students.

Chapter 5

Discussion

This final chapter provides a summary of the study and an interpretation of the findings. The qualitative analysis presented in chapter 4 will be reviewed, including findings for phase 1, an analysis of the reflection papers, and phase 2, personal interviews of the students. This chapter also addresses the significance of this exploratory study, and the limitations and problems encountered. It concludes with the implications of the findings, a model for teaching self-awareness, and recommendations for future research.

Many patients can identify a doctor with a less than desirable bedside manner. They can tell stories about physicians who were good technicians, but seriously lacking in interpersonal skills. Examples of poor communication skills in physicians include: speaking in “doctoresque” to the patients; cutting the patient off in mid-sentence when talking, not allowing adequate time to discuss issues; or a seemingly uncompassionate attitude when the patient expresses emotions. These examples seem counterintuitive to a person who enters into the ‘healing’ profession. A physician’s personal characteristics, their values and attitudes, biases and past experiences all have effects on communication with their patient (Novack, Suchman, Clark, Epstein, Najberg & Kaplan, 1997), and the physician must be aware of these communication concerns.

Most medical school curricula does not undertake an organized approach to promoting self-awareness to medical students even though the literature suggests that enhancing this leads to an increase of the medical provider’s satisfaction with work experience and with themselves (Novack, Epstein & Paulson, 1999). A lack of personal awareness in a physician can adversely affect patient care (Kern, Wright, Carrese, Lipkin,

Simmons, Novack, Kalet, Frankel & Feldman, 2001) whereas an increase in personal awareness leads to personal growth, changes in values and goals, and increased energy, productivity, and creativity (Shapiro, Rutger, Robitcheck, 2006). Effectiveness as a physician requires a variety of skills including good communication and technical skills and the ability to use them with personal maturity, wisdom, empathy, and integrity. The development of these qualities involves personal awareness and an understanding of how one relates to others (Novack, et al., 1997).

Awareness of how people function psychologically is key to self-awareness and educators have opportunities to foster this development in their students (Cranton, 2000). However, as noted by the results of this study, sufficient self-awareness opportunities have not been incorporated into the medical school curriculum. Some findings suggest that physician errors often come from a “mindless application of unexamined habits and the interference of unexamined emotions” (Borrell-Carrió & Epstein, 2004; Ely, Levinson, Elder, & Mainous, 1995). These physician errors, which have the potential to cause injury or even death, often come from lack of communication and are widespread problems in today’s health care organizations. Medical errors, according to the Joint Commission (formerly the Joint Commission on Accreditation of Healthcare Organizations, JCHAO), are listed on the National Center for Health Statistic’s list of the top 10 causes of death in the United States. They rank as number five (5), ahead of accidents, diabetes, and Alzheimer’s disease, as well as AIDS, breast cancer, and gunshot wounds (“The Joint Commission guide to improving staff communication,” 2005; O’Daniel, 2008).

A call for greater responsiveness to patient issues, including improved effectiveness with physician to patient communication, has been demanded of medical education. The need

for a higher awareness of the social determinants of health, as well as teaching other responsibilities such as teamwork with patients as well as colleagues has been stressed, yet little evidence exists that this takes place. Medical schools, because of being in receipt of public funding, engage into a social contract with society in general, and therefore are obligated to produce physicians that meet the expectations of society related to their health and well-being (Beagan, 2003).

Community involvement, outreach programs and rural placement programs have often been viewed as the solution to the issues of improving health care equity. However, evidence shows that simply placing students into these settings is not enough to build social awareness or accountability (Hennen, 1997). What is needed are efforts within the curriculum to support advanced communication and active listening skills, activities that support critical self-awareness, cultural and social differences, and opportunities for the students to develop insight into their own values and attitudes that would affect their patients and colleagues (Beagan, 2003; Benbassat & Baumal, 2005).

A major goal of adult education is the development of the individual, apart from the collective. This allows for the development of a more authentic human being (Mezirow & Associates, 2000). The goal of medical education should be to provide opportunities for students to develop their levels of self-awareness (Benbassat & Baumal, 2005), provide opportunities to develop as individuals and enhance their abilities to deal with their feelings, and better respond to specific patients and their concerns. Several of these skills fall into a list of competencies medical students are expected to have knowledge of on graduation (Epstein & Hundert, 2002), called professional competency skills.

The teaching of interpersonal communication skills falls under a domain of professional competence. Because there has been difficulty in finding an agreed upon definition of professional competence, the Accreditation Council for Graduate Medical Education has defined important areas of competence to provide a framework in which to teach and assess. The six areas are: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice (which include health economics and teamwork). Professional competence in the education of a physician, as defined by Epstein and Hundert (2002, p. 226) means: “the habitual and judicious use of communication, knowledge and technical skills; clinical reasoning, emotions and values; and the use of reflection in daily practice for the benefit of the individual and the community being served.”

The definition of professional competence assumes the necessity for new skills to constantly be emerging, in particular with ever changing technology. With no agreed upon definition of competence, Epstein and Hundert (2002) further refine the definition and group the following domains as important for medical students to achieve upon graduation. Components of professional competence include: cognitive, technical, integrative, context, relationship, affective/moral, and habits of mind. The scope of this study includes all except context and technical skills.

Limitations of the study

The convenience sample of the study provided sampling bias. Students who self-selected to attend the class did so with a desire to learn communication skills. This may have skewed the results towards those inclined towards listening and speaking experiences. Students who responded to the invitation of participating in the personal interviews self-

selected and likely had a favorable impression of the class. The results of the interviews could reflect a more positive bias towards the opinion of the class and the results the students had from the class.

This study began with a set of research questions to guide the research. These questions assumed self-awareness and professional competence skills in medical students would be impacted. These assumptions could have made the researcher more focused on these findings when reviewing the data.

The researcher and the instructor of the class was the same person indicating the findings could be subject to other interpretations. There was limited familiarity between the researcher as the instructor, and the students. There is a possibility that during the personal interviews the students could have given responses in order to please the instructor. Interviews that are done over the phone limit the ability to observe and record nuances such as gestures, or body language, preventing full consideration of a response. Because the personal interviews were conducted by phone even the tone of the interviewer's voice could have influenced responses of the participants.

A strong potential for bias existed as the researcher has been involved in the health care field to some degree for over 30 years, served as an instructor at the medical school for several years, and is married to a physician. While the latter could have contributed to researcher bias, it could also have contributed as a strength to the study. The familiarity the researcher had into challenges within medical education partially drove the interest of the study. Care was taken to remain as objective as possible and allow the data to guide and dictate the findings, while taking into account that the perspective of the researcher was a main component of the qualitative research (Coffey & Atkinson, 1996).

Summary of the Study

Using a case study approach, this exploratory study investigated how the use of reflection in a communications class designed to teach ethical influence skills, impacted levels of self-awareness and professional competencies in medical students. All dimensions of skills in Epstein and Hundert's table of professional competency skills were included except for the context and technical dimension.

The content of the class, based on six influence and persuasion principles by Robert Cialdini (2001), incorporated several self-assessments and class exercises to stimulate self-awareness. At the end of each class, a reflection paper was completed for evaluation of the class and to capture the thinking process of the students. Follow-up interviews were conducted with a group of students to verify data from the reflection papers. Data for this study was collected over a three year period and comes from 46 reflection papers and 11 personal interviews.

The research was guided by the following questions:

1. How are medical students affected by the experience of personal reflection to promote self awareness?
2. In what ways do medical students experience a heightened level of self-awareness through reflection?
3. How is professional competence in medical students impacted through self-awareness and reflection?

Class content. Delivery of the class content consisted of 10 hours with the students, two hours over 5 sessions. The beginning of each class was one hour of didactic lecture based teaching of the principles of influence and science based research to support the

information. This was followed by one hour of different activities to stimulate self-awareness, such as self-assessments, group discussion, 15 minutes to work on the final assignment, Q & A, and completion of a reflection paper.

The final assignment for the class was a speech each student gave incorporating each of the six principles of influence and their personal strengths they learned from the VIA Inventory of Strengths survey (<http://www.viacharacter.org/surveys.aspx>) into a request for admittance into a residency program. The students were asked to research residency programs, along with their mission statements, the geographical areas of the programs, and other information that they could link to make the request more personal to them. In this speech, the students were asked to address their strengths along with some personal information as to why they should be chosen for the residency program.

At the end of each class session, the students completed a reflection paper, one at the end of four class sessions, and a final paper voicing their opinion of the class experience. The reflection questions and the order of the questions follow the categories for cognitive domains from Blooms' Taxonomy of Educational Objectives. Developed in 1956, Benjamin Bloom developed this tool to serve as a aid for measurement, developing common language surrounding learning goals, and determining whether a course met it's standards and objectives (Krathwohl, 2002). The domains are: knowledge, comprehension, application, analysis, synthesis and evaluation (see Table 9).

Table 9. Reflection Questions.

Reflection Questions	
Class 1-4	Final
1 After listening to today's lecture, what is the one issue that resonates most with you?	1 After attending the ethical influence class, was this class more or less than what you expected? Please elaborate.
2 What surprised you the most?	2 What surprised you the most?
3 How can you connect this information to your future career as a physician?	3 How do you think this class has impacted your skill level as a future physician?
4 What would you need to learn more about in order to feel you can make a difference as a physician?	4 How have you currently been able to apply the concepts you learned in this class?
5 What would you change to make the information more applicable to you?	5 If you had not taken this class, what different results would you be seeing now in your communication skills?

An invitation to participate in personal interviews was sent to 53 students who had participated in the communications class using reflection. Eleven students responded and agreed to participate. The length of time that elapsed between attendance in the class and the interviews was 6 months – 3 years, with five (5) of the interviewees having graduated and working in their residency programs. Following are the questions used for the interview (see Table 10).

Table 10. Interview Questions.

Interview Questions	
1	What was different in this class in the learning process than what you were normally used to?
2	What skills did you learn that are presently useful to you?
3	How do you feel this class helped you as a future physician?
4	There were several opportunities to learn about your self in the class. What surprised you the most that learned about yourself?
5	There are many areas of life that we can use these strategies for ethical influence. In what ways have you been able to use these strategies?
6	Can you describe a situation where you recognized any of the strategies being used on you?
7	One of the assessments used in class were reflection papers. In what ways do you feel writing reflection papers contributed to your learning process?
8	What did you like best about the learning process?
9	What did you like least about the learning process?
10	Can you reflect back and give me an example of a situation you handled by using some of the strategies or information you learned in the class?
11	Would you recommend this class to other medical school students?
12	Why or why not?
13	Is there anything that comes to mind about the value of reflection that you care to further contribute?

An inductive-deductive dialogue model developed by Ricardo Contreras (2011) was used as the process for analysis of the codes. This approach was appropriate as a set of research questions guided the process, while also attempting to discover other underlying themes in the data. This two pronged approach allowed for starting from a deductive approach from the perspective of the research questions guiding the coding and developing a set of a priori codes, grouping codes into hierarchies using prefixes as they emerged and finally into networks to view the connections and test for assumptions or a hypothesis. Memos were created from findings from previous studies and linked to data segments that emerged supporting those findings. The inductive process followed by looking at small segments of text and developing emergent codes from open coding or in-vivo coding,

developing a flat list of codes, grouping them into hierarchies through pre-fixes and then into networks. Memos were created at this stage that included thoughts and interpretations on the emerging data. These memos were linked to data segments that supported the findings. This process allowed for findings of patterns and relations in the data and how they could be linked.

Key Findings

One important finding about the impact of reflection on self-awareness and professional competency skills is that reflection proved to be an effective measure of both. An increase in self-awareness was noted by 72% (33) of the respondents (n=46) followed by 74% (34) indicating an increased awareness of others, increased confidence 37% (17), an increase in personal responsibility to create understanding 28% (13), and 89% (41) believing that what they learned and were practicing would be of benefit to their patients. Professional competency skills were assigned as a code and used when students made statements that related to these skills. Communication skills in the Relationship domain impacted 76% (35) of the respondents, and increase of mindfulness occurred within 59% (27) of respondents, increased respect for patients within 52% (24) of students and 43% (20) reported recognizing gaps in knowledge.

Students were affected in various ways aside from an increase in their communication skills. Twenty-five students (54%) reported an awareness of the didactic teaching style of the medical school culture, the value placed on time, and the impersonal attitude it fostered. Most comments revolved around the lack of personal development in the curriculum and how the type of self-discovery that had occurred in the class had been beneficial to the students. Several requested an advanced level of the class or a repeat as they were close to

graduation. Some students had transformational learning experiences reporting that the reflection papers help ‘give a voice’ in an environment where they did not think individuation was valued. Several students believed that their conflict management skills had improved and noted an improvement in interpersonal relationships. The predominant way the students experienced an increase in self-awareness was through the writing of their final assignment, an application letter for a residency program. Twenty-four respondents (52%) indicated participating in this assignment was instrumental in the process of self-awareness for them. Five students (11%) who participated in the personal interviews reported getting the residency program of their first choice by using the letter they had written for their final assignment. Table 11 displays in aggregate the top 20 themes revealed from student reflection papers and interviews, and the impact on the research questions. This information from this table is shown delineated in chapter 4.

Table 11. Top 20 themes from study and impact on research questions.

Theme	Quote Count	n	n=46	RQ1 How affected?	RQ2 How do they experience?	RQ3 How are PC skills impacted?
Increased self-awareness	174	33	(72%)	x		
PCS - Communication skills - Relationship	138	35	(76%)	x		x
Medical school culture	88	25	(54%)	x		
PCS - Observations of one's own thinking - Mindfulness	81	27	(59%)			x
Benefit to Patients	76	41	(89%)	x		
Insight	75	37	(80%)	x		
Class - want more of	68	21	(46%)			
Time - value in med culture	68	19	(41%)	x		
Reflection	67	20	(43%)		x	
Increased awareness of others	66	34	(74%)	x		
Affected	55	37	(80%)			
Increased Confidence	49	17	(37%)	x		
Impacted Personal life	46	11	(24%)	x		
PCS - Increased awareness of personal responsibility	43	13	(28%)	x		x
PCS - Increased respect for patients - Affective Moral	40	24	(52%)	x		x
Thinking process	37	20	(43%)	x		
Training aid	33	35	(76%)		x	
PCS - Recognizing gaps in knowledge - Cognitive	33	20	(43%)	x		x
Residency Application	30	24	(52%)		x	

Research Implications

The existing literature outlines the need for structured communications classes that will help students build rapport with patients, minimize medical errors, and build teamwork within the health care system. However, more research is needed on how to effectively deal with classes that focus on medical students' personal development. It has been reported that some students view non-medical classes as not valuable towards material covered on their examinations, as they believe that the real curriculum are the classes that allow them to pass the exams, and the attitudes and values modeled by the organizational culture (Bloomfield, Harris, & Hughes, 2003). Until the organizational learning culture adopts communication and personal development skills as a priority, they will serve as temporary "teachable moments" and may not take on a permanent nature, much like the 'teaching to the test' experience in K-12. Figure 7 depicts the current timeline of the class as an intervention.

The results from this study indicate that personal development classes and the use of reflection are both lacking and important to students going through a medical school curriculum. Benefits of incorporating these types of classes include an enhancement of personal communication skills; an increase of awareness of self and others; an increase of respect for patients; an awareness and appreciation of personal strengths, which lead to an increase in self-confidence; and an increase in some of the dimensions of professional competence skills.

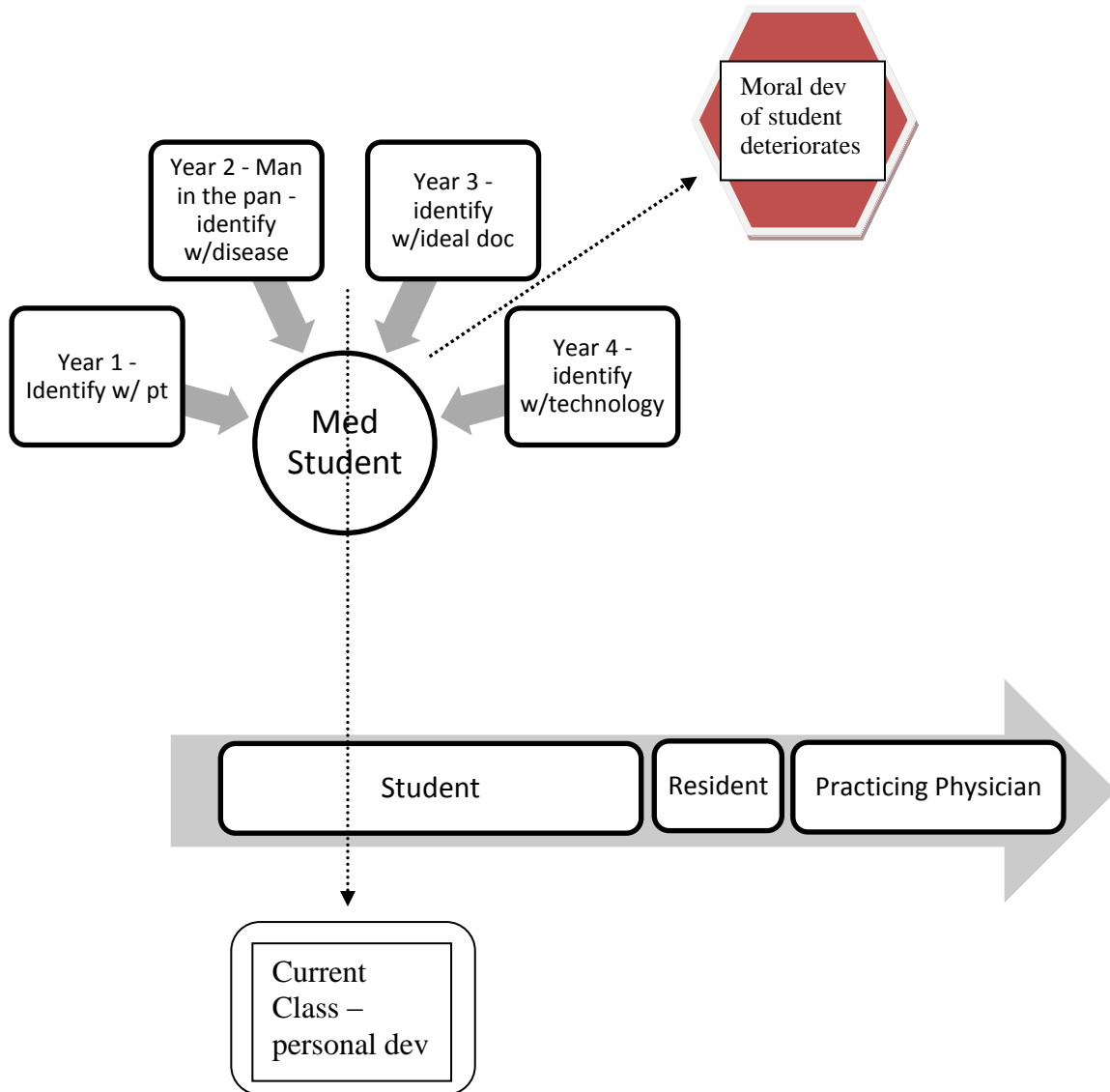


Figure 7. Current timeline of class intervention.

Medical curriculum is currently undergoing change implementing classes that teach skills to help future physicians better meet the needs of the public. It has only been recently that undergraduate and residency training have made a priority of teaching communications skills to their students. However, the results from this study, and other research findings indicate that the medical school organizational culture continues to support the strictly

medical model and resists teaching classes that deal with individuals differences or psychosocial issues (Maguire & Pitceathly, 2002). Implementing personal development classes throughout the educational experience for the student could help turn this organizational attitude around by individuals becoming more comfortable with the experience. Medical instructors, by participating in personal development workshops, could better understand their own values and communication styles and provide a more quality teaching experience for the students. By recognizing the individual differences in the students, this could provide a less judgmental environment in the classroom, encouraging more discussion and less fear of asking questions among the students.

Medical students would benefit from having personal development classes interspersed throughout their educational experience. A one-time class may be an eye-opener to the different teaching/learning styles available, but most likely does not create permanent change as it is not supported by the organizational culture. The research literature states that physicians avoid inquiring about issues that may impact their patients socially or emotionally, due to the belief that they may not have the skills to deal with the problems, take up too much time, or even impact the physician emotionally. Therefore, if the physician senses that a conversation may be headed in that direction, blocking techniques are used to avoid the incident (Maguire & Pitceathly, 2002). Providing learning opportunities in medical school that teach the students about themselves and differences in others, could help them become comfortable with the experiences they are most likely to face with their future patients. Personal development classes or reflective experiences that allow the students to “have a voice,” and reconnect to themselves while learning the necessary skills of controlling

their fears and emotions to practice medicine, could produce a more balanced individual as a physician, and more compassionate towards their patients.

Practicing physicians could benefit from personal development and reflective exercises to improve communication skills as well. It is well documented that physicians that acquire good communication skills identify patients' issues and problems more accurately, have less malpractice suits against them, and have greater job satisfaction and less stress (Brown, et al., 1999; Buller & Buller, 1987; Epstein, et al., 1993). Patients who reported having physicians with poor communication skills felt only half of their complaints or concerns were elicited; their physician extracted a minimal amount of information about their problem, issue or concern; felt ignored by their physician as to the information they wished to know; and believed their physician did little to check for understanding (Maguire & Pitceathly, 2002). Current evidence suggests that patients from physicians who attend continuous medical education (CME) courses on communication skills benefit by feeling less distressed, disclose more feelings about their predicament and feel more satisfied from the patient-doctor interaction. The physician has a higher level of self-confidence around their communication skills and feels more validated by their patients (Maguire & Pitceathly, 2002).

Implementing reflective or personal development assessments into CME courses for practicing physicians, as well as throughout a student's medical school experience, could help guide and reinforce the changes necessary in undergraduate medical education for changes to take place, as well as support attitudinal change in the organizational culture. Positioning personal development classes in the curriculum, before the third year and during

the fourth year, could help circumvent the decline in moral development that is seen in medical students between the third and fourth year (Branch, 2000) (see Figure 8).

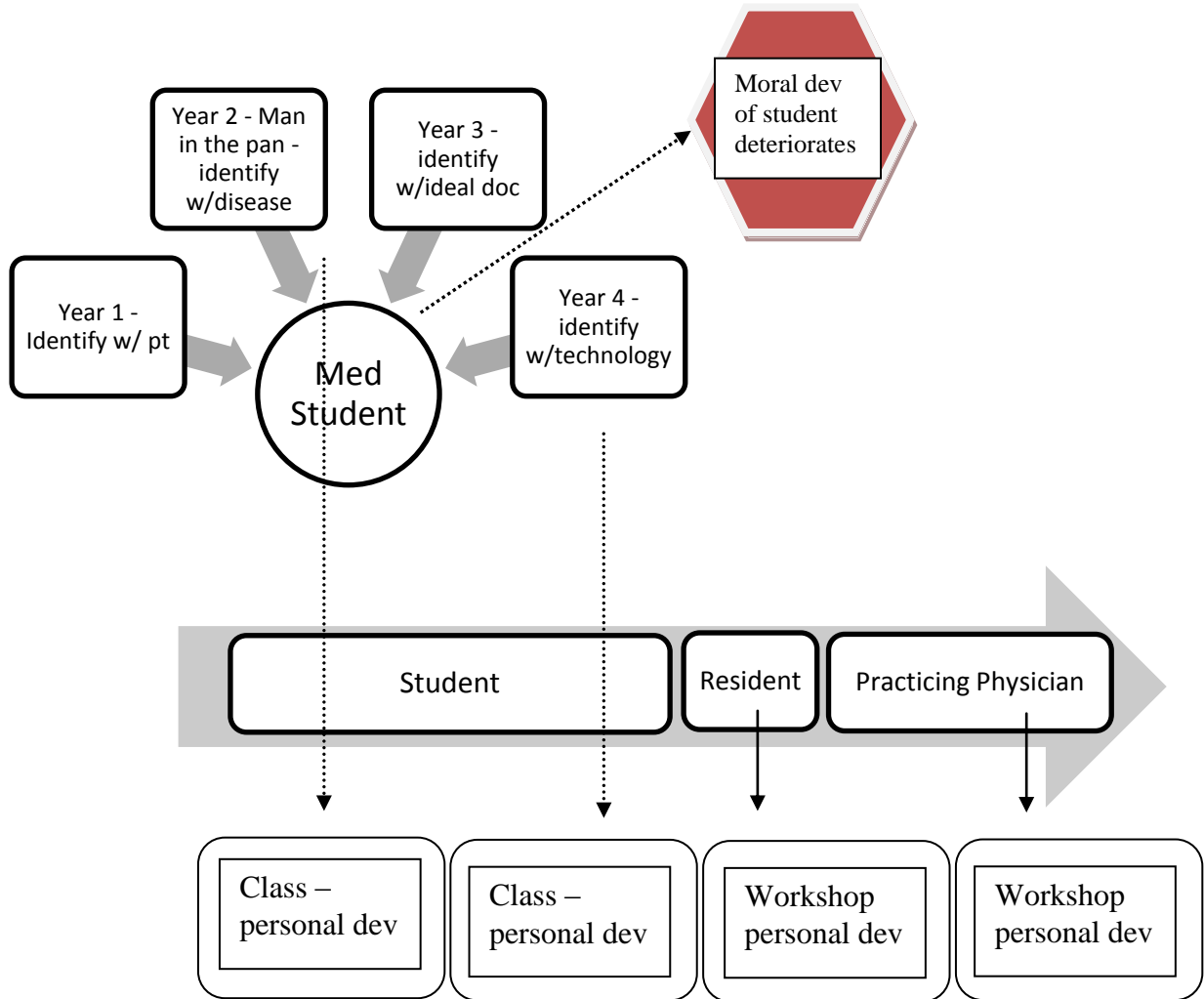


Figure 8. Suggested timeline for personal development classes.

This study contributes to the educational field by capturing and assessing learning in medical students using an innovative technique of combining reflection papers and CAQDAS – computer assisted qualitative data analysis software. This type of assessment

and analysis can provide an in-depth reporting of the students' educational experience, and highlight gaps in the curriculum, as well as opportunities to implement courses to meet the students' as well as the public's needs. Assessments such as reflection can guide curricular change but require alignment with the organizational culture by recognizing its value and where it serves an effective purpose, incorporating reflection through out the institution, and asking for feedback (Epstein & Hundert, 2002). Medical schools committed to teaching competence in communication and incorporating personal development exercises will produce physicians who meet the needs of society and the personal needs of the individuals, both doctors and patients. Re-introducing medical students back to them-selves in the form of personal development experiences is a form of re-introducing them back to their humanity.

The medical school where this class took place has been recognized for implementing the principles of adult education into the curriculum, along with elective classes that seek to enhance the educational experience of the student. This medical school has a focus of improving teaching and learning through a comprehensive program of professional development in medical education as indicated by offering this class within the elective curriculum. Because this study captured the student's perspective of their educational experience, it speaks to the rigors and effects that a medical education has on an individual in spite of being involved in a progressive curriculum. The results from this study can be used to strengthen an already innovative program, or guide the development of a beginning program, to further benefit the individual, the school, and the population it serves.

How medical students could learn. Medical students are a reticent group, not known to share information freely. Findings in this study show that the organizational climate that surrounds them supports this behavior. In order to overcome this for the purpose

of the final project, care was taken to build trust and a non-judgmental environment. Time was very limited with these students, and the goal of taking a reticent group to sharing their personal information with classmates they considered to be competing with, was a challenge. An incremental approach to sharing personal information was adopted for this class in order for students to feel comfortable with disclosure. A model developed by the researcher to encourage disclosure with a reticent group within a short time was implemented. This model, based on the premise that reticent groups could be compared to the “no voice” level of learning from *Women’s Ways of Knowing* (Belenky, Clinchy, Goldberger, & Tarule, 1986), incorporates learning activities appropriate to different learning theories. A progression of activities from these learning theories provides a scaffolding process of supporting the learner to build on prior knowledge from previous activities. This learning process provides opportunities for a transformational learning experience in a short time. For example, the first class activity involved having students only share information on index cards with no identifiers on them. The instructor then shared the results with the class during the next session. Students quickly saw what they had in common with each other. Small groups were formed during the second class. They were given an exercise that questioned and usually pointed out errors in their assumptions, then asked to discuss their opinions and experiences surrounding that issue only in their groups, allowing them to save face before the entire class. During the third class session, students were asked to share and compare information surrounding their assessments, first with their group, then with other groups. This provided an opportunity for them to discuss their similarities and differences. Each class session showed an increase of disclosure in both reflection papers, in group discussions, along with interactions with the instructor.

For the final assignment, the students, as much as they resisted, were able to stand in front of their peers and with conviction discuss their personal strengths, life experiences they had, and why they should be admitted into a residency program of their choice. Students commented they were surprised to learn some of the experiences their peers had from the past, and the goals they had for the future, in spite of being in the same cohort for the past three years. Although the model for disclosure in reticent learners has not been tested, it has been used successfully to develop a high level of disclosure quickly among reticent groups and provides an opportunity for future research (see Figure 9).

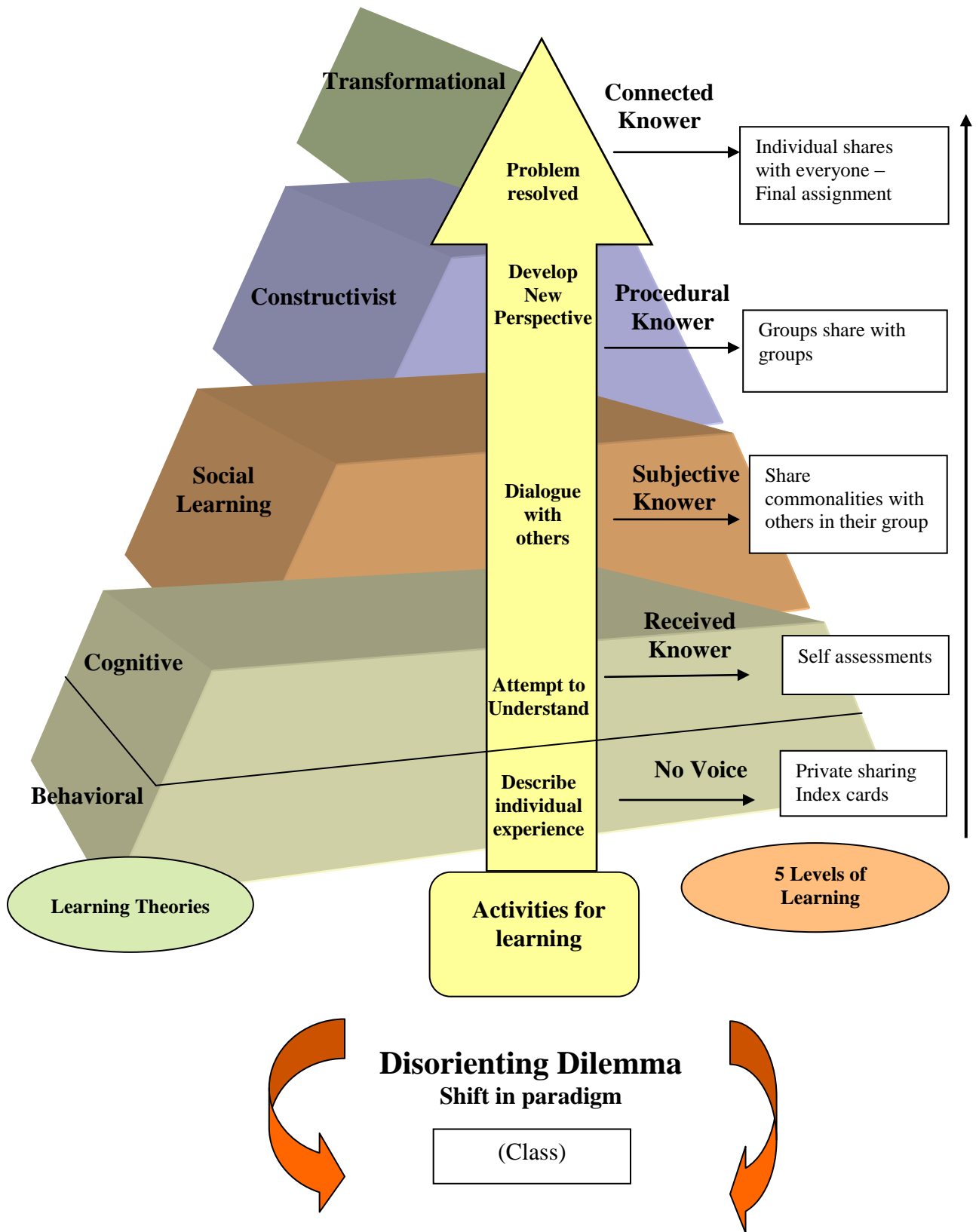


Figure 9. Model for disclosure in reticent learners.

Researcher learning. As the researcher, it would have been impossible to organize and deal with all the information, quotations and codes had it not been for the use of CAQDAS; computer assisted qualitative data analysis software. My persistence in learning the nuances of this software, which is not user friendly, to create meaning from the bits and pieces of information from the reflection papers, verified by the individual interviews from the students, became a gratifying experience for me. As the instructor of the course, it was fulfilling to realize that the students are gaining important skills and realize the value of treating others with respect and consideration. It was also an insightful experience as to the power of the medical culture and how one can “lose” oneself without realizing what the process is, not necessarily for the benefit of the individual student.

Suggestions for Future Research

This study accomplished its goal of exploring the impact of reflection on self-awareness and professional competency skills in medical students. The key to realizing the full potential of the use of reflection would be the adoption of its use within the medical curriculum. Therefore, the question becomes, how does this type of qualitative assessment work itself into a quantitative assessment culture?

In order to strengthen assertions, this study should be conducted again with a quantitative instrument such as the Govern and Marsh Situational Awareness Scale (Govern & Marsch, 2001). Coupling the results of a pre/ post assessment and the results of reflection papers would further validate the results of the use of reflection. Efforts should also be made to conduct this study with a larger sample size, or with an entire cohort of students. An example would be having all students take this course before going through their standardized patient program and explore the results. A follow- up study on additional

students who graduated from their undergraduate into their residency programs and used their practice residency applications is necessary to verify the effectiveness of the class content and exercise. Incorporating a word count to check for disclosure levels within the reflection papers from the start to finish of the class is recommended. This would confirm that at each class interval there was actually more information being shared. Finally, as the researcher, personally I would like to know from the handful of students who expressed that communication skills were not worthwhile skills to learn, what specialties were they going into? Perhaps they know themselves better than anyone, and by choosing the right specialty, they would be doing everyone, including themselves a big favor.

It was difficult to assess as to whether the ten hours allotted for the course was sufficient to learn and apply influence skills and change behavior. Because the class took place between the second and third year, most of the students were unable to put the skills into place, other than using them on each other or with family members. A suggestion would be to position this class during the current time slot as an introductory course and followed up with an advanced class during the fourth year when students are engaged in patient interactions. This would serve as an opportunity for the student to reconnect with their personal values and an intervention against the deterioration of moral development that occurs during the third and fourth year (Branch, 2000). To make the practice of reflection a more acceptable activity, implementing reflective exercises throughout the undergraduate school curriculum, the residency program, and in workshops for practicing physicians is suggested. Future research on the benefits of these activities would be beneficial.

The model for disclosure in reticent learners should be tested. Although the researcher has experienced success using this model, a study surrounding the use of the

activities, especially with groups where little time is allotted for the learning process to take place, could help support implementing its use in other situations.

A course in personal development and self-awareness requires some degree of personal vulnerability. The acculturation of becoming a doctor is successful at having individuals detach and objectify experiences and individuals for the emotional protection of the medical student and of the physician. Sometimes the process goes too far and the perception is that the physician seems unable to connect with their fellow human being. The balance of detachment of 'self' and reconnection to 'self' is necessary and a study surrounding this could be appropriate.

Conclusions

Effective medical education must not focus on only the technological skills and teaching to the test, but also on the human factor and skills that will encourage trust and compliance with patient treatment plans. As shown in this study, the use of reflection can enhance quality communication skills and encourage self-confidence for the medical student and future physician. It is important for medical education programs to help foster classes that encourage and provide opportunities for the learning of these personal development skills. By addressing this issue, medical curriculum will have the opportunity to help students greatly enhance their professional competency skills while addressing the personal development needs of the individual.

And finally, the insightful words of medical student K:

Respondent K: I'm learning that it's the WAY you communicate and present things that count, and how to deal with different cultures and personalities. You can have all the right information but if you're not being listened to, or people don't understand

what you're saying, or think you care, it makes no difference. So, can I be honest here? In medicine, there is no accounting for differences in people, or how they might feel about something. There is no focusing on the individual. We need to learn more about this.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision*(50), 179-211.
- Ang, M. (2002). Advanced Communication Skills: Conflict Management and Persuasion. *Academic Medicine*, 77(11), 1166.
- April, K. A. (1999). Leading through communication, conversation and dialogue. *Leadership & Organization Development Journal*, 20(5), 231-245.
- Bakan, D. (1966). The duality of human experience. *Chicago: Rand McNal.*
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*(84), 191-215.
- Bandura, A. (2001). Social cognitive theory: an agentic perspective. *Annu Rev Psychol*, 52, 1-26. doi: 10.1146/annurev.psych.52.1.152/1/1 [pii]
- Barbel Pee, T. W. H. F. E. S. D. (2000). Practice-based learning: views on the development of a reflective learning tool. *Medical Education*, 34(9), 754-761.
- Barnett, R., & Coate, K. (2005). *Engaging the curriculum in higher education*: Open Univ Pr.
- Beagan, B. L. (2003). Teaching Social and Cultural Awareness to Medical Students:" It's All Very Nice to Talk about It in Theory, But Ultimately It Makes No Difference". *Academic Medicine*, 78(6), 605.
- Belenky, M. F., Clinchy, B. M., Goldberger, N. R., & Tarule, J. M. (1986). *Women's Ways of Knowing: the development of self, voice and mind*. New York: Basic Books.
- Benbassat, J., & Baumal, R. (2005). Enhancing self-awareness in medical students: An overview of teaching approaches. *Academic Medicine*, 80(2), 156-161.

- Berg, B. L. (Ed.). (2004). *Qualitative research methods for the social sciences*. (Fifth ed.). Boston: Pearson.
- Bloomfield, L., Harris, P., & Hughes, C. (2003). What do students want? The types of learning activities preferred by final year medical students. *Medical Education*, 37, 110-118.
- Borrell-Carrió, F., & Epstein, R. M. (2004). Preventing errors in clinical practice: a call for self-awareness. *The Annals of Family Medicine*, 2(4), 310.
- Brailovsky, C., Charlin, B., Beausoleil, S., Cote, S., & VanderVleuten, C. (2001). Measurement of clinical reflective capacity early in training as a predictor of clinical reasoning performance at the end of residency: an experimental study on the script concordance test. *Medical Education*, 2001(35), 430-436.
- Branch, W. T. (1998). Professional and moral development in medical students: the ethics of caring for patients. *Trans American Clinical Clim Association*, (109), 218-230.
- Branch, W. T. (2000). Supporting the moral development of medical students. *Journal of General Internal Medicine*, (15), 503-508.
- Branch, W. T., Hafler, J. P., & Pels, R. J. (1998). Medical students development of empathic understanding of their patients. *Academic Medicine*(73), 361-362.
- Branch, W. T., Kern, D. E., Haidet, P., Weissman, P., Gracey, C. F., Mitchell, G., et al. (2001). Teaching the Human Dimensions of Care in Clinical Settings. *JAMA*, 286(9), 1067-1074.
- Bransford, J. D. (2000). *How people learn: brain, mind, experience, and school*. Washington, D.C.: National Academy Press.

- Brockbank, A., & McGill, I. (2007). *Facilitating reflective learning in higher education*: Open University Press.
- Brookfield, S. D. (1987). *Developing Critical Thinkers*. San Francisco: Jossey-Bass Publishers.
- Brown, J. B., MPP, PhD, Boles, M., PhD, Mullooly, J. P., PhD, & Levinson, W., MD. (1999). Effect of Clinician Communication Skills Training on Patient Satisfaction. *Annals of Internal Medicine*, 822-829.
- Buber, M., & Smith, R. G. (2000). *I and Thou*: Scribner Book Company.
- Buller, M. K., & Buller, D. B. (1987). Physicians' Communication Style and Patient Satisfaction. *Journal of Health and Social Behavior*, 28(4), 375-388.
- Charon, R. (2001). Narrative medicine: a model for empathy, reflection, profession, and trust. *JAMA*, 286(15), 1897.
- Cialdini, R. B. (2001). *Influence: Science and Practice* (Fourth ed.). Boston: Allyn and Bacon.
- Coffey, A., & Atkinson, P. (1996). *Making sense of qualitative data: Complementary research strategies*: Sage Publications, Inc.
- Cohen, J. J. (2008, 2008). *Chairman's Summary of the Conference*. Paper presented at the Revisiting the Medical School Educational Mission at a Time of Expansion, Charleston, SC.
- Contreras, R. (2011). [Deductive-Inductive Coding Model].
- Coulehan, J. L., Platt, F. W., Egener, B., Frankel, R., Lin, C. T., Lown, B., et al. (2001). "Let me see if i have this right...": words that help build empathy. *Ann Intern Med*, 135(3), 221-227. doi: 200108070-00022 [pii]

- Cranton, P. (2000). Individual Differences and Transformative Learning *Learning as Transformation, Critical Perspective on a Theory in Progress* (pp. 181-204). San Francisco: Jossey-Bass.
- Creswell, J. W. (2003). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (2 ed.). Thousand Oaks: Sage.
- Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks: Sage.
- DasGupta, S., & Charon, R. (2004). Personal Illness Narratives: Using reflective writing to teach empathy. *Academic Medicine*, 79(4), 351-356.
- Davies, S. M., Davies, T. C., & Rutledge, C. M. (1995). The Doctor, the Patient: A first year course for personal and professional growth. *Family Medicine*, 27, 444-448.
- Downs, C. W. (1994). Organizational communication conflict instrument. In R. B. Rubin, P. Palmgreen & H. E. Sypher (Eds.), *Communication research measures: a sourcebook*. New York: Guilford Press.
- Elam, C. L. (2000). Use of "emotional intelligence" as one measure of medical school applicants' noncognitive characteristics. *Acad Med*, 75(5), 445-446.
- Ely, J. W., Levinson, W., Elder, N. C., & Mainous, A. G. (1995). Perceived causes of family physicians' errors. *The Journal of Family Practice*.
- Epstein, R. M., Campbell, T. L., Cohen-Cole, S. A., McWhinney, I. R., & Smilkstein, G. (1993). Perspectives on patient-doctor communication. *Journal of Family Practice*(37), 377-378.
- Epstein, R. M., & Hundert, E. M. (2002). Defining and assessing professional competence. *JAMA*, 287(2), 226-235.

- Eraut, M. (1994). *Developing professional knowledge and competence*: Routledge.
- Fowell, S., & Bligh, J. (2001). Assessment of undergraduate medical education in the UK: time to ditch motherhood and apple pie. *Medical Education*(35), 1006-1007.
- Frankel, R. M., Morse, D. S., Suchman, A., & Beckman, H. B. (1991). Can I really improve my listening skills with only 15 minutes to see my patients? *HMO Practice*(5), 114-120.
- Geier, J. G. (1967). A TRAIT APPROACH TO THE STUDY OF LEADERSHIP IN SMALL GROUPS. *Journal of Communication*, 17(4), 316-323. doi: 10.1111/j.1460-2466.1967.tb01189.x
- Goleman, D. (1995). *Emotional intelligence*. New York.
- Goleman, D. (2006). *Social Intelligence*. New York: Bantam Books.
- Goleman, D., & Boyatzis, R. (2008). Social intelligence and the biology of leadership. *Harv Bus Rev*, 86(9), 74-81, 136.
- Govern, J. M., & Marsch, L. A. (2001). Development and Validation of the Situational Self-Awareness Scale* 1. *Consciousness and Cognition*, 10(3), 366-378.
- Grewal, D., & Davidson, H. A. (2008). Emotional Intelligence and Graduate Medical Education. *JAMA*, 300(10), 1200-1202.
- Heisler, M., Bouknight, R. R., Hayward, R. A., Smith, D. M., & Kerr, E. A. (2002). The relative importance of physician communication, participatory decision making, and patient understanding in diabetes self-management. *Journal of General Internal Medicine*, 2002(17), 243-252.

- Henderson, E., Berlin, A., Freeman, G., & Fuller, J. (2002). Twelve tips for promoting significant event analysis to enhance reflection in undergraduate medical students. *Medical Teacher, 24*(2), 121-124.
- Hennen, B. (1997). Demonstrating social accountability in medical education. *Canadian Medical Association Journal, 156*(3), 365.
- The Joint Commission guide to improving staff communication (J. C. Resources, Trans.). (2005). Oak Brook Terrace: Joint Commission on Accreditation of Healthcare Organizations.
- Karpman, S. B. (1972). Developments in transactional analysis. *Curr Psychiatr Ther, 12*, 132-150.
- Kegan, R. (1982). *The evolving self: Problem and process in human development*: Harvard Univ Pr.
- Kern, D. E., Wright, S. M., Carrese, J. A., M Lipkin, J., Simmons, J. M., Novack, D. J., et al. (2001). Personal growth in medical faculty: a qualitative study. *The Western Journal of Medicine, (175.2)*, 92.
- Kind, T., Everett, V. R., & Ottolini, M. (2009). Learning to connect: students' reflections on doctor-patient interactions. *Patient Educ Couns, 75*(2), 149-154. doi: S0738-3991(08)00534-X [pii]10.1016/j.pec.2008.09.011
- Krathwohl, D. (2002). A Revision of Bloom s Taxonomy: An Overview. *Theory into practice, 41*(4), 212-218.
- Lamude, K. G., & Lichtenstein, A. (1985). The effects of motivational needs and rights situational dimension on compliance gaining strategies. *Communication Research Reports, 2*, 164-171.

- Leedy, P. D., & Ormrod, J. E. (2005). *Practical research : planning and design* (8th ed.). Upper Saddle River, N.J.: Prentice Hall.
- Lewins, A., & Silver, C. (2007). *Using software in qualitative research: A step-by-step guide*: Sage Publications Ltd.
- Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*: Sage Publications, Inc.
- Lingard, L., & Haber, R. J. (1999). Teaching and Learning Communication in Medicine: A Rhetorical Approach. *Academic Medicine*, 74(5), 507-510.
- Maguire, P., & Pitceathly, C. (2002). Key communication skills and how to acquire them. *BMJ*, 325, 697-700.
- Marcus, E. (1999). Empathy, humanism, and the professionalization process of medical education. *Academic Medicine*, 74(11), 1211.
- Marsick, V. J. (1990). Action learning and reflection in the workplace. In J. D. Mezirow (Ed.), *Fostering Critical Reflection in Adulthood*. San Francisco, CA: Jossey-Bass.
- Marwell, G., & Schmitt, D. (1967). Dimensions of compliance-gaining behavior: An empirical analysis. *Sociometry*, 30(4), 350-364.
- Mayer, J. D., Salovey, P., Caruso, D. R., & Sitarenios, G. (2001). Emotional intelligence as a standard intelligence. *Emotion*, 1(3), 232-242.
- Meier, D. E., Back, A. L., & Morrison, R. S. (2001). The Inner Life of Physicians and Care of the Seriously Ill. *JAMA*, 286(23), 3007-3014.
- Merriam, S. B., & Caffarella, R. S. (1999). *Learning in Adulthood: a comprehensive guide*. San Francisco: Josey-Bass.
- Mezirow, & Associates. (2000). *Learning as transformation: critical perspectives on a theory in progress*. San Francisco: Josey-Bass.

- Misch, D. A. (2002). Androgogy and Medical Education: are medical students internally motivated to learn? *Advances in Health Sciences Foundation*, (7), 153-160.
- Montgomery, K. (2006). *How Doctors Think: Clinical judgment and practice of medicine*. New York: Oxford University Press.
- Moustakas, C. (1994). *Phenomenological research methods*: Sage Publications, Inc.
- Niemi, P. (2003). Medical students' professional identity: self-reflection during the preclinical years. *Medical Education*, 31(6), 408-415.
- Novack, D., Suchman, A., Clark, W., Epstein, R., Najberg, E., & Kaplan, C. (1997). Calibrating the physician: personal awareness and effective patient care. *JAMA*, 278(6), 502.
- O'Daniel, M. a. R., A H. (2008). Professional Communication and Team Collaboration *Patient Safety and Quality: An Evidence Based Handbook for Nurses*. Rockville: US National Library of Medicine.
- O'Keefe, D. J. (2002). *Persuasion: Theory & research* (2 ed.). Thousand Oaks: Sage Publications.
- Patton, M. (2002). *Qualitative research and evaluation methods*: Sage Publications, Inc.
- Pee, B., Woodman, T., Fry, H., & Davenport, E. (2000). Practice-based learning: views on the development of a reflective learning tool. *Medical Education*, 34, 754-761.
- Pietroni, R. (2001). *The toolbox for portfolio development: a practical guide for the primary healthcare team*: Radcliffe Publishing.
- Plack, M., M, & Greenberg, L. (2005). The Reflective Practioner: reaching for excellence in practice. *Pediatrics*, 116(6), 1546-1552.

- Poirier, S. (2002). Voice in the medical narrative. *The role of narrative in medical ethics*.
New York/London: Routledge, 48-58.
- Porras, J. I., & Silvers, R. C. (1991). Organizational Development and Transformation.
Annual Review of Psychology(42), 51-78.
- Prislin, M. D., Giglio, M., Lewis, E. M., Ahearn, S., & Radecki, S. (2000). Assessing the
acquisition of core clinical skills through the use of serial standardized patient
assessments. *Academic Medicine*(75), 480-483.
- Rabow, M., & McPhee, S. (2001). Doctoring to heal: fostering well-being among physicians
through personal reflection. *Western Journal of Medicine*, 174(1), 66.
- Relman, A. (1998). Education to defend professional values in the new corporate age.
Academic Medicine, 73(12), 1229.
- Russ-Eft, D., & Preskill, H. (2001). *Evaluation in organizations: A systematic approach to
enhancing learning, performance, and change*: Basic Books.
- Saarni, C. (2000). Emotional competence: A developmental perspective.
- Safran, D., Montgomery, J., Chang, H., Murphy, J., & Rogers, W. (2001). Switching doctors:
predictors of voluntary disenrollment from a primary physician's practice. *J Fam
Pract*, 50(2), 130-136.
- Salovey, P., & Sluyter, D. (1997). *Emotional development and emotional intelligence:
Educational implications*: Basic Books.
- Schön, D. (1987). *Educating the reflective practitioner*: Jossey-Bass San Francisco.
- Shapiro, J., Rucker, L., & Robitshek, D. (2006). Teaching the art of doctoring: an innovative
medical student elective. *Medical Teacher*, 28(1), 30-35.
- Slotnick, H. B. (2000). Physicians' Learning Strategies. *Chest*, 118, 18-23.

- Spencer, J., & Jordan, R. K. (1999). Learner centered approaches in medical education. *British Medical Journal*, 318(7193), 1280.
- Spiro, H., McCrea Curnen, M., Peschel, E., St James, D., & Wolf, S. (1996). *Empathy and the Practice of Medicine*: Yale University Press.
- Stanton, F., & Grant, J. (2002). Approaches to experiential learning, course delivery and validation in medicine. A background document. *Medical Education*, 33(4), 282-297.
- Starr, P. (1992). *The social transformation of American medicine*. New York: Basic Books.
- Stevens, D. P. (2007). Finding safety in medical education. *Quality and Safety in Health Care*, 2002(11), 109-110.
- Suchman, A. L., Botelho, R. J., & Hinton-Walker, P. (1998). *Partnerships in Healthcare: Transforming relational process*. New York: University of Rochester Press.
- Swick, H., Szenas, P., Danoff, D., & Whitcomb, M. (1999). Teaching professionalism in undergraduate medical education. *JAMA*, 282(9), 830.
- Teutsch, C. (2003). Patient-doctor communication. *Medical Clinics of North America*, 87(5), 1115-1145.
- Wagner, P. J., Moseley, G. C., Grant, M. M., Gore, J. R., & Owens, C. (2002). Physicians' emotional intelligence and patient satisfaction. *Family Medicine*, 34(10), 750-754.
- Wilson, S. R., & Waltman, M. (1988). Assessing the Putnam-Wilson organizational communication conflict instrument. *Management Communication Quarterly*, 1, 367-388.
- Yedidia, M. J., Gillespie, C. C., Kachur, E., Schwartz, M. D., Ockene, J., Chepaitis, A. E., et al. (2003). Effect of Communications Training on Medical Student Performance. *JAMA*, 290(9), 1157-1165.