TRANSFORMATIONAL LEARNING EXPERIENCES
OF PERIOPERATIVE REGISTERED NURSES WHO HAVE COMPLETED A
PERIOPERATIVE TRAINING PROGRAM

by

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Abstract

The purpose of this case study was to determine which activities factor into transformational learning that may occur as a result of completing a perioperative preparation program for registered nurses. Through the process of describing the lived experiences of the participants who have completed a perioperative nurse training program, it also assisted in informing pedagogical practice by helping to establish the extent of transformational learning that occurs. The role of a perioperative nurse is one that is demanding, knowledge intensive, and highly collaborative. Perioperative nurse educators need to understand the process of transformation in order to assist new perioperative nurses in successfully completing a perioperative nurse-training program. The Learning Activities Survey, a follow-up survey, and individual interviews were used to accomplish a mixed method sequential study design. The research established that half of the participants had experienced transformational learning while half did not.
Dedication

This dissertation is dedicated to my wife, Sophia M. Schild, my son Mathew M. Schild, and my parents, George H. and Joan B. Schild.
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The completion of this doctoral degree represents the achievement of a goal I set for myself 10 years ago. The journey of attaining a doctorate has been an arduous and rewarding one. For the help in the successful completion of this journey, I must thank my wife, Sophia, for her patience, unflinching support, sacrifice, encouragement, and love. I would not have been able to complete this journey without her. I must also thank my parents, George and Joan Schild, for their support and encouragement. I wish to thank my committee chair, Dr. Janet Lessner, for her help and encouragement throughout this process. She provided the guidance and direction needed to successfully complete this dissertation.

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CHAPTER 1. INTRODUCTION

Background of the Study

Becoming a perioperative registered nurse is a process of introduction and then immersion into the practice. During immersion, a registered nurse chooses to engage in the process of obtaining the additional training and experience needed to practice that specialty competently. This process of change involves vigorous study, reflection, and self-examination. In successfully completing the process, there may be a change in how nurses view themselves. As the change occurs, the nurse internalizes a professional self-image in order to fully perform in the professional role (Rothrock, 1989). In a study of nursing professionals, Jantzen (2008) found that in order to incorporate new learning of basic and advanced professional skills, learning has to not only be experiential, but life changing as well. The life changing experiences need to reflect new feelings of “a competent, compassionate, caring, and empowered professional” (Jantzen, 2008, p. 25).

These experiences can be described as transformational changes.

Traditionally, the perioperative field is closed to outsiders due to the nature of surgery and the surgical environment. Because limited opportunities exist in undergraduate education, which exposes student nurses to the perioperative specialty (Sigsby, 2008), there is a lack of knowledge regarding the field. This lack of exposure and knowledge of the specialty during basic nursing education may have a profound effect on a nurse’s ability to make the decision to transition into this career (Allen & Beyea, 2002).
Statement of the Problem

Retention of perioperative nurses has become one of the most critical issues facing healthcare facilities today. Allen and Beyea (2002) stated that when perioperative leaders of 1,500 voluntary hospitals of America were surveyed, 57% reported nursing vacancies. They also stated that for every nine full time positions, there were five additional vacancies, which may take up to five months to fill.

In the perioperative environment, the retention of new nurses has also become critical for many institutions. The retention of perioperative nurse may be improved by requiring them complete comprehensive preparation programs. The programs may successfully integrate nurses into the perioperative environment. Integration into the environment through a program requires using methods that assist nurses in becoming skilled perioperative clinicians.

Nurses wishing to transition into the demanding, knowledge-intensive, highly collaborative role of a perioperative registered nurse may find this process to be extremely difficult. There is a gap in knowledge regarding the extent to which changes in self-perception occur as a result of completing a perioperative nurses’ training program. Perioperative nurse educators should understand this process of transition into the perioperative registered nurse role in order to assist them in successfully completing a perioperative nurse-training program.

The preoperative preparation program is designed to help new perioperative nurses integrate into a competent perioperative role. Successful completion of the training involves professional socialization and education, resulting in transformational changes in the learner.
Transformative learning refers to the process by which we transform our taken for granted frames of reference such as meaning perspectives, habits of mind, mind-sets to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action. (Mezirow, 2000, p. 9)

The learners’ self-perceptions change during the program and culminate when nurses complete the perioperative program. When immersed in the program, it is important that nurses entering the specialization of perioperative nursing adopt the values and identify with the role that they are to play, as stated in the Association of periOperative Registered Nurses Perioperative Standards and Recommended Practices as well as the healthcare organization at which they are employed. These values may conflict, so the nurse must decide which values will guide their practice.

As they immerse themselves in their role, the potential perioperative nurses must be imbued with the attitudes, values, and unspoken messages of the organization (Mooney, 2007). Values of the professional perioperative nurse are founded on caring and ethics (Lindwall & von Post, 2008). Perioperative nursing encompasses a perioperative dialogue, as well as a caring process and surgical treatment techniques, which come from habits developed as a result of being in the perioperative area (Lindwall & von Post, 2008). The process of becoming a perioperative nurse may change one’s perspective or frame of reference. This process has implications for successful program completion, and integration into the clinical arena may mean that the nursing shortage in the perioperative suite may be lessened as a result of successful integration. Limited research has been undertaken on the retention of perioperative registered nurses. Howery
(1990) reported that the actual number of nurses leaving the profession was unknown. Twenty years later, there is still a lack of knowledge regarding perioperative nurse retention rates. However, what was known is that graduate nurses’ turnover rates are generally between 55 to 61% (Casey, Fink, & Krugman, 2004). Furthermore, national statistics regarding the retention of perioperative nurses still do not exist. What has been published to date is information regarding an individual Illinois health care facility, which stated that there is a 44% retention rate of perioperative nurses (Persaud, 2008).

**Purpose of the Study**

The purpose of this case study was to determine which learning and support activities factor into transformational learning that may occur as a result of completing a perioperative preparation program for registered nurses. It will also help to inform pedagogical practice by helping determine the extent to which transformational learning occurs as a result of completing a perioperative preparation program for registered nurses through the process of describing their lived experiences.

**Research Question**

The research questions in this study were used to probe the phenomenon of the lived experiences of the registered nurse after completing an existing perioperative training program. The research questions were as follows:

1. Has transformational learning occurred during the process of completing a perioperative nurse’s preparation program?

2. What has the new perioperative registered nurse experienced in the process of becoming a professional perioperative registered nurse?
3. What experiences does the new perioperative registered nurse feel contributed to the success of their transitioning into a professional perioperative registered nurse?

**Definition of Terms**

The following terms are defined for the purpose of this study:

*Adult learners.* In this study, adult learners are nurses that have completed basic nursing training and have chosen to take an advanced training program to enter the profession of perioperative nursing.

*Perioperative nursing.* Perioperative nursing is defined as advanced practice of professional nursing by a professional registered nurse. This practice is focused on the delivery of care to patients in the preoperative (before surgery), intraoperative (during surgery, “operating room nurse”), or postoperative (after surgery, “post anesthesia care nurse” or “recovery room nurse”) phases of surgery. For the purposes of this study, the term is used to identify the position of “operating room nurse”.

*Transformational learning.* Transformational learning refers to the process by which individuals examine their frames of reference. The frames of reference include meaning perspectives, habits of mind, and mind-sets. This makes these frames of reference more inclusive, discriminating, open, emotionally capable of change, and reflective so that nurses may generate beliefs and opinions that will prove more true or justified to guide action (Mezirow, 2003).

**Significance of the Study**

The knowledge gained in this study assisted in informing pedagogic practice by enhancing the understanding of which learning and support activities support transformational learning in a perioperative training program. In describing their
experiences, the perioperative nursing program graduates helped perioperative educators to understand the personal developmental, cognitive, social, and professional changes underwent by the learners.

**Assumptions and Limitations**

This section on assumptions and limitations describes several assumptions made during the completion of this research. Also described are several limitations that were presented during the completion of this research this study.

**Assumptions**

Several assumptions were made during the course of this study. The first assumption was that with exposure to this research, perioperative nurse educators would become more informed of pedagogical practice, which encourages transformational learning, and understand the personal developmental, cognitive, social, and professional changes undergone by the learners.

The second assumption was that the participants of this study would answer the survey and follow-up questions honestly and truthfully. The third assumption was that the survey instrument provided an accurate measurement of personal, perceptual changes in the learners. Finally, it was assumed that the data collection method, which involved a survey, would effectively poll study participants.

**Limitations**

This research was a case study utilizing a small number of participants. The study was conducted with a purposive group of participants from two healthcare facilities in the Chicago metropolitan area. Finally, the study surveyed perioperative nurses who
completed a perioperative nurse-training program and may not necessarily be applicable
to other nurse training programs.

**Nature of the Study**

This phenomenological case study used a mixed method design, employing a
sequential explanatory strategy. In using this method, the researcher first collected data
using the quantitative method and then supported the data with qualitative methods
(Creswell, 2009). The goal of the quantitative phase of the study was to identify
perioperative students who may have experienced transformational changes, and the goal
of the qualitative phase was to help explain the transformative changes by having the
perioperative students describe their experiences. This approach helped to provide an
understanding of the problem through the analysis of the quantitative data, while using
the participants’ views to explore the statistical results in depth (Ivankova, Creswell, &
Stick, 2006).

**Organization of the Study**

Chapter 2 provides a comprehensive review of the literature related to adult
learning theory, transformational learning theory, phenomenological research design, and
perioperative environments. In addition, nurses integrating into the specialty of
perioperative nursing are discussed. Chapter 3 discusses procedures used to collect the
data. The information collected was acquired from the interviews as well as a survey.
Chapter 4 discusses the results of the information obtained. Analyses of the data, results,
and a summary of findings are discussed. The results are interpreted and presented.
Chapter 5 discusses a summary of the findings. A conclusion and a list of
recommendations for practice and further study are presented.
CHAPTER 2. LITERATURE REVIEW

Introduction

The problem posed in this case study was how the experience of a perioperative training program changes the participants’ perception of themselves as registered nurses into that of perioperative registered nurses. Retention of newly-trained perioperative nurses is essential and has become critical for many health care facilities. Each perioperative vacancy may take many months to fill.

The purpose of this case study was to discover the lived experiences of nurses that have transitioned into the role of newly-qualified perioperative registered nurses. The review of literature and research included key concepts of transformational learning, adult learning, the perioperative environment, instructional methods that can be employed to foster transformational learning, and phenomenology.

There is a lack of literature that examines transformational learning and the lived experiences of new perioperative registered nurses as well as nursing students in general. It is important that these nurses be able to transition into the role of the perioperative nurse. Transformational learning helps to explain the process of professional perioperative nurse development. An investigation into the lived experiences of newly-trained perioperative nurses helps perioperative nurse educators better understand the process of transformational learning as a developmental theory.

Review of the Literature

For most people the workplace is the site of tertiary socialization, after the family and the education system. It is here that workers learn to modify their performance and to understand their roles, including their gender.
roles, in the structures and interactions of the organization (Evans & Rainbird, 2002, p. 7).

Workplace learning is a social activity. Through this activity, the individual learns from others in the community, particularly that of perioperative nursing in this study. Communities of practice exist where members “share expertise, competence, learning, activities, discussions, information, tools, stories, experiences, and a knowledgebase” (Seaman, 2008, p. 270). Communities of practice are both social and personal processes (2008). In order to join the community of practice, new members must obtain specialized knowledge. This specialized knowledge can only be obtained through participation in the cultural or contextual environment (Silvia, Davide, & Francesca, 1998).

Community, relationships, and cultural norms shape the daily activities of learning and work (Fenwick, 2008). Exposure to social norms that differ from one’s own can be a disorienting event for the learner. These disorienting events can initiate critical reflection, leading to a questioning of assumptions and perspectives. This questioning can, in turn, lead to transformational learning.

**Transformational Learning**

Mezirow (1990) introduced the concept of transformational learning in 1978 after interviewing a group of women that had returned to college after an extended break (Merriam, Caffarella, & Baumgartner, 2007). Initially, the learning was described as a personal perspective transformation. The transformation involved 10 stages:

1. Experiencing a disorienting dilemma.
2. Undergoing self-examination.
3. Conducting a critical assessment of internalized assumptions and feeling a sense of alienation from traditional social expectations.

4. Relating discontent to the similar experiences of others, recognizing the problem is shared.

5. Exploring options for new ways of acting.


7. Planning a course of action.

8. Acquiring the knowledge and skills for implementing a new course of action.

9. Trying out new roles and assessing them.

10. Reintegrating into society with the new perspectives (Cranton, 2006b, p. 20).

Mezirow (1990) developed this theory to “construct what he called the critical theory of adult learning and education” (Cranton, 2006b, p. 21). An example of this theory can be found in Mezirow’s (1990) definition of communicative learning:

Not all learning involves learning to do. Of even greater significance to most adult learning is understanding the meaning of what others communicate concerning values, ideals, feelings, moral decisions, and such concepts as freedom, justice, love, labor, autonomy, commitment, and democracy. (Mezirow, 1990, p. 8)

This concept provides reason for critical reflection, which is one of the core components of transformational learning theory. These ideas are necessary in order for rational discourse to occur. The discourse is very complex, and in order to truly understand an idea, the context of the idea must first be understood (Habermas, 1981).
Originally, Mezirow (1990) felt that transformative learning occurred following a disorienting event. Over time, others have proposed variations of this thought. Many have come to accept transformational learning as being developmental in nature, occurring over time, and being influenced by the learners’ perceptions and experiences (Merriam, 2004). Theorists such as Dirkx (2000) have suggested that transformational learning can occur over time. In their research on HIV patients, Courtenay, Merriam, and Reeves (1998) documented that transformational learning can take as long as 5-years to occur.

Taylor (2000) found that transformative learning may occur over an expanse of time, with the possibility of learners regressing and lurching forward during the process. Taylor (2000) also stated that studies show that there is a disorienting event, but that the event can occur over time, slowly accumulating like a balloon that is being filled with air. Dirkx (1997) suggested that transformational learning occurs through soul or “transcendence of the individualistic and constraining vision provided by the ego” (p. 83). Dirkx (1997) also suggested that there is a deep emotional connection between the inner self and the world around an individual. Dirkx (1997) believed that there are affective, emotional, and spiritual aspects to transformational learning.

Cranton (2006b) stated that Dirkx (1997) also suggested learning could be from a process of ordinary everyday occurrences. Transformative learning does not necessarily require extraordinary or deep thought and analysis (Dirkx, 2001). Eisen (2001) found that, contrary to the belief that transformational learning is epochal, it can result from incremental changes when using new knowledge and skills. Mezirow (2000) stated that changes in habits of mind can be epochal, occurring suddenly, or incremental in nature, with these habits of mind transforming progressively over time.
Transformational learning theory is based on the constructivist philosophy (Cranton, 2006b). The premise of constructivist philosophy is that knowledge and meaning come from personal experience. Learners build new knowledge based on what they have previously learned. Learners are also actively involved in the learning process. This is the core of adult learning theory in which adult learners are self-motivated, goal-directed, and purposeful (Cross, 1981). The process of learning is a dynamic one in which learners will change their understanding based on new experiences. Learners do not absorb information as they encounter it; rather, they analyze it, question it, and decide how it fits into their already lived experiences.

Learning does not occur in isolation; rather, it is collaborative in that learners engage in learning with others. During the learning process, knowledge is acquired through interaction with others (Windschitl, 1999). In fact, when we interact all future experience is influenced by present experiences (Dewey, 1938). Dewey (1938) stated that all experiences are a “moving force” in the development of habits. Merriam (2007) expressed that models of adult learning begin with the learner’s experience and, as such, are constructivist in nature. Learners’ knowledge is formed by their own perspective and values, combining social and cultural contexts (Gordon, 2009). Since the beginning of adult education as a field of inquiry, experience has always been thought to be a valuable element in differentiating adults from youth. Lindeman (1961) stated, “experience is the adult learner’s living textbook” (p. 7).

There have been varied criticisms of Mezirow’s (2000) theory. Collard and Law (1989) criticized Mezirow’s (2000) selective use of Habermas’s theory of communicative action as the basis for Mezirow’s theory, which under emphasized social collective
action. Cranton (2006b) stated that Mezirow (2000) clearly believed that individual transformation precedes social transformation. Mezirow (2000) did believe that educators could still educate for social change, but that they could do it by helping the individual learners change, and thus learn to make a difference (Cranton, 2006b).

According to Mezirow (2000), transformational learning is a process by which frames of reference, which are currently held beliefs and assumptions based on life experiences (habits of mind), are changed. Mezirow (2000) explained that throughout life, habits of mind have formed as a result of everything that the learner has experienced such as culture, language, race, schooling, religion, or gender. Everything that the learner is results from the experiences and learning that came before. The process occurs when something upsets the presently held assumptions and beliefs. This event could be a life event such as a death in the family, a new job, or it could be as simple as seeing something familiar in a new light. The learner then changes as a result of critical reflection based on the new information. The changes are new assumptions and beliefs. Contributing to the change is all of the shared experiences that the learner has acquired from culture, values, and beliefs of the social environment (Mezirow, 2000).

Transformational learning requires rational discourse and critical reflection to make the changes needed to implement the new understanding. Cranton (2006a) stated that transformative learning occurs when individuals act on a revised point of view after critically examining their habitual expectations.

Brookfield (1986) stated “Critical reflection is marked by an awareness of the contextuality and the contingency of knowledge and by an appreciation of the culturally constructed nature of value frameworks, social codes, and belief systems” (p. 42). Critical
reflection opens the learner up to self-examination and different perspectives. The learner can initiate this change after exposure to new knowledge, insights, and values, thus leading to the questioning of existing schema, according to Cranton (2006a). Critical reflection can take the learner out of the schema or life world that they have experienced and now accept and lead to an acceptance of new ways of thinking or interacting with the world. Critical reflection is an active process in which previous thoughts, beliefs, and experiences are examined. The learner does not have to accept the new information, but reflection can cement or change the learner’s current understandings and perceptions.

Rationality has a key role in critical reflection. Habermas (1981) expressed that there is a close relationship between rationality and knowledge. Furthermore, Habermas (1981) felt that rationality was the ability to reason, while knowledge was conceptual and personal. Humans act with the knowledge and experiences that they have in their schema of the world.

When learners perform goal-directed activities, problem solving can be based on learners’ rationality. Thought processes based on their personal life experiences guide goal-directed activities. Habermas (1981) felt that rationality was understood to be behavior that was expressed by speaking or acting for good reason. “Facts” are what the learner produces based on their own schema. Learning is then based on an analysis of new understandings when presented by phenomena in a different context. This new understanding is weighed against old ideas and understandings, leading to an assessment of both sides in rational discourse. During the discourse, discussion of ideas, thoughts, feelings, knowledge, values, and truths can be discovered and beliefs substantiated (Mezirow, 1991).
Rational discourse can lead to critical reflection in the learner. In order for substantive discourse to occur, the following conditions must be met:

1. Have accurate and complete information.
2. Be free from coercion and distorting self–deception.
3. Be able to weigh evidence and assess arguments objectively.
4. Be open to alternatives.
5. Be able to become critically reflective upon presuppositions.
6. Have equal opportunity to participate (including a chance to challenge, question, refute, and reflect and to have others do the same).
7. Be able to accept an informed, objective, and rational consensus as a legitimate test of validity (Mezirow, 1991, p. 13).

Finally, rational discourse can lead to true understandings or confusion for learners. At the discourse end, learners make a choice as to which alternatives they will accept during learning. In confusion, progress cannot be made towards transformational learning.

Mezirow (1990) stated that in order for transformational learning to occur, it must be the result of a disorienting event. The event can occur as a result of any outside stimulus that initiates critical reflection in which learners question the way that they react to the world around them. In reflection, learners realize that the previous beliefs or values were invalid. Learners then acquire an alternative method for understanding that better fits the situation. Mezirow (2000) called these existing methods of interpretation the world habits of the mind. Cranton (2006b) suggested that such habits of mind include:

1. Epistemic, or how we acquire knowledge.
2. Sociolinguistic, or language use in terms of societal norms and culture.
3. Psychological, or one’s self-concept and how individuals look at themselves.
4. Moral-ethical, or conscience and morality.
5. Philosophical, or our spiritual beliefs and worldview.
6. Aesthetic, or our beliefs about beauty.

Each of these habits exists separately but is interdependent. Being interdependent, these habits reflect how learners see themselves and the world around them. These habits also influence how learners interact and make judgments. Rational discourse and reflection can encourage learners to question any or all of these habits of mind.

**Epistemic Habits**

According to Cranton (2006b), there are epistemic habits of the mind that relate to how learners acquire and use knowledge. These habits are sociolinguistic, psychological, moral-ethical, philosophical, and aesthetic. Habits of mind are based on the acquisition of knowledge and experience, which learners examine in the process of transformational learning.

**Sociolinguistic**

Participants in communication interpret new understandings of their world based on the knowledge that they have acquired through their culture (Habermas, 1981). In nursing, there are commonalities between all specialties and practices that are shared, such as the belief that each patient deserves competent and individualized care. The perioperative area, however, has a language and culture that is separate from other specialties in nursing. It is this stock of knowledge that each new perioperative RN has to learn. This knowledge consists of an entirely new language, expectations, and practice in order to function with skill and competence (Rothrock, 2007). Sigurosson (2001) stated
that perioperative nursing has its own view of what perioperative nursing is. It is one of comprehensive management in the preoperative, intraoperative, and postoperative periods of patient care.

In terms of language, the new perioperative nurse must learn the names of the instruments that are used in the process of surgical intervention. Each perioperative subspecialty, such as orthopedics, neurosurgery, gynecology, and otolaryngology, has its own special instrumentation. In addition, for each subspecialty, the new perioperative nurse must be educated regarding specific medications, patient positioning, patient risk factors, surgical anatomy, physiologic alteration and its consequences, potential for patient injury and prevention, and the psychosocial consequences for both the patient and the patient’s family (Rothrock, 2007). By learning the language and culture of the perioperative area, the new perioperative nurse will be able to deliver competent and safe care by effectively communicating with all members of the perioperative care team.

**Self-Concept**

There are very few studies on the self-concept of the perioperative nurse in relation to role expectations. This is surprising in that there are more than 42,000 registered nurses who are members of the Association of Perioperative Nursing (AORN, 2010). One such study is that of Rothrock (1989) who discussed the role of the nurse and her/his self-image when addressing a nurse’s professional role. The researcher suggested that in order to function effectively in this new environment, nurses must internalize the professional role into their own self-image during the socialization process in the operating room. As a new graduate, the nurse interacts with fellow coworkers and other members of the team in the operating room. During this interaction, a new role and new
self-concept are formed. It is in this new role and environment that nurses must have a broad base of knowledge, the ability to be intuitive, flexible, and instantly be able to recall past experiences and put them into practice (Rothrock, 2007).

Arthur (1992) addressed the professional nurse’s search for self-concept in the attitudes he/she has during the role transition from student to professional. The author argued that professional self-concept is linked to a standard self-concept, but is somewhat different. Self-concept is said to affect the nurse’s adjustment to the professional role. The professional role becomes part of the professional identity, which in turn is part of the general self-concept.

Ohlen (1998) cited characteristics of “self-knowledge curiosity, generosity, tolerance of stress, professional knowledge, trust in one’s own capacity and feelings” (p. 722) as attributes of a person with a developed professional nursing identity. It is through growth and maturity that a nurse formulates a professional identity based on positive self-concepts and image. The positive image provides the nurse with the strength and endurance to practice in today’s challenging world of professional nursing, a world wrought by many changes in the healthcare environment.

The changes and challenges of the healthcare environment may be the reason for nurses looking at a possible transition to a perioperative environment. During that transition, the nurse discovers the possible self that was sought during a search for an alternate career in nursing, the alternate career being in the perioperative environment where a new self-concept is developed which answers the psychological need to locate the possible self. Each perioperative nurse has a self-concept of who he or she is and how he or she fits into the perioperative profession. Through socialization with other members
of the perioperative team, the new perioperative nurse develops a view of a possible self. Identity is shaped and channeled in part by the kind of work that individuals do (Hoare, 2006). As the new perioperative nurse develops, identity strengthens and a future as a professional perioperative nurse can be envisioned.

**Moral-Ethical**

The American Nurses Association (ANA) published a Code of Ethics, which is to be followed by every registered nurse. In addition, the Association of Perioperative Registered Nurses (AORN) published Perioperative Standards and Recommended Practices (AORN, 2011), which is updated yearly and provides ethical guidance. Each new perioperative nurse must learn these standards and recommended practices for the purpose of guiding their own practice.

Perioperative nurses develop a moral-ethical compass and a sense of professional ethics during both their training as a nurse as well as their training as a perioperative nurse. These are respect for autonomy, beneficence, non-malfeasance, veracity, justice, confidentiality, and fidelity (Burkhardt & Nathaniel, 2008). Each nurse must respect patient autonomy and the right of the patient to choose for him or herself, act in ways that always benefit the patient, act in a manner that will cause no harm, and always be honest with the patient and other members of the team. Each nurse must respect the confidentiality of patients and the right of each patient to expect fair and equitable treatment. Finally, each patient has the right to expect that each nurse will live up to the expectations of their profession.
Philosophical

Nursing has a philosophy of practice that focuses on societal health needs (Burkhardt & Nathaniel, 2008). Those in the field of nursing are required to use knowledge-based practice to contribute to the well-being of society (McCurry, Revell, & Roy, 2010). Each new person who enters the practice of perioperative nursing brings with them spiritual beliefs, experiences, and values that contribute to the discipline. New perioperative nurses must learn to use the “knowledge, judgment and skills based on the principles of physical, biological, physiological, behavioral, social and nursing sciences” that they bring with them to develop new perioperative knowledge and skills (AORN, 2011). It is a moral philosophy that encourages the new perioperative nurse to question existing knowledge and practices using evidence provided by research. The philosophy encourages the practice of continuous learning and the improvement of skills.

Aesthetic

Community and culture determine the aesthetic habits of the mind (Cranton, 2006b). They can include all attributes of what is thought to have beauty or a pleasing design (2006b, p. 27). The novice nurse may not realize the importance of aesthetics to the practice of perioperative nursing. Cooke, Chaboyer, Schluter, and Hiratos (2005) were able to show how music that is provided to patients waiting pre-operatively for surgery significantly decreases anxiety compared to those patients that did not have music available to them. Nilsson, Rawal, and Unosson (2003) found that there was a significant reduction of pain following surgery in patients that had been exposed to music both intra-operatively and post-operatively.
Additionally, the design of the preoperative, intra-operative, and post-operative areas plays an important role in the outcomes of patients and their families. The new perioperative nurse will learn the importance of environment in helping patients and their families deal with the stress and uncertainties of surgery. Stress levels are dependent upon environmental factors such as noise, spatial disorientation, lighting, and the general isolation of being a patient (Cesario, 2009). In particular, noise has a deleterious effect on patient outcomes. Diette, Lechtzin, Haponik, Devrotes, and Rubin (2003) discovered that when nature scenes and sounds were available to patients, intra-operative pain and anxiety were significantly reduced.

In using the evidenced-based practice learned in the perioperative training program, the new perioperative nurse can become aware of using these techniques as well as others to improve patient outcomes.

**Characteristics of the Adult Learner**

Adult learners are individuals that are mature, responsible, and seeking or becoming involved in activities designed to increase their knowledge. This learning may take the form of informal learning in which the learner does not attend formal classes, or they may attend a formal, structured program that involves face-to-face interaction in a classroom or asynchronously on the Internet.

Adult learning is self-directed, purposeful, goal-oriented, constant, and is a life-long process (Cross, 1981). It is also life-centered and affected by the changes each adult faces in the process of everyday living (Knowles, 1998), such as job changes, children, and marriage. Adults have personal reasons for engaging in a learning activity. For example, many adults enjoy learning. The reasons for enjoying learning include feelings
of pleasure, success, satisfaction and happiness from receiving the content, and the activity of learning (Cross, 1981).

Adult learning is part of the continuing process of adult development. Learning may be related to the need for self-actualization, a fully integrated ego, introspection, and self-examination (Merriam & Clark, 2006). According to Tennant and Pogson (1995), learning may be related to interaction with the environment surrounding the learner. Learning continues throughout adulthood and can result in changes of attitude, ideas, behaviors, and beliefs (Merriam & Clark, 2006). It may also be viewed as part of a process that takes place during the period between birth to death.

**Perioperative Environment**

The perioperative environment is a highly technical, stressful, critical care environment. In the perioperative environment, each nurse is responsible for the delivery of safe, effective care while being reassuring to the patients for which they are responsible. The environment is technologically advanced, requiring various technical skills and knowledge to be able to operate equipment safely while working in a fast-paced environment. “The perioperative nurse depends on the knowledge of surgical anatomy, physiologic alterations, and their consequences for the patient, intraoperative risk factors, potential for patient injury, and the means of preventing them, and psychosocial implications of surgery for the patient and their families” (Rothrock, 2007, p. 1).

The current view of perioperative nursing is that the perioperative nurse must plan for all aspects of care during the perioperative, intraoperative, and postoperative periods of the patients’ experience using the nursing process as a framework for the delivery of
care (Rothrock, 2007). As a planner, the nurse must organize and manage equipment, personnel, and stay informed. Staying informed entails communicating with different departments for the provision of continuation of care and interacting with patient family members for the purpose of education and the reduction of anxiety. The perioperative nurse must also be able to interact with physicians, administrators, office personnel, other nurses, and allied health personnel while working as a member of a team. While working as a team member, the nurse uses evidenced-based knowledge to guide practice.

The perioperative registered nurse role takes place in many different venues. The role may be performed in an outpatient surgical center, a full-service hospital setting, radiology departments, physician’s offices, and endoscopic surgery suites. No matter the practice setting in which the care is delivered, the professional perioperative registered nurse is required to meet the standards set by the Association of periOperative Registered Nurses (AORN). The *AORN Standards and Recommended Practices* are reviewed and updated yearly and reflect current practices of perioperative professional nursing.

The perioperative training program reflects current practice. The program is designed to train the adult learner, a professional registered nurse, to develop the skills necessary to meet the standards set by AORN. True to the standards, the course consists of 25 modules covering the clinical expectations of the perioperative specialty. The modules provide education ranging from assisting in the delivery of anesthesia by an anesthesia professional to wound closure and healing. In addition, the perioperative nursing students are socialized into the role of the perioperative registered nurse. During this socialization, the student perioperative nurse must learn how to interact with physicians, pharmacists, allied health personnel, outside vendors, and healthcare
administrators. Silen-Lipponen, Tossavainen, Turunen, and Smith (2004) found that it is difficult for the adult learner to combine theoretical knowledge, clinical knowledge, and role socialization expectations needed to fulfill the expectations of the perioperative nursing role. Sigurosson (2001) found that the transition to perioperative nursing by the adult learner can be very difficult due to the demands of the role. During interviews of perioperative nursing students, Sigurosson (2001) found that to succeed, the students had to be very determined. Knowles (1998) stated that adult learners are driven by internal motivators to meet learning goals.

The perioperative environment is a challenging environment that requires a lengthy, intensive training program to be able to function in a confident, competent, and safe manner. The clinical and theoretical knowledge as well as the social skills needed require the perioperative registered nurse student to develop an in-depth understanding of the new role. Instructional methods are used to help the perioperative nurse student transition into the new role.

**Instructional Methods**

Career changes generate feelings of stress, apprehension, and uncertainty. The student’s schema is changing and the learner must adjust to the new environments and methods of instruction. Based on the literature, one can conclude that learning must be learner-centric and that transformative learning is supportive rather than coercive (Cranton, 2006b; Mezirow, 2000; Taylor, 2009a). Transformative learning is based on a relationship of trust with the educator and must be authentic in nature. In a transformative learning environment, the educator must respect the autonomy and dignity of each individual student (Friere, 1998). The educator must create an environment of safety so
that the learner can feel free to explore the role and environment. One of the key requirements of fostering transformative learning is that it should be inclusive (Taylor, 2008). It must also be emancipatory in that the learner is free to question and probe without fear of retribution; the environment must be free of coercion (Cranton, 2006b). With this in mind, the educator must first recognize individual differences between learners. All adult learners have different learning styles and ways of learning, and educators must consider these differences. Learners may have visual, auditory, or tactile/kinesthetic learning styles or even a combination of learning styles (Gagne, Golas, Keller, & Wager, 2005). As there are differences in style between individual learners, transformative learning differs between learners as well. The learning environment that encourages the learner to critically question experiences and be open to alternatives supports emancipatory learning. Education can be used to help individuals exercise their own power promoting personal and social change (Cranton, 2006b). By showing respect for the individual and group of learners, a genuine relationship is developed between the learner and the teacher.

The educator can play the role of an instigator, or one “who challenges, stimulates, and provokes critical thinking” (Cranton, 2006b). The educator can also help the learners by using meaningful group activities, providing support, encouragement, and by building a trusting relationship with the learner (Cranton, 2006b). Learners must be seen as individuals in their own right. The educator must be a facilitator of learning. The educator is faced with the practical issue of exactly how to facilitate learning while supporting personal and social transformation as the goals of adult education (Merriam, et al., 2007). In facilitating learning rather than dictating it, the educator is functioning as
a resource and a manager (Cranton, 2006b). As learners grow, they develop ways of knowing that allow them to make finer distinctions and be more open to the integration of learning into more complex actions (Daloz, 2000). It is in the nature of the experiences that the transformative learning is fostered in the learner (Taylor, 2009b).

A key component of transformational learning is the reflective process. Learning activities must be used to encourage critical reflection and discussion (Cranton, 2000). Journaling encourages thought and reflection and is a technique that is often used in the training of perioperative registered nurses. By providing a method of critical examination of learning experiences, students are able to examine their beliefs and assumptions. This allows the learner to examine what has been experienced from multiple points of view or frames of reference, allowing for assessment of best practices. The process of writing helps the writer to express and clarify experiences, work through issues and ideas that were problematic or troublesome, and explore thoughts, feelings, and memories that had not been previously acknowledged (Kant, 2009).

**Mentoring**

Mentors and preceptors can foster transformational learning through reflection in action. Through discourse with the preceptor, ideas, thoughts and concerns can be discussed while engaged in practice. By modeling self-reflection (Cranton, 2002 p. 164), the preceptor can demonstrate that this process is normal for best practices. Immediate feedback can be given in practice situations that can guide the learner. “The aims of reflective practice are ambitious in helping guide the supervisee through a process of learning and discovery” (Todd, 2005). The learner can take this opportunity to immediately reflect on their practice. Knowledge related to how to “be” and how to do
things is best learned through interaction between individuals (McWilliam, 2007). Through guided reflection, the learner can develop self-awareness as a practitioner and as an individual. Interactions occurring between the preceptor and the learner in practice settings impact the learners’ professional identity (Phillips, Fawns, & Hayes, 2002). Through the same interactions, the learners also develop a sense of their own identity (Phillips et al., 2002). They become familiar with learning with reflection–on-action through the recollection of past events, learning from experiences, and coming to a new understanding of themselves and their situation (Todd, 2005). This process helps the learner develop an awareness of who they are and the results of their actions.

Mentoring can foster transformational learning through a collaborative reprocessing of the basic assumptions of the way one views the world. Mentoring is important in the development of a positive vision that values transformative discourse (Daloz, 2000). As learners grow, they develop ways of knowing that allow them to make finer distinctions and be more open to the integration of learning into more complex actions (Daloz, 1999). Through mentoring, the perioperative learner can develop new approaches to problem solving. Mentoring can help the learner develop the ability to make and keep commitments for the common good. For future perioperative nurses, this can mean taking responsibility for their actions, as they affect their patients and their own lives. They will be entering a community of professional practitioners that adhere to professional standards and practices.

Through these standards and practices, the perioperative learner can understand the social constructive meaning of being a perioperative registered nurse. Discourse between the preceptor and mentor with the learner in the practice setting can lead to
personal professional identity formation of the learner (Phillips et al., 2002; Zepke & Leach, 2002). Table 1 illustrates this concept:

Table 1

<table>
<thead>
<tr>
<th>Phenomenological Scopes for Practice</th>
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<tr>
<td><strong>Ontological domains of practice</strong></td>
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<td>Discourses (Conversations)</td>
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<td>Agency</td>
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<td>Structures</td>
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Conversations between the mentors/preceptors and the learner are seen as social acts that impact the professional identity of the learner (Phillips et al., 2002). Culture and community influence identity. All of the meanings, habits of mind, practices, and forms are shared across the community (Hermans, 2001). Role and position within the community of professional perioperative RNs is learned during the program of didactic and clinical education. The transformation occurs during the oral and written discourse that takes place between the mentor, preceptor, learner, and with other members of the perioperative community while delivering perioperative care. In addition, the learner has an internal dialogue that also influences transformative learning. It is in the very nature of the discourse that the ideas of professional competence such as duty of care, advocacy, respect for one’s self and others, and collegiality that ethical behaviors exist (Phillips et al., 2002).

**Phenomenology**

Hegel felt that “phenomenology referred to knowledge as it appeared to the consciousness, the science of what one perceives, senses, and knows in one’s immediate awareness and experience” (as cited in Moustakas, 1994, p. 26). Phenomenology is the study of what appears in the consciousness and provides a philosophical rationale for the examination of the human experience (Holloway, 2005). Phenomenology provides a way to look at the how individuals understand what is happening in their lives.

Husserl is credited with the modern method of phenomenological inquiry in which social investigators look for how an individual perceives what they have experienced (as cited in Kleiman, 2004). The descriptive phenomenological method is
concerned with the lived experiences of the individual. The researcher listens attentively to the responses of the interviewee while trying not to interpret a personal meaning from the response. Participants describe their experiences from their own views of the world (Giorgi, 2006). Experiences are in the consciousness of the individual giving meaning to events. Phenomenology tries to eliminate all extraneous, preconceived beliefs and ideas of the researcher about what has been experienced.

Heidegger believed that rather than being purely descriptive in nature, any description of an experience contains an interpretation based on the individual’s experience and culture. Experience is explored using hermeneutics, which is founded on an ontological view of the experience being interpreted (as cited in Dowling, 2007).

Merleau-Ponty’s philosophy is one of “phenomenology of perception” (as cited in Thomas, 2005, p. 69). It contrasts with that of Heidegger in that the experience being described does not rely on interpretation; rather, it relies on how the subject views the experience from his or her view of the world. Thomas (2005) also stated “It is to give a direct description, not a causal explanation” (p. 65).

Critics of phenomenology feel that the researcher who relies on the “the evidence of consciousness” (Moran, 2000, p. 21) is naive. Hopp (2008) believed that phenomenology, as a foundation of human knowledge, could not be supported. He stated that the idea of intuition “enables us to know facts that lie far beyond our power to perceive, it brings with it the danger of inauthenticity” (Hopp, 2008, p. 212). Derrida was perhaps one of the principal critics of Husserl’s ideas of phenomenology. One of Derridas’ arguments was that phenomenology did not have a specific language of its own (as cited in Fischer, 2007). Fischer (2007) argued that the language of the person
describing the phenomenon contains the meaning of the event. The phenomenological event is viewed in the context of the event for the person who experienced it. While it is true that language reflects the culture of the speaker, the person who experienced the event is still communicating how the event affected her/him.

**Conclusion**

This literature review highlighted the lack of research regarding the experiences of graduates of perioperative training programs for professional registered nurses. Research has been conducted regarding how student nurses feel about their experiences during their short time in the perioperative area as well as on team building. It is important to determine the lived experiences of registered nurses who have transitioned into the role of newly qualified perioperative nurses following the completion of a perioperative nurse-training program.
CHAPTER 3. METHODOLOGY

Introduction

The purpose of this case study was to explore the lived experiences of nurses who have transitioned into the role of perioperative nurses following their completion of a perioperative nurse-training program. In describing their experiences, respondents assisted the program educators in understanding the personal developmental, cognitive, social, and professional changes undergone by the learners. Reflection provided the nurses with a way to describe what happened to them and enabled them to fully describe their conscious experiences (Moustakas, 1994). Reflection also allowed them to discern the meaning of their experiences and the relationship such experiences have to themselves. The research design and methodology were guided by the purpose of the study in addition to the literature review.

Restatement of Research Questions

The research questions addressed in this study are as follows:

1. Has transformational learning occurred during the process of completing a perioperative nurse’s preparation program?

2. What has the new perioperative registered nurse experienced in the process of becoming a professional perioperative registered nurse?

3. What experiences does the new perioperative registered nurse feel contributed to the success of their transitioning into a professional perioperative nurse role?

Research Design

This research was a case study that focused on the lived experiences of graduates of perioperative training programs. The choice of the phenomenological case study
approach using mixed methods was made due to the nature of the information sought for in this study. Phenomenological studies have been conducted that examined other aspects of the nursing experience. Currid (2009) examined how stress affects mental health nurses working in acute care mental health units. Currid (2009) conducted research with nurses on their units that described their experiences and found that nurses frequently felt pressured by overwork, understaffing, and ever-increasing target goals for improving efficiency.

Standing (2009) stated that phenomenology is particularly suited for nursing research because it strives to seek understanding from lived experiences. The author used phenomenological research methods to do a longitudinal study of the development of decision-making skills, while student nurses transitioned into staff nurses. Vivalki (2008) found that phenomenological research was relevant in that it examined human experience and meaning. The researcher stated that a critical exploration of phenomenology and its methods could lead to challenging and interesting paths for the researcher in understanding life experiences.

Benner (1985) utilized the Heideggerian phenomenological approach in developing her theory of novice to expert (Dowling, 2007). Benner (1985) stated that the Heideggerian approach was “particularly useful in understanding the phenomenal world of health and illness” (p. 5). The Heideggerian phenomenological method studies the person from the standpoint of where they are in a situation rather than dissecting the pieces of the experience.

Lipponen et al. (2004) used the phenomenological technique to research student experiences related to learning about teamwork during placement in the perioperative
area. Lipponen et al. (2004) also stated that they used the descriptive phenomenological method of Giorgi. Through this method, the researchers were able to determine how students felt about their experiences and what impact these experiences had on them.

A case study allows for the in-depth study of a “program, event, activity, process, or one or more individuals” (Creswell, 2009, p. 13). A case study can be used to study a specific group of individuals (Merriam, 2009) in which each participant’s experience can be closely examined for what might be revealed and can be defined by the process of actually carrying out the investigation. A case study is “bounded” in that the number of participants, sites, or even a specific instance of an event can limit the study. It is the unit of analysis that determines the case study (Merriam, 2009). The focus of the present study was phenomenological in nature. A phenomenological case study tied both the phenomenological research technique and the case study method together in search for meaning and understanding of the described experiences of graduates of a perioperative registered nurse-training program.

This study used a mixed method approach, which was a partially mixed sequential dominant status design. With this design, a study is divided into two phases with either a qualitative or quantitative phase having greater emphasis (Leech & Onwuegbuzie, 2009). This study consisted of two phases. The first phase involved conducting a survey of the entire original sample. The second phase consisted of an interview of selected participants derived from an analysis of the answers of the survey of the entire sample. The first phase of the research was quantitative, while the dominant (second) phase was qualitative.
Sample Selection

The design of the sample must be related to the research being done. In the case of this case study, the design was a mixed method study. Because this study used a mixed method design, how the study proceeded was important to the design of the sampling model (Collins, Onwuegbuzie, & Jiao, 2006). In this study, the quantitative component preceded the qualitative component. The sample for this study was purposive. This sample was chosen for convenience and availability and was rich in information (Creswell, 2009).

This specific sampling approach used a sequential design, incorporating two purposeful samples with one being a nested sample. A nested relationship between two samples implies that one sample is a subset of the original sample (Collins et al., 2006). In this case, the first sample group was given the survey to complete, with the second sample chosen from the first by virtue of their answers on the survey. The selection of the participants was purposive in that participants were chosen from the perioperative training programs of specific health care institutions for the purpose of studying their lived experiences and are known by the clinical educator of the facility.

The population for this study was nurses who have transitioned into the role of a perioperative registered nurse within two years of their completing the perioperative training program. Fifteen participants were chosen from two healthcare facilities that prepare registered nurses for the nursing specialty of perioperative-registered nursing. The researcher contacted each selected facility’s Perioperative Nurse Educator asking for their assistance in this research project and gained their permission to proceed with the research. Once the agreement to assist in the conduct of this research and permission to
proceed was obtained, a copy of the research proposal and a copy of the instruments to be used were given to the Perioperative Nurse Educator for their review. Once that was accomplished, the assistance of the Perioperative Nurse Educator was sought in submitting the research project to their healthcare facility’s Institutional Review Board (IRB) for review, and permission to conduct research at the facility was granted.

The Perioperative Nurse Educators were asked to assist in the recruitment of potential participants. To recruit potential participants, the Perioperative Nurse Educators were asked to identify perioperative nurses who had recently completed the perioperative registered nurse training program at that facility and then distributed a memo asking for volunteers from amongst them to participate in the research.

The purpose of choosing participants from several facilities was twofold. One was to obtain a variety of experiences from different geographic training sites, and the second was to preserve anonymity among the participants. A purposive sample was chosen for convenience and availability, and because this type of sample can be rich in information (Creswell, 2009). The selection of the participants was purposive in that participants were chosen from the perioperative training programs of specific healthcare institutions for the purpose of studying their lived experiences and are known by the clinical educator of the facility.

**Method of Inquiry**

The mixed method design was used to obtain the data needed to answer the research questions. In using the mixed method approach, both qualitative and quantitative data can be used to determine whether transformational changes in the participants have occurred. The findings of this study can help guide pedagogical practice by describing the
extent to which transformational learning occurs as a result of completing a perioperative preparation program for registered nurses.

**Instrumentation**

The instrumentation included both quantitative and qualitative components. Data was collected through the use of a Learning Activities Survey (LAS). King (2009) developed this survey for adult learners; King also validated the survey through the use of pilot studies, using formative evaluation for the improvement of the instrument with these studies (Trochim, 2000). In addition, further validation of the tool was obtained through a panel of experts in the field of transformational research in which they were asked to critique the tool and suggest changes. Reliability was determined by the hermeneutical method (Gall, Gall, & Borg, 2003) in which several items were evaluated individually to observe how each section performed, and then the survey was evaluated as a whole (King, 2009). The tool has incorporated changes suggested by the panel of experts and through pilot studies (King, 2009). Finally, King (2009) used the instrument, which was originally developed as part of her dissertation, in ongoing research in transformative learning. The LAS has been used in more than 15 studies since its original creation (King, 2009).

The Learning Activities Survey consists of four parts. Part one collects and assesses data to determine the stages of transformational learning. Part two helps to identify which experiences promoted transformational learning, while part three identifies which activities the respondents participated in. Finally, part four collects demographic information. Once the original survey has been distributed, a follow up interview was conducted among the original participants who scored 3 on the PT-Index, as discussed in
data analysis and who agreed to participate in a second follow up interview. Answers to the original LAS were explored more fully in the follow-up interview.

**Data Collection**

Both quantitative and qualitative data were collected through the use of the LAS. The survey was distributed to the participants who consented to participate in the study at an agreed upon time at the healthcare institution at which they completed the perioperative training program.

The Consent form was part of a packet given to perioperative nurses who have volunteered to participate in the survey. The materials consisted of the consent form, the Learning Activities Survey, an instruction sheet on how to complete the survey, an information sheet describing the research, and follow-up signup forms. The participants were then asked to read the instruction sheet, the information sheet, and to consent to participate in the follow-up interview. Following this, participants were asked to complete the survey with assistance given as needed by the researcher. Once participants had completed the survey, the survey and follow-up signup sheet were collected. All participants were thanked and offered a copy of the research once completed.

After completion, the LAS was examined and analyzed. Participants who had been identified as having experienced a change in perspective as a result of the perioperative nurse-training program and had consented to participate in the follow-up interview were contacted to set up an appointment in order to complete the follow-up interview. Those participants who agreed to participate in the follow-up interview were asked to sign a separate consent form.
Each participant who scored a 3 on the PT-Index, as discussed in data analysis, was asked for their voluntary participation in completing a follow-up interview. Follow-up interviews help to further document and make clear information collected by the survey. Data collection commenced after approval was granted by the health care facilities Institutional Review Board (IRB) and/or Director of Surgery in addition to the IRB of Capella University.

**Data Analysis**

This was a sequential study comprised of two phases with the intent being to determine whether transformational changes occurred as a result of completing a perioperative training program for registered nurses. The first phase collected quantitative and qualitative data that was used to address the question of whether a change in perspective had occurred. The second phase was qualitative in nature and was used to further explain the quantitative data.

The initial analysis of the data identified characteristics of the respondents. For example, it identified attributes such as male, female, age, and others for the purpose of describing the sample. The frequencies of each were determined and reported.

Results from the questions in the survey related to Mezirow’s stages of perspective transformation. Question 1 directly related to Mezirow’s 10 stages of perspective transformation (See Appendix) with questions 2, 3, and 5 allowing reflection on the answer to question 1.

The response to question 2 helped the researcher to determine whether the perspective transformation was related to the perioperative registered nurse-training program. Questions 3 and 5 allowed the respondent to describe the change. The responses
to questions 1, 2, 3, and 5 of the instrument were analyzed using the PT Index, with a result of 1, 2, or 3. Question 1 indicated that the learner has experienced a disorienting event. Question 2 asked the learner to reflect on their frames of reference while they were in training in order to determine whether they changed. Questions 3 and 5 asked the learner to describe what occurred to initiate the changes in their frames of reference and if the training experience had influenced the change in their frames of reference. A score of 1 meant that no perspective changes had occurred, as indicated by the response to questions 1 and 2 and no response to questions 3 and 5. A learner score of 2 meant that perspective changes are a result of life events and not education. A score of 3 meant that perspective changes occurred as a result of the educational process (King, 2009). Table 2 illustrates scoring to determine the PT-Index score.

Table 2

<table>
<thead>
<tr>
<th>Responses to Question 1</th>
<th>Responses to question 2</th>
<th>Descriptive responses to questions three and five</th>
<th>PT-Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Describe changes as a response to training</td>
<td>3</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td>Describe changes related to life events not training</td>
<td>2</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
<td>No response</td>
<td>1</td>
</tr>
</tbody>
</table>

Questions 1, 2, 3, 5, 6, and 7 of the LAS helped answer research question 1. Question 4 of the LAS helped answer research question 2. Questions 2 and 7 helped answer research question 3.
Those participants’ responses that resulted in a PT index score of 3 were asked to volunteer to complete the follow-up interview. The follow-up interview helped to clarify the answers given in the LAS.

Two concerns are present in a qualitative research study. The first is whether the information being collected is accurate, and the second is whether the data collection instrument is reliable (Dempsey & Dempsey, 2000). Using a variety of participants from two different healthcare facilities enhanced validity of the data. The more cases included in a study, the more compelling the interpretation of the data will be (Merriam, 2009). A common method of enhancing validity and generalizability is to complete case studies at multiple sites (Merriam, 2009). What was being studied was the “multiple constructions of how people have experienced a particular phenomenon, how they have made meaning of their lives, or how they have come to understand certain processes” (Merriam, 2009, p. 214). The respondents relayed their own life experiences.

The second concern of any qualitative study is reliability (Dempsey & Dempsey, 2000). Reliability is affected by researcher bias and the possibility of carelessness. One way of reducing the possibility of carelessness and bias is to have the instrument be used in many different studies by different researchers. The instrument used in this case study was used in many different studies and has been evaluated by experts in the field of adult education as a reliable instrument (King, 2009). Additionally, the respondents in this study were unknown to the researcher.

Using triangulation from multiple data sources ensured reliability and validity. Data collected from different healthcare facilities were compared to each other. There were two purposes for triangulation: confirmation and completeness of data, thereby
increasing confidence in the results (Jick, 1979). Triangulation is the principle method to ensure validity and reliability (Merriam, 2009).

The relationship of changes in perspective and learning experiences can be determined by answers given in Question 2 and Question 7 of the LAS to help determine which experience contributed most to a change in perspective, which answers research Question three. Transformational learning occurs as a result of a change in perspective and acting on the basis of the changed perspective. Research Question 3 helped perioperative educators to identify which experiences are most likely to lead to a change in perspective for the perioperative learner.

Statistical data related to questions 4 and 7 were used to present and interpret the findings. A distribution of the data recorded was reported. Demographic data was also reported.

The researcher administered the follow-up interview following analysis of the LAS. Specific information obtained during the interview was confirmed through the use of a checklist (Question 4). Answers to the questions were reported as the respondents answered the questions. The respondents’ answers to the interview questions were evaluated through the use of a constant comparative method to identify themes (Gall et al., 2003). This method can be used for the development of purely descriptive constructs in addition to theoretical constructs (Gall et al., 2003). The constant comparative method involves immediate analysis of data as it is collected. Each piece of data is compared to all of the other data that has been collected and is sorted according its importance (Dempsey & Dempsey, 2000). In the case of this study, answers to the interview
questions were compared with each other and then sorted into categories based on similarities and dissimilarities.

According to Van Manen (1984), a phenomenological theme is based on the structures of the experiences of those undergoing the phenomena. In responding to the survey questions, the participant revealed experiences reflecting changes in values, beliefs, opinions, and expectations. The survey responses defined the themes of this study. The text was examined line by line with the goal of identifying important phrases.

According to Creswell (2009), noting the number of times that a specific phrase occurs in participants’ transcripts from the interviews identifies themes. In addition, the researcher did this as a means of quantifying qualitative data in order to compare the two (Creswell, 2009). For this qualitative data, individual interviews were examined line by line to search for the repeating of phrases.

Using this process, researchers are able to label themes, underline them, and compare the identified phrases to similar phrases (Cohen, Kahn, & Steeves, 2000). During this research, identified phrases were highlighted and coded. The coded themes were identified and then separated and grouped together, which revealed patterns (Percy & Kostere, 2008).

**Ethical Issues**

Each individual was asked to provide written consent to participate in the research after being fully informed about the study, its purpose, and the intended use of the information collected. Participants remained anonymous to other participants. The researcher knew the identities of the participants. Participants were made aware that they could withdraw from the study at any time and that it would have no effect on
professional status, relationships with other perioperative nurses employed at the same facility, their supervisors, or any other departments within the healthcare facility. The participants were made aware of the potential risks, benefits, and estimated time involved in participating in the study. All quotes that were used to illustrate themes were made anonymous. All data that was collected remained anonymous except to the researcher and was made anonymous before any data was revealed to anyone else. Findings in no way disclosed the identities of the participants or linked them to this study in any publications, reports, or presentations. Results of the study have been kept under lock and key in a secure vault for a period of 7 years, after which they will be destroyed. Results of the study will also be shared with participants who request a copy of the completed study.

Due to the nature of the study, risks in terms of harm or discomfort to the subjects involved in the study were not more than risks faced by the subjects in day-to-day life.
CHAPTER 4. DATA ANALYSIS

This chapter presents the results of the LAS and follow-up interviews concerning the transformational learning experiences of perioperative registered nurses who have completed a perioperative training program. This mixed method research study was conducted with participants from perioperative training programs who have completed the training program over the last 2 years (2010-2012). This research was conducted at healthcare facilities in Illinois. The research questions guiding this study were:

1. Has transformational learning occurred during the process of completing a perioperative nurse’s preparation program?

2. What has the new perioperative registered nurse experienced in the process of becoming a professional perioperative registered nurse?

3. What experiences does the new perioperative registered nurse feel contributed to the success of their transitioning into a professional perioperative nurse?

**Initial Survey Results**

Two separate healthcare facilities were surveyed in this study. Five graduate perioperative nurses agreed to participate in the initial survey from one facility, while 10 graduate perioperative nurses agreed to participate in the second facility. The initial survey that utilized LAS determined the level of perspective transformation of the participants.

The participants were asked to relax and reflect on their experiences of training to become perioperative registered nurses. They were then asked to view the LAS and check off any statement related to their experience while training. Question 1 consisted of 12 check-off responses. Question 2 required a yes or no response and was a fork question. If
the respondents answered yes, they were to complete the rest of the questionnaire. If the respondents answered no, then they were to skip directly to question six and then continue on with the survey. Question 3 required a short written response. Question 4 consisted of check-off statements, which helped to describe what experiences had contributed to the change in perspective. Question 5 required a short written response detailing the first realization of perspective change. Question 6 was a yes or no question, which asked the participants if they characterized themselves as someone who reflected on past experiences. Question 7 asked participants to reflect on what their experience had been in this training program. Questions 8 through 14 inquired about their demographic details. Because the sample size was small and the results obtained were similar between both healthcare facilities, the responses were combined into one set of results. In addition, all results that had a response rate of 0 were not reported. Further, filler sounds such as “um” and “mmm” during the interviews were removed from the transcript in this document.

Responses to Question 1

Question 1 examined the 10 stages of perspective transformation postulated by Mezirow (Table 3). This question helped to answer research question 1, “Has transformational learning occurred during the process of completing a perioperative nurse’s preparation program?” as it sought to determine whether there had been a perspective transformation.

Question 1h and 1j garnered the highest response rate of 73%. Question 1l gathered the next highest response rate, that of 66%. Following with a response rate of 60% was question 1k. Question 1b had a response rate of 40%. Questions 1c, 1d, and 1e
all had a response rate of 33%. Question 1b had a response rate of 40%, followed by questions 1a and 1f with a response rate of 26%. Finally, question 1g had the lowest response rate of 6%. The responses in both facilities indicated that there had been a change in perspective.

Through their answers to questions 1a, 1c, 1f, and 1g, participants indicated that few had questioned their beliefs and social roles and did not think about acting in different ways. However, this contrasted with the responses to other questions, which indicated that respondents had tried out new roles and ways of acting in addition to seeking feedback from others about their performance. Questions 1h, 1j and 1l indicated that the participants obtained the information needed to perform in the new role and adopted the role. This indicates that the participants were seeking to find the information needed to adapt to their new roles. The responses to question 1l indicated that most of the participants had made the transition to the new role. However, as the response to 1l had a rate of 73%, this would suggest that for 27% of the graduates, the transition to the new role was not complete.

Table 3

*Summary of Responses to Question One*

<table>
<thead>
<tr>
<th>Question</th>
<th>1a</th>
<th>1b</th>
<th>1c</th>
<th>1d</th>
<th>1e</th>
<th>1f</th>
<th>1g</th>
<th>1h</th>
<th>1j</th>
<th>1k</th>
<th>1l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responses</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>11</td>
<td>11</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>%</td>
<td>26%</td>
<td>40%</td>
<td>33%</td>
<td>33%</td>
<td>33%</td>
<td>26%</td>
<td>6%</td>
<td>73%</td>
<td>73%</td>
<td>60%</td>
<td>66%</td>
</tr>
<tr>
<td>Rank</td>
<td>6th</td>
<td>4th</td>
<td>5th</td>
<td>5th</td>
<td>5th</td>
<td>6th</td>
<td>7th</td>
<td>1st</td>
<td>1st</td>
<td>3rd</td>
<td>2nd</td>
</tr>
</tbody>
</table>

Note. N=15
Responses to Question 2

This question also helps to answer research question one by examining the change of perspective. Question 2 essentially restated question 1 in a different format. Question 2 of the survey directly questioned whether the participants felt that they had questioned and changed their values, beliefs, opinions, or expectations. The responses to this question (Table 4) indicated that some of the participants had experienced the perspective changes needed for transformational learning.

Eight of the participants indicated that they had experienced a time during their training that they had realized that their values, beliefs, opinions, or expectations had changed. However, one of the participants stated the she did not believe that she had experienced a change in perspective (Question 5). Participants that felt that they had not experienced a time when their values, beliefs, opinions, or expectations had changed were asked to skip questions three, four, and five and to continue the questionnaire at question six. The following responses (to questions 3, 4, and 5) represented the feelings of eight of the original 15 participants.

Table 4

Summary of Responses to Question 2

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responses</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>%</td>
<td>53%</td>
<td>40%</td>
</tr>
<tr>
<td>Rank</td>
<td>2nd</td>
<td>1st</td>
</tr>
</tbody>
</table>

Note. N=14 (One participant did not respond)
Responses to Question 3

Question 3 helped to answer the second research question, “What has the new perioperative registered nurse experienced in the process of becoming a professional perioperative registered nurse?” This question asked the participants to try to briefly identify what happened that encouraged them to change their values, beliefs, opinions, or expectations.

More than half of the participants had indicated in question 2 that they had experienced a time that they realized that their values, beliefs, opinions, or expectations had changed. Eight of the respondents answered yes to question 2 and then responded to this question.

One respondent stated: “My values, beliefs, opinions, and expectations have set a new, higher standard in order for me to perform my duties in excellent standard.” A second respondent answered: “My expectations of myself and staff around me changed as I learned more about the role of an OR RN.” A third respondent expressed: “Thought it would be more exciting. Did not realize it could be monotonous.” A fourth respondent stated: “A sick patient came in that had little to no chance of survival. A surgery was done that was needless and the patient died within hours of leaving OR.”

Another respondent replied: “The requirements of this job have changed from previous jobs. Therefore more responsibility and personal obligation to ensure that patients are well taken care of.” The next respondent opined, “I learned more about the role of an OR Nurse. This helped me realize the impact that the nurse has during a vulnerable time.” The seventh respondent replied “When I began the training program I was a new grad and did not have much nursing experience and the little experience I did
have was not in the OR. Over the 9 month program I changed my roles/opinions of OR nursing and found out what kind of RN I truly was.” Finally, the eighth respondent replied “Being a surgical tech previous to my nursing degree, I had to fully learn to think like a circulating RN before I could merge and integrate all the information together. I believe eventually this created a large picture and objective, multi-faceted view which has made me a better OR RN.”

Each of these respondents voiced that they had changed as a result of the training program. Six of the eight respondents voiced that the new role demanded a greater sense of responsibility and had internalized this new way of acting. One of the respondents reflected on the helplessness she felt when a patient had died. One respondent reflected on how the new career was not what she thought it would be, indicating that she was still trying on the new role. Taken as a whole, the respondents reported experiencing a change in perspective during the course of their perioperative training.

**Responses to Question 4**

The participants were asked to choose individual learning activities that they felt had contributed to the change in their perspectives. The three groups of questions reflected three different influences related to person, activity, or life experience. The first set of questions of the group asked the participants to reflect on whether a person had contributed to their change in perspective. The second group of questions asked the participants if any of the listed activities contributed to the change in perspective. Finally, the third group of questions asked if a change in life experience had contributed to the change in perspective. The participants could choose from more than one group of questions.
Five respondents felt that a person had influenced this change in perspective. The second part of the first group of questions asked the respondents to identify how that person had helped to influence the change in perspective. Three participants felt that a challenge from their educator/preceptor had influenced the change, three of the participants felt that another nurse’s support had contributed to the change, one of the participants also felt that support from the educators had contributed, and one respondent felt that she herself had contributed to the change in her perspective. One participant also felt that the challenge of patient care had been a contributing factor.

The second group of questions from question 4 asked the respondents to identify specific activities that may have influenced the change in perspective from a list. The responses were identified as to the percentage of respondents. The responses were also ranked according to percentage of respondents that answered the question.

At the facility, 100% of the respondents felt that part of a class assignment contributed to the change in perspective. The choices of the facility one respondents consisted of writing about their concerns (50%), personal competency assessment (50%), verbally discussing their concerns (50%), self-evaluation (100%), and subspecialty experience (50%).

At facility two, four of the six respondents (66%) felt that a class assignment contributed to the change in perspective. The choices of the facility two respondents consisted of deep concentrated thought (16%), personal competency assessment (16%), verbally discussing one’s concerns (33%), self-evaluation (33%), subspecialty experience (16%), and personal reflection (16%). Between both facilities, self-evaluation had the highest rank, with verbally discussing one’s concerns being the second highest ranking.
Subspecialty experience as well as personal competency assessment was also ranked second in both facilities. Personal reflection and deep, concentrated thought was ranked second only at facility two.

Finally, the third part of question 4 asked if there was a significant life event that influenced a change in perspective. None of the respondents from either facility felt that a significant life event had influenced a change in perspective.

Table 5

Summary of Responses to Question 4

<table>
<thead>
<tr>
<th>Was it a person that influenced change?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responses</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Percent</td>
<td>62%</td>
<td>37%</td>
</tr>
<tr>
<td>Rank</td>
<td>1st</td>
<td>2nd</td>
</tr>
</tbody>
</table>

Note. N=8

Table 6

Summary of Responses to Question 4 (continued)

<table>
<thead>
<tr>
<th>If “Yes”, what was it?</th>
<th>Responses</th>
<th>Percent</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Another nurse’s support?</td>
<td>3</td>
<td>42%</td>
<td>1st</td>
</tr>
<tr>
<td>Your classmates support</td>
<td>1</td>
<td>14%</td>
<td>3rd</td>
</tr>
<tr>
<td>A challenge from your educator/preceptor</td>
<td>3</td>
<td>42%</td>
<td>1st</td>
</tr>
<tr>
<td>Your educators/ preceptors support</td>
<td>1</td>
<td>14%</td>
<td>3rd</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self, The challenge of patient care in this setting, especially trauma patients</td>
<td></td>
<td>28%</td>
<td>2nd</td>
</tr>
</tbody>
</table>

Note. N=5 (Three nurses answered no to question 6a and therefore did not answer here)
Table 7

Summary of Responses to Question 4 (continued)

<table>
<thead>
<tr>
<th>Was it part of a class assignment that influenced the change?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responses</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Percent</td>
<td>86%</td>
<td>14%</td>
</tr>
<tr>
<td>Rank</td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Note. N = 8

Table 8

Summary of Responses to Question 4 (continued)

<table>
<thead>
<tr>
<th>If “Yes”</th>
<th>Responses</th>
<th>Percent</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>What was it?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-evaluation</td>
<td>4</td>
<td>57%</td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
</tr>
<tr>
<td>Verbally discussing your concern</td>
<td>3</td>
<td>43%</td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
</tr>
<tr>
<td>Personal competency assessment</td>
<td>2</td>
<td>29%</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
</tr>
<tr>
<td>Sub-specialty experience</td>
<td>2</td>
<td>29%</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
</tr>
<tr>
<td>Writing about your concerns</td>
<td>1</td>
<td>14%</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
</tr>
<tr>
<td>Deep, concentrated thought</td>
<td>1</td>
<td>14%</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
</tr>
<tr>
<td>Personal Reflection</td>
<td>1</td>
<td>14%</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orientation, hands on as well as reflection from a standpoint of having been a tech</td>
<td></td>
<td>14%</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Note. N=7 (One nurse answered no to question 6c and therefore did not answer here)

Table 9

Summary of Responses to Question 4 (continued)

<table>
<thead>
<tr>
<th>Was it a significant change in your life that influenced the change?</th>
<th>Responses</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>8</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note. N=8

53
Responses to Question 5

Question 5 asked “Thinking back to when you first realized that your views or perspective had changed, what did your being in the perioperative training program have to do with the experience of change?”

This question also helps answer the research question of “Has transformational learning occurred during the process of completing a perioperative nurses training program?” as the question sought to identify the effect of the perioperative training program on a change in perspective.

Eight of the participants answered this question. Three quarters of the respondents felt that the perioperative training program had a change in perspective as a result of attending the program, while one quarter felt that the program had little effect on their change in perspective. One of the respondents stated: “It help me have a big perspective of what perioperative service is all about and realized I always have to give it my best shot in everything I do.” A second respondent stated: “I don't believe it did.” A third respondent stated: “Very little.” The fourth respondent stated: “The support of the nurse educators.” The fifth respondent stated: “The program helped facilitate having people to talk to/with.” The sixth respondent stated: “It helped to introduce me to this change.” The seventh respondent stated: “The training program was a learning experience and throughout the program I found out who I really was as a nurse and what I did / did not want to become based on my various preceptor(s) relationships.” Finally, the eighth respondent stated: “Learning a different framework of thought regarding the same issues from a different perspective.”
This question was significant in that it asked the participants to reflect on their experiences once again to try to identify how the perioperative training program had changed their perspectives, if at all. Responses indicated that participants had taken their training seriously and that it had an impact on how they viewed their practice.

**Responses to Question 6**

With question 6, all of the respondents returned to answer the questions contained in the survey. Question 6 asked each of the participants if they thought of themselves as individuals that would reflect back on previous decisions or behavior, and 87% of the respondents felt that they reflected back on past decisions and behavior.

**Table 10**

*Summary of Responses to Question 6*

<table>
<thead>
<tr>
<th>Would you characterize yourself as one who usually thinks back over previous decisions or past behavior?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Percent</td>
<td>87%</td>
<td>0</td>
</tr>
</tbody>
</table>

Note. N=15 (2 did not respond to this question)

**Responses to Question 7**

Question 7 sought to identify participants’ experiences at their institutions that they felt were supportive of their experience during their training. This question was similar to parts of question 4.

The experiences that the participants felt were most supportive were their preceptors’ support followed by verbally discussing their concerns, a challenge from the educator/preceptor and personal learning assessment. The next most frequently cited supportive activity was another student’s support, a classmate’s support, followed by personal reflection. Following this in frequency is course self-evaluation, the educators’
support, class activity, internship, and assigned readings. Finally, activities found to be supportive were deeply concentrated thought, lab experiences, with the least supportive activities consisting of writing about concerns and non-traditional course structures.

Table 11

Summary of Responses to Question 7

<table>
<thead>
<tr>
<th>Responses</th>
<th>Percent</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your preceptors’ support</td>
<td>11</td>
<td>73%</td>
</tr>
<tr>
<td>Verbally discussing your concerns</td>
<td>10</td>
<td>67%</td>
</tr>
<tr>
<td>A challenge from your educator/preceptor</td>
<td>8</td>
<td>53%</td>
</tr>
<tr>
<td>Personal learning assessment</td>
<td>7</td>
<td>46%</td>
</tr>
<tr>
<td>Another student’s support</td>
<td>7</td>
<td>46%</td>
</tr>
<tr>
<td>Your classmates’ support</td>
<td>7</td>
<td>46%</td>
</tr>
<tr>
<td>Personal reflection</td>
<td>6</td>
<td>40%</td>
</tr>
<tr>
<td>Course self-evaluation</td>
<td>5</td>
<td>33%</td>
</tr>
<tr>
<td>Your educator’s support</td>
<td>5</td>
<td>33%</td>
</tr>
<tr>
<td>Class activity/exercise</td>
<td>4</td>
<td>27%</td>
</tr>
<tr>
<td>Internship</td>
<td>3</td>
<td>20%</td>
</tr>
<tr>
<td>Assigned readings</td>
<td>3</td>
<td>20%</td>
</tr>
<tr>
<td>Deep, concentrated thought</td>
<td>2</td>
<td>13%</td>
</tr>
<tr>
<td>Lab experiences</td>
<td>2</td>
<td>13%</td>
</tr>
<tr>
<td>Writing about your concerns</td>
<td>1</td>
<td>7%</td>
</tr>
<tr>
<td>Nontraditional course structure</td>
<td>1</td>
<td>7%</td>
</tr>
</tbody>
</table>

Note. N=15

Demographics of the Study Sample

A total of 15 new perioperative nurses participated in the study by completing the LAS. Eight participants (53%) completed the follow-up questionnaire and were interviewed. All of the respondents were female. Thirteen of the participants were white, one was Asian or Pacific Islander, and one participant did not respond to this question. Six of the participants were single, eight were married, and one was divorced.

The educational levels of the participants were as follows: seven had earned an Associate’s degree in nursing, eight had earned a Bachelor’s of Science in nursing, and one had earned a Master’s of Science in nursing. One participant had earned an advanced
degree in a related field. One stated that she had earned a high school diploma, but in truth in order to continue into the nursing profession, one must complete high school or a General Equivalency Diploma (GED).

Two of the participants were between the ages of 21 and 24, three were between 25 and 29, six were between 30 and 39, and four were between 40 and 49.

All of the participants had been nurses for 2 ½ years or less, with the exception one who had been a nurse for 10 years. Nine of the nurses had been employed as nurses for 3 years or less, while one nurse had been employed in nursing for 5 years and another for 10 years. Also, all of the participants stated that their gender was female.

Table 12

Summary of Responses to Question 8

<table>
<thead>
<tr>
<th>Sex</th>
<th>Responses</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note. N=15

Table 13

Summary of Responses to Question 9

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Respondents</th>
<th>Percent</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>8</td>
<td>53%</td>
<td>1st</td>
</tr>
<tr>
<td>Single</td>
<td>6</td>
<td>40%</td>
<td>2nd</td>
</tr>
<tr>
<td>Divorced/Separated</td>
<td>1</td>
<td>7%</td>
<td>3rd</td>
</tr>
</tbody>
</table>

Note N=15
Table 14

*Summary of Responses to Question 10*

<table>
<thead>
<tr>
<th>Race</th>
<th>Respondents</th>
<th>Percent</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, Non-Hispanic</td>
<td>13</td>
<td>86%</td>
<td>1st</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>1</td>
<td>7%</td>
<td>2nd</td>
</tr>
</tbody>
</table>

Note. N=15 (one participant chose not to respond to this question)

Table 15

*Summary of Responses to Question 11*

<table>
<thead>
<tr>
<th>Prior education</th>
<th>Respondents</th>
<th>Percent</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>High school diploma/GED</td>
<td>1</td>
<td>7%</td>
<td>3rd</td>
</tr>
<tr>
<td>Associates degree (Nursing)</td>
<td>7</td>
<td>47%</td>
<td>2nd</td>
</tr>
<tr>
<td>Bachelor’s Degree (Nursing)</td>
<td>8</td>
<td>53%</td>
<td>1st</td>
</tr>
<tr>
<td>Master’s Degree (Nursing)</td>
<td>1</td>
<td>7%</td>
<td>3rd</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>13%</td>
<td>4th</td>
</tr>
</tbody>
</table>

Note. N=15

Table 16

*Summary of Responses to Question 12*

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Years in Nursing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>10 years</td>
</tr>
<tr>
<td>1</td>
<td>5 years</td>
</tr>
<tr>
<td>1</td>
<td>3 years</td>
</tr>
<tr>
<td>3</td>
<td>2.5 years</td>
</tr>
<tr>
<td>6</td>
<td>2 years</td>
</tr>
<tr>
<td>1</td>
<td>1.5 Years</td>
</tr>
<tr>
<td>2</td>
<td>1 year</td>
</tr>
</tbody>
</table>

N=15
Table 17

**Summary of Responses to Question 13**

<table>
<thead>
<tr>
<th>Time Employed at facility Respondents</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20 years</td>
</tr>
<tr>
<td>1</td>
<td>10 years</td>
</tr>
<tr>
<td>1</td>
<td>7 years</td>
</tr>
<tr>
<td>3</td>
<td>6 years</td>
</tr>
<tr>
<td>6</td>
<td>2 years</td>
</tr>
<tr>
<td>1</td>
<td>1.5 years</td>
</tr>
<tr>
<td>2</td>
<td>7 months</td>
</tr>
</tbody>
</table>

N=15

Table 18

**Summary of Responses to Question 14**

<table>
<thead>
<tr>
<th>Age</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 – 24</td>
<td>2</td>
</tr>
<tr>
<td>25 – 29</td>
<td>3</td>
</tr>
<tr>
<td>30 – 39</td>
<td>6</td>
</tr>
<tr>
<td>40 – 49</td>
<td>4</td>
</tr>
</tbody>
</table>

N=15

**Comparison of Questions 4 and 7**

The purpose of this study was to help determine which learning and support activities factored into transformational learning that may have occurred as a result of completing a perioperative training program for nurses. The study also intended to inform pedagogical practice of perioperative nurse educators. Both questions 4 and 7 asked the learners to identify experiences they may have had during the course of their training. The questions also asked the learners for life-changing experiences that occurred during the course of their training. These experiences were identified by the learners as having occurred during the course of their training. The difference between questions 4 and 7 though is that learners who answered question 4 had identified themselves as having
experienced a change in their perspective by answering question two positively. Question 4 then identified learning experiences that the learners considered to have contributed to their change in perspective. Question 7 identified learning experiences of all of the learners (including those who answered question two negatively) as to what they experienced during the course of their training. While all of the activities identified in the surveys supported the learning goals of becoming a perioperative nurse, activities that supported perspective transformation consisted of far fewer than the entire list of activities presented in both questions.

These activities, as chosen by the students, supported perspective transformation among all learners that stated that they had experienced a change in perspective.

Table 19

*Activities that Supported Perspective Transformation (Question 4)*

<table>
<thead>
<tr>
<th>Activity involving another person</th>
<th>Responses</th>
<th>Percent</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Another Nurse’s Support</td>
<td>3</td>
<td>37.5%</td>
<td>1st</td>
</tr>
<tr>
<td>A challenge from Educator/preceptor</td>
<td>3</td>
<td>37.5%</td>
<td>1st</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>25%</td>
<td>2nd</td>
</tr>
<tr>
<td>Your classmates’ support</td>
<td>1</td>
<td>12.5%</td>
<td>3rd</td>
</tr>
<tr>
<td>Your educators/preceptors support</td>
<td>1</td>
<td>12.5%</td>
<td>3rd</td>
</tr>
</tbody>
</table>

Note N=8

Table 20

*Assignments that Supported Perspective Transformation (Question 4)*

<table>
<thead>
<tr>
<th>Assignments</th>
<th>f</th>
<th>Percent</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-evaluation</td>
<td>4</td>
<td>50</td>
<td>1st</td>
</tr>
<tr>
<td>Verbally discussing your concern</td>
<td>3</td>
<td>37.5%</td>
<td>2nd</td>
</tr>
<tr>
<td>Sub specialty experience</td>
<td>2</td>
<td>25%</td>
<td>3rd</td>
</tr>
<tr>
<td>Personal competency assessment</td>
<td>2</td>
<td>25%</td>
<td>3rd</td>
</tr>
<tr>
<td>Personal reflection</td>
<td>1</td>
<td>12.5%</td>
<td>4th</td>
</tr>
<tr>
<td>Writing about your concerns</td>
<td>1</td>
<td>12.5%</td>
<td>4th</td>
</tr>
<tr>
<td>Deep concentrated thought</td>
<td>1</td>
<td>12.5%</td>
<td>4th</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>12.5%</td>
<td>4th</td>
</tr>
</tbody>
</table>

Note N=8

The following tables, 21 and 22, represent a list of activities and assignments that all of the participants felt were a part of their experience during their training as
perioperative nurses. Activities chosen by the graduates also appear as activities that support a change in perspective, which is necessary for transformational learning (Mezirow, 2000).

Table 21

Activities that May be Part of Nurses Experience During Training (Question 7)

<table>
<thead>
<tr>
<th>Activity involving another person’s support</th>
<th>f</th>
<th>Percent</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your preceptors’ support</td>
<td>11</td>
<td>37.5%</td>
<td>1st</td>
</tr>
<tr>
<td>A challenge from Educator/preceptor</td>
<td>8</td>
<td>37.5%</td>
<td>1st</td>
</tr>
<tr>
<td>Another student’s support</td>
<td>7</td>
<td>25%</td>
<td>2nd</td>
</tr>
<tr>
<td>Your classmates’ support</td>
<td>7</td>
<td>12.5%</td>
<td>3rd</td>
</tr>
<tr>
<td>Your educator’s support</td>
<td>5</td>
<td>12.5%</td>
<td>3rd</td>
</tr>
</tbody>
</table>

Note N=15

Table 22

Assignments that May be Part of Nurses Experience During Training (Question 7)

<table>
<thead>
<tr>
<th>Assignments</th>
<th>f</th>
<th>Percent</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbally discussing concerns</td>
<td>10</td>
<td>66%</td>
<td>1st</td>
</tr>
<tr>
<td>Personal learning assessment</td>
<td>7</td>
<td>46%</td>
<td>2nd</td>
</tr>
<tr>
<td>Personal reflection</td>
<td>6</td>
<td>40%</td>
<td>3rd</td>
</tr>
<tr>
<td>Course self-evaluation</td>
<td>5</td>
<td>33%</td>
<td>4th</td>
</tr>
<tr>
<td>Assigned readings</td>
<td>3</td>
<td>20%</td>
<td>5th</td>
</tr>
<tr>
<td>Lab experiences</td>
<td>2</td>
<td>13%</td>
<td>6th</td>
</tr>
<tr>
<td>Class activity/exercise</td>
<td>2</td>
<td>13%</td>
<td>6th</td>
</tr>
<tr>
<td>Deep concentrated thought</td>
<td>2</td>
<td>13%</td>
<td>6th</td>
</tr>
<tr>
<td>Internship</td>
<td>1</td>
<td>6%</td>
<td>7th</td>
</tr>
<tr>
<td>Non-traditional course structure</td>
<td>1</td>
<td>6%</td>
<td>7th</td>
</tr>
<tr>
<td>Personal journal</td>
<td>1</td>
<td>6%</td>
<td>7th</td>
</tr>
<tr>
<td>Writing about your concerns</td>
<td>1</td>
<td>6%</td>
<td>7th</td>
</tr>
</tbody>
</table>

Note N=15

The Perspective Transformation Index

The Perspective Transformation Index (P-T Index) (King, 2009) is a tool developed to determine which learners had experienced a change in perspective. The responses to questions 1, 2, 3, and 5 of the Learning Activities Survey (LAS) were analyzed using the PT-Index with a result of one, two, or three. Question 1 indicates that the learner has experienced a disorienting event. Question 2 asks the learners to reflect on
their frames of reference while they were in training and determine whether they changed. Questions 3 and 5 ask the learner to describe what happened to initiate the changes in their frames of reference and if the training experience had influenced that change. A score of one meant that no transformative changes have occurred as indicated by the response to questions one and two and no response to question three. A learner score of two meant that transformative changes are a result of life events and not education. A score of three meant that perspective changes occurred as a result of the educational process (King, 2009). Table 2 illustrates the scoring of the responses.

Utilizing the PT-Index on the responses to the LAS by the participants in this study resulted in two participants out of the five total participants being eligible from facility one and five participants out of the 10 total participants from facility two eligible to participate in the follow-up survey and interview. Each of these participants indicated through their responses to question one that they had experienced a perspective change. Each of the respondents answered in the affirmative to question two, and they were able to briefly describe what happened in changing their perspective. In addition, with question 5, the respondents that qualified for the follow-up survey and interview were able to relate the perioperative training program to the change in their perspective.

**The Follow-Up Survey and Interviews**

The follow-up survey and interview participants were chosen based on their responses to the initial survey questions and scoring using the PT-Index tool. Out of a total of 15 original participants from both facilities, seven participants were chosen to complete this part of the research. All of those who were chosen for the follow-up survey
and interview elected to participate. All of the interviews were conducted individually and the responses were recorded for later transcription.

The follow-up survey and interview consisted of seven questions. Of the seven questions one (question 4), was a repeat of question 7 from the initial survey. The six remaining interview questions were designed to elicit information, which helped to more fully describe their experience and activities that supported a change in perspective. The interviews and survey lasted about 15 minutes for each participant.

**Question Number 4 (Survey Question)**

The participants were asked again to choose individual learning activities that they felt had contributed to the change in their perspective. The three groups of questions reflected three different influences related to person, activity, or life experience. As in questions four and seven of the initial LAS, the participants were again asked to reflect on whether a person had contributed to the change in perspective. The second group of questions asked the participants if any of the listed activities contributed to the change in perspective and the third group of questions asked if a change in life experience had contributed to the change in perspective. The participants could choose from more than one group of questions.

Six of the respondents felt that a person had influenced this change in perspective, while one participant felt that a person had not influenced their change in perspective. The respondents then identified how that person had helped to influence the change in perspective (Table 24). Five participants felt that support from their educator/preceptor had influenced the change, three of the participants felt that support from the their classmates contributed to the change in perspective, while two felt that another nurse’s
support helped to influence their change in perspective. Two of the respondents also felt that a challenge for their educator/preceptor contributed to the change. Finally, one respondent felt that the change in perspective came strictly from being engaged in trying to learn her chosen specialty. The following group of questions asked the respondents to then identify from a list of specific activities (Table 26) those that may have influenced the change in perspective. The responses were identified as to the percentage of participants’ answers. The responses were also ranked according to percentage of participants who answered the question.

This time, all of the respondents felt that a class assignment contributed to the change in perspective. The first choice of the respondents was that the change in perspective was due to verbally discussing their concerns and self-evaluation (three respondents each.) Second was deep, concentrated thought and personal reflection (two each). One respondent chose an activity or project as having had an influence on a change in perspective and one chose “other.” Finally, participants were asked if there was a significant life event that influenced a change in perspective. None of the respondents from either facility felt that a significant life event had influenced a change in perspective.

Table 23

<table>
<thead>
<tr>
<th>Summary of Responses to Question 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was it a person that influenced change?</td>
</tr>
<tr>
<td>Responses</td>
</tr>
<tr>
<td>Percent</td>
</tr>
<tr>
<td>Rank</td>
</tr>
</tbody>
</table>

Note. N=7
Table 24

Summary of Responses to Question 4

<table>
<thead>
<tr>
<th>If “Yes”, what was it?</th>
<th>Responses</th>
<th>Percent</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your educator’s/ preceptors’ support</td>
<td>5</td>
<td>71%</td>
<td>1st</td>
</tr>
<tr>
<td>Your Classmates’ support</td>
<td>3</td>
<td>42%</td>
<td>2nd</td>
</tr>
<tr>
<td>Another nurse’s support?</td>
<td>2</td>
<td>29%</td>
<td>3rd</td>
</tr>
<tr>
<td>A challenge from your educator/preceptor</td>
<td>2</td>
<td>29%</td>
<td>3rd</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>14%</td>
<td>4th</td>
</tr>
</tbody>
</table>

Note. N=7

Table 25

Summary of Responses to Question 4

Was it part of a class assignment that influenced the change?

<table>
<thead>
<tr>
<th>Responses</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note. N = 7

Table 26

Summary of Responses to Question 4

<table>
<thead>
<tr>
<th>If “Yes” What was it?</th>
<th>Responses</th>
<th>Percent</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbally discussing your concern</td>
<td>3</td>
<td>43%</td>
<td>1st</td>
</tr>
<tr>
<td>Self-evaluation</td>
<td>3</td>
<td>43%</td>
<td>1st</td>
</tr>
<tr>
<td>Deep, concentrated thought</td>
<td>2</td>
<td>29%</td>
<td>2nd</td>
</tr>
<tr>
<td>Personal Reflection</td>
<td>2</td>
<td>29%</td>
<td>2nd</td>
</tr>
<tr>
<td>Activity or Project</td>
<td>1</td>
<td>14%</td>
<td>3rd</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>14%</td>
<td>3rd</td>
</tr>
</tbody>
</table>

Note. N=7

Table 27

Summary of Responses to Question 4

Was it a significant change in your life that influenced the change?

<table>
<thead>
<tr>
<th>Responses</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note. N=7
Individual Interviews

A series of open-ended questions that asked the respondents to reflect on their experiences as perioperative nurse trainees were given in addition to the survey question. These questions helped to determine the “essence” of their lived experience (Moustakas, 1994). Through reflection, the respondents were able to verbalize their experiences, which described the transformation in their perspective. The responses were recorded and then transcribed for analysis.

Interview question 1. The interviewer first asked: “Thinking back over your perioperative education at this healthcare institution, have you experienced a time when you realized that your values, beliefs, or expectations had changed?” All of the participants answered affirmatively, with four of the participants adding to their positive response.

Interviewee 2 stated:

Yeah, I guess they did. I was thinking, my beliefs the OR would be a little…I guess maybe a little exciting. I didn’t realize so many surgeries were repetitive surgeries, so I kind of came in with a different idea of what the OR was compared to what I actually see that happens. Not that it’s a bad thing; it’s just different from… my belief was different than what I thought it was going to be.

Interviewee 3 stated: “Like before I…was exposed to like what a perioperative nurse did I didn’t really fully understand and so through like the program and experience like my opinions of that changed and what occurs like during a surgery changed.” Interviewee 5 stated: “My beliefs about practice in the OR I would say yes.” Interviewee 6 stated: “In relation to my overall…all my values…not just my beliefs or values of in the OR, but
overall, right? I’m just trying to make sure I think of an example. Well yeah, I’d say yeah.” Interviewee 7 stated:

For the expectations yeah, and yes some of it has been really been changed because as you said we never really encountered…once we got out of the school we never really properly prepared, because in textbook it’s not really you know what we really encountered you know in the real life, because it’s not really the good scenario. So here you are prepared by undergoing the perioperative learning. You are expected what to do you know, the detail, not just the basic one, but more detailed stop to observe uh the knowledge of what you are going to do and you prepared yourself you know to be more um assertive to the patient’s needs. And for the…you also anticipate things that might uh happen, you know, the critical ones like before it’s just like you know the general, or you didn’t even have any idea what’s going on. So here it’s really uh prepared you and skills-wise, knowledge-wise, it really improved you and also…improved me actually um also for…prepared me for all those critical things that might happen you know.

**Interview question 2.** The interviewer then asked: “Briefly describe that experience. In response to this question, interviewee 1 stated:

That…one of the times was a trauma. Came in, there was…she was…should have been dead basically, but because of her age she was getting ready to go from teenage to adult. It was self-inflicted. She didn’t want to live anymore and her parents…one of her parents could not let go and did everything possible and now her life is totally and completely changed in a way that is physically and
mentally altering, and now… And there were times that we went up to get her from ICU she was mentally there and she was mouthing, “Let me die. Do not do this,” but we had to take her anyways because her father signed consent for her. It was… It went from… I went from being able to say it was kind of like why? You know. It was she doesn’t want this but they’re making us doing it anyways. It went from do we do this, do we not do this. They say we have to so we do. It’s very tough.

Interviewee 2 stated: “I guess just thinking it was all kind of a life and death …not a lot of tonsils and adenoids and…and cataract surgeries and a lot of repetitive surgeries.”

Interviewee number three stated:

Before like when I was even talking to somebody that worked in surgery she um said, “Well when I worked in surgery I felt like I was just a gopher just running around,” that type of thing, and then you have like movies and videos and TV or whatever that show surgery and the average person is never actually able to experience and see what happens. And even then until you actually are in the role you don’t really understand what all is involved.

Interviewee 4 stated:

Well I’m obviously brand new out of nursing school when I started the program so I hadn’t had much experience other than nursing school itself, which isn’t much experience at all, as I’m sure you know. So I mean I had basic ideas from what we had learned in nursing school, but I hadn’t actually put any of it to practice. So since being here definitely throughout the residency which was nine months long, I can definitely see changes in myself just in the way I treated
patients and in things that I saw in other people that made me kind of say well I
don’t want to be like that or I would like to be more like that. I’m trying to think
specifically. Just I’ve seen some nurses that aren’t very friendly. We only are
with the patients for a short time before they go to sleep and I feel that that time
there makes or breaks how the patient feels about the whole surgical experience.
And I’ve definitely seen people do it both ways and I definitely didn’t want to
be like those people that in my opinion were short and didn’t take any time to
get to know that patient probably because they were like well we’re just going
to be with you for five minutes; it really doesn’t matter. I wanted to make sure
that I was the nurse that took the time, got to know the patient, even had a little
conversation with them about things other than the surgery, even though we’re
not with them for you know hours like people are on the floor. That’s one of the
big things that I’ve seen change in myself is that I wanted to have that extra
thing with that patient.

Interviewee 5 stated: “It was a different perspective for me to come in. I was a surgical
tech for 5 years before I became a nurse, and so to think about the same problems or the
same challenges from a very different perspective.” Interviewee 6 stated:

As far as morals and values the like surgical conscience that they teach that we
are taught during orientation that you know if you do accidentally touch
something on a sterile field that you’re not supposed to, you know, no one sees
it but you have to remember that your surgical conscience that you saw it

69
Interviewee 7 stated:

Well yeah, before uh I never really handled how to do emergency cases. Sometimes I...before I get into this area I was even...I was afraid to...to you know act on an emergency thinking that I might do something wrong and um might do harm than helping. So but when you know when you get to...they prepare you with how to do...you know, how to do this emergency cases and everything...they gave you an example and it would have a mock emergency scenario that prepared you really. And we have a case just a week ago um and it really helped you know to prepare as um with critical thinking and how to act. So because they give us a scenario and we have undergone um things and lessons, lectures on what you are going to do in case this thing happened. So we are really prepared for what to do...where to get those stuff that...the stuff that we’re supposed to have, medication and everything which help us um you know save the patient’s life.

Interview question 3. The researcher then asked the following question: “Do you know what triggered it? If so, explain.” Interviewee one responded: “Probably...I had to say...probably on that case I did a lot of self-reflection, if I were in this position would I want this for me. That’s probably what did the most.” Interviewee two stated: “Just the day to day basis working.” Interviewee 3 responded: “Just the opportunity to really learn more about the role and through the program there is like a lot of history and that type of stuff too, not just...” Interviewee 4 relayed:

I would say seeing a couple of nurses up on the floor, seasoned nurses that didn’t do that and it made me feel like if I was that patient I would not have
wanted to be in that situation. It wouldn’t have made me feel good about my procedure and about the whole situation. So I think just seeing different…because everyone is different, I think seeing the people up there most of them I think are very friendly and they take the time, but there are a few that don’t and I think I just have those experiences and that really changed me.

Interviewee 5 stated:

Yeah. Uh acting in a circulator role, especially like during a trauma situation realizing the um the vast responsibilities of a circulator that are not…of a circulating nurse that are not um just broadly apparently to you when you’re in a scrub role, strictly, um medical management, um the amount of work that goes into being also the person who assists anesthesia rather than just the field itself. Um, working with the floor nurses pre and post op to give reports and to get reports and to think about a whole patient rather than just a case was very different from…for me from having been a tech who was not a nurse.

Interviewee 6 stated:

Well we had a perioperative 101 class. It was 8 different days during in the first 3 months of my orientation and we had one session where they talked about surgical conscience and a couple of the nurse educators from the hospitals you know gave examples of when you know they had to break down a complete room because something happened, but it’s…it’s not fair to the patient. It’s not fair to the institution. It’s not fair to your colleagues to forget that and say oh well, it’s okay, or you know, it’s very important to stick to those…you know, the sterility of the cases as much as possible for patient safety. So that was
pretty much all that…just from examples. I haven’t…recently there was a situation where there was a…like a wet load had come from SPD, so they had to break down the whole room as well and that was really a tough day because the physician involved wasn’t very happy about it, you know, how did this tray even get on the field in the first place, so it was a really big thing, but it was more important for patient safety to go ahead and break it down and start from scratch.

Finally, interviewee 7 responded by stating:

Well, yeah, the learning…the learning process, the lectures, perioperative nursing and also you know the…just for even the what do you call this one, follow-up of this …the…learning,…a lot of nurses are lecturers so always they are asking if there is anything that we need, so yeah, follow-up with perioperative learning that we had before.

**Interview question 5.** This question asked the respondents to describe how any of the influences cited in question 4 influenced the change in their perspectives. In response to this question, interviewee 1 stated that:

For like the verbally discussing um we got to spend a lot of time just talking about like what we were doing and if we had any questions and get a better understanding of what our role is and what is involved in being a nurse in the OR, so that was helpful. Also it was helpful because …so I guess that would maybe be like a classmate thing too, I don’t know, but like discussing where each of us was at as far as like our progression and sharing that we both had the same experiences.
Interviewee 2 responded by stating:

Well deep concentrated thought just thinking about it. And then verbally discussing my concerns with family, family and friends as they’re asking how…how it is going and …and self-evaluation You know is this something I still want to do, which I still enjoy it. It still wasn’t quite what I thought it was but it’s still good.

Interviewee 3 stated:

Well I had various preceptors. I had probably 4 or 5 during the 9-month period and obviously they’re all very different again, so some of them specifically the one… I ended up joining the heart team. Specifically I would say my preceptor on the heart team. She has a great personality. She was always very caring. I think I got a lot of the way I am today from her, so I would say she was definitely a big part um and she’s also probably the reason I ended up joining the team I did was just because I love the way she does everything. I think she’s a fabulous nurse. I would definitely want to be under her care, so I think that’s a really big part of it.

Interviewee 4 followed up by saying:

Internship, actively being a nurse, just being…being in an OR nurse role I guess just during internship and being able to experience different patient situations that would cause me to think in a different way than I would have as a tech.

Interviewee 5 specified:

Internship, actively um being a nurse, just being…being in an OR nurse role I guess just during internship and being able to experience different uh patient
situations that would cause me to think in a different way than I would have as a tech.

Interviewee 6 stated:

Oh, besides like a person or…, well I guess the experience that from hearing about the experience what had happened, the breaking down the field. I’m just thinking of this in particular, this… this topic, but yeah. I guess from other people’s experiences or from people.

Finally, interviewee 7 stated:

Uh actually… I can see… other than here for the… for personal concerns, just for concentrated thoughts are reading and personal learning or just this one will really help you know improve everything, self-evaluation, everything this will help in improving your knowledge and so it always helped me to be a better one you know, to improve myself in.

**Interview question 6.** This question asked the respondents what could have been done differently to have encouraged the change in perspective and, if there was anything, which specific activities. Interviewee 1 stated: “Probably more either bringing it to your attention or education on the possibilities of ethical dilemmas you may face in your nursing that you’re going to have to…” Interviewee 2 stated:

I guess maybe just more discussion with your… your teacher about what’s… what are your expectations of the OR before you get started. What are you thinking you’re actually going to be doing in the OR compared to what you actually are doing in the OR, because we don’t have as much uh patient contact.
There’s a lot of computer work and a lot of ...I’ve heard a lot of people say a lot of gophering, so yeah, go for this, go for that.

Interviewee 3 responded: “I don’t...I can’t really think of any. I think that overall it was pretty helpful and there isn’t anything I can think of.”

Interviewee 4 specified:

I guess just maybe more talk about how we treat our patients and rather than focusing on just how you...what you...the questions you ask in your interview, because that was a big focus was I remember having my little note card with all of that written down and that was the only thing I was concerned about because they made it such a big deal, and I think that kind of made us blind to the way you treat your patient, because you go in there and you’re all focused on your interview and then you just ask your questions and you’re like I’m done. And really that’s not... I mean there’s more to the patient than that, and I think but that comes with time too. I think just becoming more comfortable you know with your surroundings and just in your role too, but that would have helped I think just more don’t focus all on this and make sure you talk to your patient otherwise.

Interviewee 5 stated:

Gosh, I don’t know. A lot of the... I don’t know that there was any particular thing in like the class framework very much deals from a different perspective I guess than actually being in the OR and caring for a patient as far as the stuff that you learn in lab about doing a prep and clean to dirty technique. None of that stuff changes how you think medically about a patient as a whole rather
than thinking about a patient as a case when you’re a tech. So just…I think overall the coursework gives you a good foundation to start that from, but without internship, without clinical in or hours I don’t know that there’s any particular thing you could do outside of…outside of an orientation internship where you’re doing hands-on patient work that could have actually exposed you in a way to…to think like that.

Interviewee 6 responded with: “Well, maybe to hear more …more encounters, maybe more stories and then maybe to have maybe infection control or something come and talk to us about infection rates and like just to kind of drive in the point.”

Finally, interviewee 7 stated:

To tell you honestly probably add more topics you know and …all this…you know the other program, the perioperative uh nursing program is okay already for the beginning because as you go along with your training you learn more, you get prepared, so there is nothing really much to change except probably add a few more important like for emergency cases, but they’ve got some of that already, but yeah. I don’t see any much to change in there for the lectures-wise.

**Interview question 7.** Interview question 7 consisted of asking the respondent a number of short answer parts to questions designed to encourage reflection on the change in perspective. Question 7a asked when the respondents had first noticed that their perspectives were changed. Interviewee one responded with: “Probably…probably mid-change.” Interviewee two stated: “I think once it happened entirely, maybe about a year later.” Interviewee three replied with: “I think I started to realize while it was happening, but then I fully realized after it had happened looking back.” Interviewee 4 stated: “I
would say after it entirely happened, probably when I was at home like thinking about the day, that’s when I realized.” Interviewee 5 replied:

Definitely while it was happening, while… definitely while it was happening I had an experience where as an intern I was in a trauma case and I realized that my instinct is instantly for my attention to go to the operating field to run for instrumentation or supplies for the field. And I’m watching the nurse who is precepting me gather medications and help anesthesia troubleshoot with blood pressure and different ways that they can toy with things to get volume back up because there was a bleed happening. Seeing that person encompass that role and realizing that it’s going to always be my first response to go to the field and I’m going to have to make myself say whoever else is in the room does the field; I have to do this until I’m comfortable with it. This is a different way for me to think than what I’m used to. I need to do this until I’m comfortable doing that. So definitely predisposed to or during for sure.

Interviewee 6 stated: “Once it entirely happened I think.” Interviewee seven stated:

Actually while it was happening. During the lecture actually when we were undergoing perioperative nurse nursing I realized that there is a lot of things I haven’t you know I have no idea even though I’ve undergone perioperative nursing back in the Philippines there’s still a lot of you know new things. And besides you know there’s a lot of updates of in nursing-wise, so yeah, it truly helps in acquiring those knowledge policy-wise because you know different policy from different hospitals and how they do things culture-wise it’s different also back in the Philippines. So it’s really knowledge improvement and so…so
while we are undergoing perioperative nursing I really appreciate the knowledge that that gave me and as I said yeah, there’s some…I realize that it’s making an improvement with my skills and knowledge.

Question 7b asked the respondents what made them aware that the change in perspective had occurred, Interviewee 1 stated: “Realization that at one time I was okay with it and all of a sudden I was like well this is a little bit beyond my…my feeling okay.” Interviewee 2 felt: “Looking at my assignments for the next day going ‘Oh yuk’ or ‘Oh yeah.’” Interviewee 3 responded: “Once I got done with the program and that…that I was able to put everything together and then reflect back.” Interviewee 4 stated:

Probably people telling me how much better I was doing or making…my preceptors comments about you know well you’re really doing this and making me feel like I had actually come out of my shell a little bit and was acting more like I wanted to be acting.

Interviewee 5 replied with: “I guess realizing that in retrospect to it happening I guess realizing that I can assume any of those roles comfortably.” Interviewee 6 stated:

Oh I had, I can’t think of the word, but I somehow touched a sterile field. It was just like a Foley kit, um so once I had touched part of it that I shouldn’t have so I went ahead and grabbed it and threw it away and got another Foley kit.

Interviewee 7 responded with:

Well as um self …reflection and then you know by yourself that what your knowledge was and how…where your level is, so yeah and then practice-wise if I should do hands-on and you realize that I’ve never done this before and now I’d be…. Sometimes there’s a lot of simple things that you might think oh it’s
easy, you can just figure things out, but no, if you want to do things safely then
you know you have to learn the small details of that procedure, so yeah, how
you did…hands-on and practice.

Question 7c then asked the respondents: “What did your being in the
perioperative training program have to do with it?” In response, interviewee one stated:
It helped us…helped me realize that there was others…that we could go to and
talk to if we were having with it. It lined us up with not only did it give us
preceptors, it gave us mentors and also in the OR. It basically gave you…let you
know that you had a backup if you needed it.

Interviewee 2 responded: “I don’t think the perioperative training had any…anything so
much to do with that. It was just a learning experience of what I liked and what I didn’t
like to do.” Interviewee 3 stated: “I think that’s what made me aware of it.” Interviewee 4
related:
I don’t actually think it had much to do other than the precepting part. I don’t
think the actual like in-class training really had much to do with it. I think it was
more hands-on learning from the other preceptors that helped with it.

Interviewee 5 stated:
What did my perioperative training have to do with it? The ability um the
support of your teachers and a hands-on experience to allow you to think about
one train of thought until you were comfortable having a bigger picture and
being able to troubleshoot and prioritize those things on your own
independently.
Interviewee 6 responded with:

Oh well, I keep going back to my perioperative 101 class because I think that was really a big part of the education. The...the day to day, like we learn and everything is important too, but like these bigger points I think we covered in periop 101 like prioritizing when they talked about then, what to do if you have to get the crash car, like all these things I think periop 101 is what kind of brought…brought it to my attention to begin with, because I haven’t really gone back to those things in the OR per say just because cases haven’t been out of control. Everything has been you know just normal.

Lastly, interviewee 7 did not respond to this question.

Question 7d asked the respondents: “What did you do about it?” Interviewee 1 did not respond to this question. Interviewee 2 responded with: “I look at it as a positive. I have a job. I enjoy what I’m doing, but not everybody enjoys every single day that they are doing stuff, but…..” Interviewee 3 felt: “I was able to take um what I knew as far as what people thought of an OR nurse and what I thought and um try to put that altogether to become a better nurse and provide better care.” Interviewee 4 stated: “Well I changed my whole way of doing things obviously.” Interviewee 5 felt:

Just actively seeking information that as it comes up that you realize isn’t something you’ve thought about isn’t a way that you thought about it before you um you talked to your preceptor, you talked to the doctors and the anesthesiologists that you work with saying, ‘Hey you know, I notice that you’re starting to…to fuss back there and I’m seeing this and this in the monitor. I want to know you know had I asked you when I first started to notice
blood pressure dropping if there was something I could do; you know does that make me more helpful to you. Because I saw you starting to fumble over there and I’m waiting for you to ask me for what you need.’ You know just using the…accessing and being a good communicator and using the knowledge that’s around you to gain…to gain from. And I mean you can…you can leave and do bookwork research, but the team around you is a wealth of knowledge in different ways if you speak to them and ask them questions. You might go look it up in a different way than you would have if you had not.

Interviewee 6 stated:

Oh yeah, into my…into my practice or into yeah…Not everything right away because I mean them…they have a great training program here where you kind of step by step you know. Our orientation is a yearlong so I’m still in the orientation right now, but um like I said not everything all at once, but step by step.

Interviewee 7 did not respond to this question.

Finally, question 7e asked, “How do you feel about the change?” To this, interviewee one replied: “I think it was a good one.” Interviewee 2 responded:

I think it was a good one. I mean if I was put in eyeballs every single day or tonsils and adenoids every single day I would probably go speak to somebody about it, but it gets mixed up and everybody takes their turn.

Interviewee 3 stated: “I think it’s good. I think that it’s like knowing the past and going through it that I…that it makes me a better nurse.” Interviewee 4 felt:
I think it’s a good change and I think I still have work to do, but I think that…I definitely think I’m a better nurse and people are more comfortable with me taking care of them now.

Interviewee 5 relayed:

I feel like definitely it has made me um a bigger asset in the OR than someone who maybe wouldn’t have…wouldn’t have realized that it is an asset, but it’s also a drawback to maintain a certain line of thought from a previous position where you only have part of the picture I guess.

Interviewee 6 responded with: “Good. Good. It’s good to have a conscience, you know, with the…that you know no one is watching you, but it’s very important you know to have that I think.” Finally, interviewee 7 simply stated:

Well I’m very happy and it really makes me confident too you know in my daily work activity. Knowledge and personally it really improved my…really improved my knowledge and my skill as well, so I’m really more confident in tackling my daily work activities, so yeah.

Finally, Question 7f asked if the respondents had any comments. Only two out of the seven participants had any comments. Interviewees 1, 3, 4, 6, and 7 responded by stating that they do not have any comments. Interviewee 2 stated:

I enjoyed the program. It would have been nice maybe to get a little more um hands-on, say working with the equipment with it wasn’t sterile. Knowing how to hook up light switches, maybe playing with some of the suture so that I would have a personal better idea when they say I need a closing needle, what a closing needle was, and you know, just some of the equipment working actually
hands-on holding the equipment and playing with it and looking at spinal stuff and this is how it actually gets put in the spine and these are how the rods work and stuff. So I guess more hands-on with the actual stuff so when they were asking for things I knew what they were asking for and why and what it does.

Interviewee 5 responded with:

I don’t know what they would be about. I thought um for some reason the way it landed with me when I did bookwork class work and my nurse um orientation classes here when I first came here as a perioperative nurse I was on my own. I didn’t have classmates and I think…I think it would have changed the experience. I don’t know for better or worse, but I can’t imagine seeing other people what they were struggling with or um I think it just provides… It would have provided um…I don’t even know how to say that, a bigger opportunity of learning to be experiencing that with other people rather than just singularly, to go you know what I just…I couldn’t…I did this module about sterile technique today and I just couldn’t wrap my head around it. You know to have other classmates that are doing the same thing as you to bounce those ideas around with I think would have been…would have been to my benefit, but for bookwork part I was by myself, so I think maybe that. I don’t know if it can be avoided, but I think that’s not maybe the best…the best position to begin from.

**Thematic Analysis**

The participants’ responses were analyzed for themes utilizing inductive analysis (Percy & Kostere, 2008) and techniques illustrated by Cohen, Khan, and Steves (2000).
The following themes were identified: ethical development, storytelling, empathy, self-reflection, and deep discussion.

Part of each nurse’s development is the creation of a moral-ethical compass, which is part of every perioperative nurse’s training. These are respect for autonomy, beneficence, non-malfeasance, veracity, justice, confidentiality, and fidelity (Burkhardt & Nathaniel, 2008). First, perioperative nurses must respect the right of patients to choose what is right for themselves and act in ways that always benefit the patients and will not cause harm. Second, nurses must respect the confidentiality of the patient and deliver care equally to all patients in their care. Finally, patients also have the expectation that the nurses taking care of them live up to all of the expectations of the profession. The American Nurses Association (ANA) Code of Ethics defined this expectation, which is to be followed by every registered nurse. In addition, the Association of periOperative Registered Nurses (AORN) published the Perioperative Standards and Recommended Practices (AORN, 2011), which is updated annually and provides ethical guidance for professional behavior. New perioperative nurses must learn these standards and recommended practices for the purpose of guiding their own practice.

Ethical development was illustrated in the response of one interviewee when she was dealing with the near death of one of her patients. She was conflicted regarding the outcome of the surgery. She stated that “it was very tough” working in surgery because of being faced with ethical decisions. Another student also discussed “the possibilities of ethical dilemmas you may face” and the need for education regarding this issue.

Other statements by the respondents reflected the moral-ethical development of the perioperative nurses during their training, which demonstrates beneficence:
As far as morals and values like surgical conscience that they teach that we are taught during orientation that you know if you do accidentally touch something on a sterile field that you’re not supposed to, you know, no one sees it but you have to remember that your surgical conscience that you saw it.

Another interviewee stated:

I wanted to make sure that I was the nurse that took the time, got to know the patient, even had a little conversation with them about things other than the surgery, even though we’re not with them for you know hours like people are on the floor. That’s one of the big things that I’ve seen change in myself is that I wanted to have that extra thing with that patient.

Ethical principles developed by the ANA define the principle of fidelity. The principle states that the nurse is required to be loyal, fair, truthful, dedicated, and act as an advocate for the patient. Statements made by the respondents reflect these ethics, such as “what I thought and try to put that altogether to become a better nurse and provide better care.”

Another example of a principle is non-maleficence, which is the avoidance of harm or hurt and is at the core of nursing ethics as illustrated by the statement “You want to be better and change yourself and be prepared for whatever it is that you…that might happen, so whatever learning that you know even if it’s not called for sometimes.”

Another example of what one participant stated about not causing harm is “it’s good to have a conscience, you know, with the…that you know no one is watching you, but it’s very important you know to have that I think.”
Finally, the example in this statement that illustrates the principle of beneficence is:

I can definitely see changes in myself um just in the way I treated patients and in things that I saw in other people that made me kind of say well I don’t want to be like that or I would like to be more like that.

Scenarios are a form of storytelling in which an example of a past event is relayed to the learner and the learner then responds with different solutions to the problem presented. Storytelling was also used to relate concepts important to the perioperative nurse trainee. The stories told are “reflective, creative, and value laden” (Haigh & Hardt, 2011) and can relate information that will have an impact on how the trainee will practice. Stories transmit norms, values, and an ethical-moral framework to the trainees (2011). They are used describe the experiences of veteran perioperative nurses to allow reflection on clinical practice and to build camaraderie. Storytelling helps new perioperative nurses build on their understanding and develop solutions to problems in practice (Bratt, 2009).

Storytelling was mentioned a number of times by different participants. An example of this was “we had one session where a couple of nurse educators from the (different) hospitals gave examples of something that happened.” Another example was stated by one of the participants hoping that perhaps “more stories” could be told that would “drive home the point” of the lesson: “Well I guess the experience that from hearing about the experience what had happened, the breaking down the field.” A further example is: “they gave you an example and it would have a mock emergency um scenario that prepared you really” and “So because they give us a scenario and we have
undergone um things and lessons, lectures on what you are going to do in case this thing happened.”

Empathy is the ability of nurses to provide understanding, validation, comfort, and support for the patient (Williams & Stickley, 2010). In the course of their training as nurses and perioperative nurses, an awareness of the suffering of others is developed. It is part of the caring environment that is established through a “relationship that is authentic, transpersonal and caring” (Lukose, 2011, p. 27). It is part of the holistic aspect of nursing in which human to human care is central to the practice (Clarke, Watson, & Brewer, 2009).

Empathy was illustrated through the experience of participants in an appreciation for the plight of the patients cared for. One statement included: “We are with the patient for a very short time before they go to sleep and I feel that the time there makes or breaks how the patient feels about the whole surgical experience.” Another statement was:

I wanted to make sure that I was the nurse that took the time, got to know the patient, even had a little conversation with them about things other than the surgery, even though we’re not with them for you know hours like people are on the floor.

Another interviewee mentioned that “To think about a whole patient rather than just a case was very different.” Another stated: “Think medically about a patient as a whole rather than thinking about a patient as a case when you’re a tech.” A different respondent stated: “I can definitely see changes in myself um just in the way I treated patients.”

Self-reflection is the practice of gaining insight into oneself and one’s practice through a conscious, dynamic process of thinking about and learning from an experience
Self-reflection must be a deliberate process to analyze the experience and learn from it. This process can be enhanced by the educator who acts as a guide to the trainee by providing a framework for analysis (2011). It is a process that is used to examine practice and learn about oneself from the experiences one has had. It also allows the student to try to apply what has been learned in different situations, which implies needed flexibility and adaptability (Kuiper, 2004).

Self-reflection was one of the processes used by the perioperative trainees to improve their practice. One participant stated that she “did a lot of self-reflection” when discussing a learning experience. Another participant thought that this would help in “improving [herself]” and that self-reflection helps to “know by yourself” what one’s knowledge level is. Another participant stated:

I can definitely see changes in myself just in the way I treated patients and in things that I saw in other people that made me kind of say well I don’t want to be like that or I would like to be more like that.

When asked about what influenced a change in perspective, the following examples of reflection were given. One participant stated that “personal reflection” was one of the reasons. Another said “[She] was able to put everything together and then reflect back.” The following statement was also made: “I guess realizing that in retrospect to it happening I guess realizing that I can assume any of those roles comfortably.”

Deep discussion is part of the critical thinking process. It is a process that involves more than just passive listening and higher level thinking (Wittmann-Price & Godshall, 2009). It promotes reflection on clinical practice and a deeper understanding of problems faced by not only the individual learner, but by other learners as well. Deep
discussion promotes appreciation of different perspectives and how problems can be solved (Ellis & Calvo, 2004). It leads to new ways of thinking through the examination of experiences. The following statement of one of the respondents is an example of deep discussion:

Like the verbally discussing we got to spend a lot of time just talking about like what we were doing and if we had any questions and um get a better understanding of what our role is and what is involved in being a nurse in the OR.

Also, another example would be: “Clarify what are your expectations of the OR before you get started,” as well as: “Actively seeking information that as it comes up that you realize isn’t something you’ve thought about isn’t a way that you thought about it before you um you talked to your preceptor.” Another participant gave the example of “Verbally discussing my concerns with uh family, family and friends as they’re asking how…how’s it going.” An additional participant cited “Verbally discussing your concerns,” while another stated: “Realize that there was others…that we could go to and talk to if we were having with it.”

Findings for Research Question 1

“Has transformational learning occurred during the process of completing a perioperative nurse’s preparation program?” The quantitative data that were collected from the participants indicated that they had experienced a change in their perspectives and that seven of the participants had themselves identified that their perspectives had changed since entering the perioperative training program. The interviews not only acted as a triangulation of the data collected, but also revealed that transformative learning had
occurred. Transformative learning is demonstrated by meeting Mezirow’s (1991) 10 stages of perspective transformation. Some examples of meeting these stages are reflected in the statements of the respondents in the interviews.

As an example of a disorienting dilemma, one participant stated, “once we got out of school we were never really properly prepared, because in textbook it’s not really what we really encountered in real life.” A different participant illustrated another example of a disorienting event: “I never really handled how to do emergency cases. Sometimes I before I get into this area I was even afraid to …to you know act on an emergency thinking that I might do something wrong and might do more harm than helping.”

Another participant stated that she felt working as a perioperative nurse “is a very different perspective” from being a tech in the operating room.

An example of self-examination would be one participant’s explanation of how she became aware that a change in her perspective had occurred: “…self-reflection and then you know what your knowledge was and how what your level is.” Another participant stated that after she had a particularly psychologically challenging case, it caused her to think about her own life: “…probably on that case I did a lot of self-reflection, if I were in this position would I want this for me?”

Critically assessing one’s assumptions is illustrated by this response from a participant that thought about her assumptions before becoming a perioperative nurse. She stated: “I was a surgical tech for five years before I became a nurse, and so to think about the same problems or the same challenges from a very different perspective.”

Recognition that others also questioned their beliefs is demonstrated by this participant’s response: “We got to spend a lot of time just talking about like what we
were doing and if we had any questions and get a better understandings of what our role is and what is involved in being a nurse in the OR.” Another participant stated: “it helped me realize that I there were others that we could go talk to.”

As an example of integrating into one’s life taking action and adopting the new role, one participant stated: “I think it is a good change and I think that I still have work to do, but I think that…. I definitely think that I’m a better nurse and people are comfortable with e taking care of them now.” Finally, another example would be the statement from another participant:

I feel like it has made me a bigger asset in the OR than someone who maybe wouldn’t have…wouldn’t have realized that it is an asset, but it’s also a drawback to maintain a certain line of thought from a previous position where you only have part of the picture I guess.

Findings For Research Question 2

Research question 2 was: “What has the new perioperative registered nurse experienced in the process of becoming a professional perioperative registered nurse?” This question was answered both by the data collected in the initial and follow up surveys and the interviews. The data (see Table 23 and 24) showed a list of activities and assignments that all of the participants felt were a part of their experience during their training as perioperative nurses. Activities chosen by the graduates also appeared as activities that support a change in perspective, which is necessary for transformational learning. In addition to the activities illustrated, the participants also felt that hands-on training, the use of scenarios, and the lectures also helped to prepare them for their new role.
Findings For Research Question 3

Research question three was “What experiences does the new perioperative registered nurse feel contributed to the success of their transitioning into a professional perioperative nurse?” Participants stated that activities such as learning critical thinking skills, personal reflection, and verbally discussing concerns helped them to transition into a perioperative nurse role. An example of this was the following statement by a participant: “They taught us how to think deeper, more reasons why behind it instead of just this is the way it is and just be done with it.” Another stated:

For like verbally discussing, we got to spend a lot of time just talking about like what we were doing and if we had any questions and get a better understanding of what our role is and what is involved in being a nurse in the OR, so that was helpful.”

Additionally, another participant felt the hands on training contributed greatly to her transition. This participant stated:

So just …I think overall the coursework gives you a good foundation to start from, but without the internship, without clinical in OR hours I don’t know that there is any particular thing you could do outside of an orientation internship where you’re doing hands-on work that could have actually exposed you in a way … to think like that.

Finally, another participant stated: “I think it was more hands-on learning from the other preceptors that helped with it.”
Conclusion

This chapter discussed the results of this phenomenological case study, focusing on the lived experiences of graduates of perioperative training programs using a mixed method approach. This study was conducted with participants from perioperative training programs who have completed their training program during the last 2 years (2010-2012) at healthcare facilities located in Illinois. A total of 15 participated in the first initial Learning Activities Survey (LAS), with seven of those original 15 participants participating in the follow-up survey and interview.

The data analysis showed that there had been changes in the perspectives of seven of the participants, which resulted in transformational learning. The interviews also showed that transformational learning had been demonstrated by their responses to the interview questions. The results also revealed what the graduates had experienced during the perioperative program and what the participants felt contributed to their successful transitioning into perioperative nurses.
CHAPTER 5. RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

This chapter reviews the purpose of the study, the findings, and their relationship to the literature. It identifies the methodology and research design used to complete this qualitative case study. In addition, the limitations and implication for practice are discussed. Finally, the conclusion will summarize the research contribution to the knowledge base of nursing practice.

The purpose of this case study was to determine which learning and support activities factor into transformational learning that occurs as a result of completing a perioperative preparation program for registered nurses in order to improve retention in healthcare institutions that face a critical shortage of registered nurses. Results of the research will also help educators understand the personal developmental, cognitive, social, and professional changes undergone by the learners.

This phenomenological, purposive, mixed method, two-phase case study used a partially mixed sequential dominant status design that explored the lived experiences of nurses who have transitioned into the role of perioperative nurses following the completion of a training program. The nurses in the program reflected on the meaning of their experiences and its relationship to their becoming perioperative nurses.

**Summary of the Findings**

The data indicated that seven participants identified themselves as having had a change in their perspectives after completing the perioperative training program. The change in perspective is part of the process of transformational learning (Mezirow, 2000). The results of the study also identified activities that supported the change in perspective necessary for transformational learning to occur. In addition, during one-on-one
interviews, the perioperative graduates were able to describe experiences that they felt had contributed to the success of their transitioning into the role of a professional perioperative nurse.

Quantitative data indicated that participants had experienced a change in their perspectives. The participants experienced a disorienting dilemma in which they realized that their education did not prepare them for what was encountered during their workday. Participants also became aware of changes in perspective during their transition to their new role and their integration into professional life.

The experience that 73% of participants felt was most helpful for transitioning into the role of a perioperative registered nurse was their preceptor’s support, followed by being able to discuss their concerns. Also important was a challenge from their educator/preceptor and a personal learning assessment. Finally, support from other learners in the training program was seen as important as a personal learning assessment.

**Discussion of the Findings**

There were three research questions answered during the process of completing this study. The first question of the study was: “Has transformational learning occurred during the process of completing a perioperative nurses’ preparation program?” Quantitative data indicated that participants had experienced a change in their perspectives. Seven of the original 15 participants identified that their perspectives had changed since entering the perioperative training program. Interview results not only acted as a triangulation of the data collected, but also revealed that transformative learning had occurred.
The second question of the study was: “What has the new perioperative registered nurse experienced in the process of becoming a professional perioperative registered nurse?” This question was answered both by the data collected in the initial survey of the original 15 participants and through the follow-up surveys and interviews of the seven participants who qualified for the second phase of the study. The data showed a list of activities and assignments that all of the participants felt were a part of their experience during their training as perioperative nurses. Activities chosen by the graduates also appeared as activities that supported a change in perspective, which is necessary for transformational learning. In addition to the activities illustrated, the participants also felt that hands-on training, the use of scenarios, and lectures helped to prepare them for their new role.

The third research question was: “What experiences does the new perioperative registered nurse feel contributed to the success of their transitioning into a professional perioperative nurse?” For this question, participants stated that activities such as learning critical thinking skills, personal reflection, and verbally discussing concerns helped them to transition into a perioperative nurse role. An example of this is the following statement by a participant: “They taught us how to think deeper, more reasons why behind it instead of just this is the way it is and just be done with it.” Additionally, one participant felt that the hands-on training contributed greatly to her transition. This participant stated that the coursework provided a foundation, but the hands-on work made transition possible.

**Discussion of the Findings in Relation to the Literature**

There is a gap in knowledge regarding transformational learning and the lived experiences of the new perioperative nurse and nursing students in general. To contribute
to nursing knowledge, this study may be seen as new knowledge regarding transformational learning in the process of transitioning into the role of a perioperative nurse. The results of this study showed that during the transition of becoming a perioperative nurse, seven of the 15 perioperative students had experienced transformational learning.

Mezirow (1990) asserted that transformational learning occurs as a result of completing 10 stages of perspective transformation (Cranton, 2006). Mezirow (1990) also stated that some of the critical components of transformational learning are critical reflection and self-examination (Mezirow, 1990). While Mezirow (1990) noted that transformational learning occurred as a result of a disorienting event, others have proposed that transformational learning can be developmental in nature, occurring over time and being influenced by perceptions and experiences (Merriam, 2004). Others such as Dirkx (2000), Taylor (2000), and Courtenay et al. (1998) have noted that transformational learning can occur over an expanse of time, can lurch forward and regress, and can even happen through the process of everyday occurrences. Eisen (2001) wrote that transformational learning is epochal and can occur through incremental changes from acquiring new knowledge and skills. Learning does not happen in isolation; rather, it is collaborative and new knowledge is acquired through the interaction of others (Windschitl, 1999).

In this study, seven perioperative nurse graduates that had experienced transformational learning met each of the requirements for transformational learning to occur. During the individual interviews, the perioperative students’ comments reflected that they engaged in collaborative learning through deep discussions with peers, which is
one aspect of critical reflection. Critical reflection, self-examination, and disorientation had a direct relationship on the transformational learning of the perioperative graduates.

Moral and ethical developments were also evident in interviews with the graduates. Burkhardt and Nathaniel (2008) wrote that these values are autonomy, beneficence, non-malfeasance, veracity, justice, confidentiality, and fidelity. The program graduates viewed ethical principles as being of the utmost importance.

Changes in self-image were apparent in the comments made by the perioperative students. Rothrock (1989) discussed these changes in self-image that the perioperative nursing student experiences when she suggested that these changes are necessary and part of the socialization process. During the socialization process, the student perioperative nurse interacts with other experienced nurses as well as nurse preceptors, who assist in the adoption of this new role. In the new role, the perioperative graduates felt that they perceived themselves differently after completing the training program.

The perioperative students were adult learners. Adult learners are goal-directed, purposeful, and goal-oriented (Cross, 1981). Becoming a perioperative nurse is a goal that is chosen by the individual learner. As a goal-oriented student perioperative nurse, the adult has decided that this is the career path that they have chosen. In order to complete this career goal of becoming a perioperative nurse, one must complete a rigorous perioperative training program. The perioperative student must be goal-oriented as the training program consists of steps that must be achieved to succeed as a graduate.

**Limitations**

This was a case study consisting of a purposive sample of 15 participants drawn from the perioperative training programs of two healthcare facilities. The size of this
sample limited the generalizability of data to a larger population. This study did not take into consideration the differences in teaching styles of the perioperative educators and differences in the delivery of curriculum. The study also did not take into account the resources available for providing perioperative training at the two healthcare institutions.

Merriam (2000) suggested that one of the issues that affect qualitative research and case studies is that of generalizability. Due to the fact that this research has a small sample, its generalizability may be limited. Creswell (2009) also suggested that in qualitative research, it is the strength of the rich descriptions and “themes developed in the context of a specific site” (p. 193) that are important, rather than its generalizability.

Bias can enter the results of a qualitative study in that the researcher has control over what information is reported (Creswell, 2009). This researcher has been employed in the perioperative area for more than 30 years in staff, supervisory, and educator positions at different healthcare institutions across the United States, which can color how one views the training of perioperative nursing students. By recording and transcribing the responses of the participants verbatim, objectivity was maintained and bias was eliminated.

In the interviews, the possibility of the integrity and sensitivity of the researcher can be questioned (Merriam, 2009). In order to address this possibility, the data collected was shown to the participants who confirmed their answers following the administration of the questionnaires. In addition, the transcripts of the interviews were checked against the recorded interviews. Interviews with the perioperative students confirmed the data collected in the survey. The different sources of the information collected support the themes identified in the study (Creswell, 2009).
Finally, the experience of researchers can be examined because they perform the data collection and analysis (Merriam, 2009). This study was undertaken using a process that had been completed many times in the past by different researchers using the same or slightly modified instrument (King, 2009). In addition, a peer reviewed the process of the study so that the quality of the study “will resonate with people other than the researcher” (Creswell, 2009, p. 192).

Implications of the Findings for Practice

Educators should note that identified themes of ethical development, storytelling, empathy, self-reflection, and deep discussion were supported by what the learners felt contributed to their successful transitioning into perioperative registered nurses. Perioperative students reflected that specific learning activities were helpful to the transition to perioperative nurse. Activities such as preceptors’ support, verbal discussions of concerns, challenges from their educator/preceptors, personal learning assessments, and support from other learners helped them to transition into their role as a perioperative registered nurse.

According to the findings, other individuals in the learning environment assisted with the change in perspective leading to transformational learning. The learners as the perioperative educators, perioperative preceptors, as well as peers in the program identified those individuals. The most valuable activity that the peers provided was support. This support resulted in close relationships between peers, perioperative educators, and preceptors. Relationships are important for the development of transformational learning. Without the support provided from these relationships, critical
reflection may have occurred as deep concentrated thought and self-reflection is much less likely to take place (Taylor, 2000).

The students of the perioperative program saw the position of the perioperative educator as being very important. The students stated that the educators and preceptors played an important role in their educational experiences in both the interviews and in the responses to the survey questions. Their answers led this researcher to believe that the role of the perioperative educator and perioperative preceptor is of critical importance and that there should be a method of documenting competence in both the role of perioperative educator and preceptor.

Results of the interviews also demonstrated that support through the open, non-threatening exchange of ideas and experience is important. This support provides a safe place for the student to develop a fundamental sense of trust (Daloz, 1999). When students can trust, they can compare their thoughts and ideas with others. Assignments could be developed and introduced that encourage this activity. This trust will help the student to develop confidence and move forward (Daloz, 1999).

**Recommendations for Further Research**

As the sample size was small, further investigation into the activities that support transformational learning in perioperative training programs is needed. A longitudinal study could be initiated to determine whether these graduates continue in the field of perioperative nursing. In addition, this study could be repeated with a focus on individuals who did not complete the training program to see what barriers they experienced in their training.
This study may be replicated using additional sites, a larger population, and a variety of training programs. Additional research may use a comparative study examining programs that are completed using the perioperative training program developed by AORN, programs that were designed by perioperative educators, and also unstructured training programs.

**Conclusion**

This study illustrated that perspective transformation occurred among the perioperative nurse graduates. It also demonstrated that transformational learning had occurred in 47% of the participants. Three research questions were answered: (1) Has transformational learning occurred during the process of completing a perioperative nurses’ preparation program? (2) What has the new perioperative registered nurse experienced in the process of becoming a professional perioperative registered nurse? (3) What experiences does the new perioperative registered nurse feel contributed to the success of their transitioning into a professional perioperative nurse? This case study also helped to fill the gap in knowledge regarding the extent to which changes in self-perception occur as a result of completing a perioperative nurse’s training program. It also helped to determine which learning and support activities factor into transformational learning that may occur as a result of completing a perioperative preparation program for registered nurses. Finally, the process of describing the lived experiences of the perioperative nurse graduates helped to determine the extent to which transformational learning occurred as a result of completing a perioperative preparation program for registered nurses and helped to inform pedagogical practice.
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APPENDIX

RELATIONSHIP OF QUESTION ONE TO MEZIROW’S TEN STAGES OF PERSPECTIVE TRANSFORMATION

Each item in question one relates to a specific stage in Mezirow’s Ten Stages of Perspective Transformation. For example, if a study participant selects 1. a. I had an experience that caused me to question the way I normally act, this answer would directly relate to stage one of Mezirow’s Ten Stages of Perspective Transformation.

Association with Mezirow’s Ten Stages of Perspective Transformation

<table>
<thead>
<tr>
<th>Stage 1: Item 1a &amp; Item 1b</th>
<th>Stage 2: Item 1c &amp; 1d</th>
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<tbody>
<tr>
<td>Stage 3: Item 1g</td>
<td>Stage 4: Item 1e</td>
</tr>
<tr>
<td>Stage 5: Item 1f</td>
<td>Stage 6: Item 1i</td>
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<tr>
<td>Stage 7: Item 1j</td>
<td>Stage 8: Item 1h</td>
</tr>
<tr>
<td>Stage 9: Item 1k</td>
<td>Stage 10: Item 1l</td>
</tr>
</tbody>
</table>

(King, 2009, p. 15)

Mezirow’s ten stages of Perspective Transformation

1. A disorienting dilemma
2. Self-examination with feelings of fear, anger, guilt, or shame.
4. Recognition of one’s discontent and the process of transformation are shared.
5. Exploration of options for new roles, relationships, and actions.
6. Planning a course of action.
7. Acquiring knowledge and skills for implementing one’s plans.
8. Provisional trying of new roles and relationships.
10. A reintegration into one’s life on the basis of conditions dictated by one’s new perspective.

(Mezirow, 2000, p. 22)