Examining generational learning: adaptation of non-traditional student learning through exposure to others in the classroom setting

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Acknowledgement and Dedication

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Abstract

This interpretative phenomenological analysis study was conducted to understand the barriers and altered learning styles within a multigenerational classroom used by non-traditional students. A definition of non-traditional student was obtained and this served to assist in the development of the study sample. Inclusion criteria needed to be met were non-traditional students older than twenty-five years, English speaking, no prior experience in higher education, and having experienced a barrier to their learning which caused alteration in their learning style. Semi-structured individual interviews of 10 currently college students were held in a private area of a health sciences college. Key terms of barriers, learning and peers were used and multiple subthemes were found. The lived experiences of this sample helps current educators understand the thoughts and feelings non-traditional students have towards their learning and the barriers in which they have had to overcome in order to be successful in a nursing curriculum. Application of these findings while limited to nursing do discuss the need for educators to be clear, non-assuming of generation and preferred learning, and use a multitude of learning styles within the classroom to encourage critical thinking within the scope of nursing.

Key words: Non-traditional student, adult learning, ways of learning, barriers, nursing education
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Chapter 1: Introduction

The current undergraduate classroom is a mixture of several generations, Baby Boomers, Generation X and Millennial students. Recent literature and research segregates the preferred learning styles based on generational norms (Blake-Gleeson, 2007; Donaldson and Graham 1999; Kupperschmidt, 2000 and 2006; Weston, 2006). However, no one at this point, has addressed the relationship between altering styles through exposure. Due to the stressors of the adult student (balancing family, work, and studying), the attrition rate for these students has been high. The need to better understand how they best learn within a classroom in order to facilitate understanding of material in the most concise way due to time constraints is a gap in literature. The perceived learning barriers the non-traditional student experiences must be better understood so that educators may assist the student in overcoming them in order to encourage success within higher education.

Research Problem

Students learn in a multitude of different ways. Over the past several years, the make-up of the undergraduate classroom has changed. The number of non-traditional students, those seeking education later in life is increasing. No longer is a classroom made up of only one generation, representing the youngest generation of learners. Changes within the economy have pushed older students to return to school for second or third career changes (Altmann, 2011; Bureau of Labor Statistics, 2012). Because of the changing faces within the classroom, the traditional methods of teaching may not be ideal for the mixed generation classroom. If student needs are not met and information is not presented in a manner, which conveys meaning, the student loses interest. The retention rate decreases, and there is an increase in attrition within a
school of higher education. Therefore, the problem of exploring ways of learning within a multigenerational classroom in undergraduate higher education is the topic of interest. The problem of practice was explored, author bias towards the research project considered, research questions using a qualitative method are used and a review of current literature has been completed.

Previous research on learning has been conducted focusing on types of learning and needs of students (Donaldson, 1991; Baptista, 2011; Rossiter, 2009). Moving away from a pedagogy style and into a preferred andragogy approach within the classroom has been well documented by Malcolm Knowles beginning several decades ago with his breakthrough research in 1973. The idea of creating a learning environment where the student is a stakeholder within their learning and the teacher has the role of guide, instead of an all-knowing entity giving forth knowledge was Knowles premise. This andragogy style defined by Knowles works differently than that of a pedagogy style of teaching and learning where the students are in need of molding and the teacher is there to instill knowledge as they see best fitting for the student. Learning was passive instead of active. Using adult learning theory concepts, the current undergraduate classroom has been transformed into a complex learning system where the learner takes on increasing responsibility for his/her own needs (Knowles, 2011; Yorks & Kasl, 2002). In today’s higher education classroom a homogenous student, body is no longer present; different generations of students are the new norm.

There have also been additional studies reflecting generational differences and preferences in learning styles. Those of older generations may prefer materials in print form, lecture style classes, and group learning. Current traditional students and younger generations
choose individual learning, technology, and multimedia platforms to encourage information exchange within the classroom instead of a traditional classroom lecture.

**Deficiencies in the Evidence**

Although there has been research relating to how adult students learn, (Knowles, 2011) and generational differences in learning styles (Hatkevich, 2008; Rossiter, 2009), little research has been conducted regarding how they choose to learn. The assumption by educators to focus primarily on the preferred learning styles of a student based solely on age is incorrect. Instead, adult students with varied backgrounds bring many life experiences to the classroom. These life experiences may change his/her preferred learning style and how information is processed and learned. Additionally, there is a need to understand how exposure of a student to other learning styles may alter the student’s perception of learning. Incorporating the idea of Gardner’s (1997) multiple intelligences may help to explain how students learn best based on their more dominant form of intelligence. Gardner believed that intelligence can take many forms. Through his research, he surmised that there were eight types of intelligence a student could possess. In his theory, Gardner explains this as using the intelligence that is dominant within the person. Each intelligence is needed within society; it is unfortunate that due to long-term understanding and research focusing more on the use of mathematical logical, and verbal linguistic, little has been researched regarding other types of intelligence. Thus, mathematical logic and linguistics are the only two types of intelligence widely accepted in mainstream education.

Gardner’s (1997) eight intelligences include visual/spatial, verbal/linguistic, musical/rhythmic, logical/mathematical, bodily/kinesthetic, interpersonal, intrapersonal, and the
newest addition, naturalistic. The visual/special individual, through sight, is able to learn best by visualizing. The musical/rhythmic intelligence requires the person to view the world within what is heard, and he/she can easily decipher pitch, melody, and non-verbal sounds within the external environment. Logical/mathematical intelligence is the individual who is more apt at seeing patterns and relationships and can problem solve quickly. Finally, the naturalistic intelligence refers to the outside world based on what is seen within the environment.

The classroom is an environment where group interaction takes place, allowing for all types of learning. Besides the teacher facilitating the learning experience, having a mixed generational class brings within it many different perspectives and experiences. Exposure to different types of learning experiences within the classroom itself may alter the preferred method of learning by the student.

There is a mixture of types of studies documenting the categories of learning experiences and how students preferred to learn (Baptista, 2011; Donaldson, 1991; Hatkevich, 2008). The majority of these studies are qualitative in nature and descriptive focusing more on types of learning styles. Using the idea of differing life experience of non-traditional students will attempt to show how and why this type of student chooses a learning style within the classroom. Awareness of the phenomena of learning by the individual has assisted the educator in learning how better to create a learning environment within the classroom for all types of generational learners. Also, considering the effects of intelligence as multifaceted, with many different types, can affect the ability of the non-traditional student to learn. The use of the theory of multiple intelligences intertwined within the idea of life experience may ultimately affect the student’s ability to learn. This relationship among non-traditional student status, ways of learning, and the
theory of multiple intelligences impact the student’s preferred learning method. If a positive
learning environment is created, one must consider if this will address the problem of attrition for
the non-traditional students who are the minority within a traditional class structure.

**Justification for the Research Problem**

The classroom of nursing students is changing. No longer is the student a typical early
twenty something student with little outside responsibilities. Instead, older generations with
different needs have been returning to the classroom. In order to better meet the needs of all
students, the ideas of preferred generational differences within a classroom; along with
understanding how students learn was needed. There are many types of learning theories to use
within the classroom; however, finding one that will work for a generationally diverse classroom
with multiple different learning styles is difficult.

Current literature has discussed the differences among generations, current needs of those
generations in higher education, however, literature is lacking in why different generations
choose one way of learning over another. Additional research was needed to determine what
factors affect learning styles of the non-traditional student within the classroom setting.

**Significance of Research Problem**

Positionality, looking at how one’s position relative to the subjects a researcher is going
to study will affect the study outcomes. How I see my position within the study will affect the
results I obtained. Therefore, I must have had to consider my own bias prior to starting a study.
Researching the topic of generational learning differences within a classroom allows for personal
interpretation of the students being studied and increased the potential of researcher bias. Using
a reflective type of questioning allows preconceptions to develop due to the interpretative nature of the style of questioning. Acknowledging bias exists prior to the beginning of a study is needed to assist in finding ways to mitigate its limiting of research results. The bias needing exploration is that of me, the potential researcher. My own prejudice about students, facility, and learning needs was investigated in order to recognize where my own bias occurs and how it was minimized.

**Recognizing potential bias of the researcher**

Briscoe (2005) discusses the idea of “othering”, where the researcher takes a view of subjects or others as different and not belonging to the “other group.” The others have different characteristics and the researcher is not connected with similarities. I did not want to completely separate myself from the subjects of my study. Since I may know the students I questioned, I cannot expect to have a distant relationship with them. For several, for whom I was their clinical instructor and past lecturing faculty, that posed a concern and potential bias. I wanted to understand the subjects own concerns and lived experiences about the learning process so that I can gain insight and empathy toward their needs. I wanted to look not only at learning but how learning and generational differences affect learning styles, I looked at all generations, even the generation I am part of. I cannot make assumptions about different generations.

To battle the idea of “othering” by allowing free expression of the subject and considering their views, I limited this bias potential through the understanding of their own lived experience, I came to understand the struggles they see. I myself was a traditional student, attending college after finishing high school. Many of the subjects I spoke with did not have the same background or experience as I did. I do not know what it is like to attempt to go to class
where I am of a completely different generation than the majority of the other individuals within the room. Acknowledging this difference will help to see the bias I have and the need to explore their lived experience.

Completing this research within the institution I work also produced a bias toward knowing the subjects. Working as a newer scholar-practitioner, it became difficult at times to work in practice with students but also consider how theory must meet practice. As Labaree, (2003) discusses, it can be difficult at times working in practice and attempting to complete scholarly work. Carlton-Parsons (2008) also discusses the difficulty researchers have removing themselves from daily life to focus on research and not allowing “hunches” and past experience to sway research. Knowing the program in which my subjects are students and having worked with several of them in the past can create bias. One way to combat this bias was considering not using students from the level I am currently teaching or have an active working relationship with during the study data collection time. Another possibility to limit prejudice of subjects was limiting my student subjects to non-nursing majors. Limiting to non-nursing majors broadens the application of my research to more than nursing, but all health sciences students. However, I determined before selecting my subject group that moving beyond nursing education does not fit with my ultimate goal of understanding the experience of the nursing student. Therefore, my sample is specific to nursing only.

Also, I may have limited the potential for bias by choosing a different location to conduct my study where I am not an educator. This would give me a completely different sample potential. However, attempting to speak to students outside of the college I work within was
very difficult and not feasible since I had limited contacts and would have needed to have my research reviewed by multiple institutional review boards.

No matter what facility or type of students I chose to use for my study, all participation was voluntary and the student could choose at any time to opt out of the study. Additionally, participation within the study will in no way affect the student’s performance within the classroom or college environment. Using subjects who were students in my classes was done since my lecturing content was completed and I did not have any more direct contact or influence upon their grade or performance.

The final major bias I needed to acknowledge as a researcher, is that of my own learning styles, ways of learning, and my personal theory related to teaching. I felt I attempted to incorporate all different ways of learning within my classroom content. I wanted to encourage, promote education, and feel I am in the classroom to facilitate learning. My own personal education philosophy stems more from the ideas of Malcolm Knowles and treating students as partners in the learning process. I feel I am here to guide them, however; I am not always the expert. With this thinking, I encourage students to discover knowledge; I cannot force it upon them and feel there are several different ways to get to the answer. It is up to the individual to see what works best for them. Therefore, I try to use all types of learning within the classroom. However, knowing that not everyone learns the same way, some students may prefer lecture, a tactile approach, or even a group activity. If they were unable to describe or discuss how they learn best, this could have influenced the study findings.
Considering bias: Study feasibility

Now that I have considered three of the main biases I have identified toward completing the study of generational learning within a classroom, I now also need to consider if the study is feasible. I do feel that even though there is a potential of bias based on othering, working with students prior to the study, being a scholar-practitioner, and incorporating known and unknown learning styles, I feel this study results are valid. Using a qualitative approach where individualized interviews were used allowed me to encourage discussion and search for common themes within the thoughts of the student. Knowing I have never had the same experiences as the subjects, I encouraged expression so that I could understand their ideas and opinions. The study may not be able to be reproduced yielding the exact same findings because these findings can only be limited to the students in which I interviewed. It was hopeful that common themes would emerge and those same themes are reproducible, but not the same experiences.

Additionally, I feel the role of scholar-practitioner, while stressful for me, allowed results to be used in both theory and practice. I was able to understand the ideas expressed by students due to working within that sphere, but also see the larger picture of how their experiences shaped educational learning activities, or the need for more theories to emerge in generational learning styles.

Finally, knowing my students may have added a potential bias, but in the end also allowed for that known working relationship to develop and the student to express more heartfelt answers to questions. Alternatively, the subjects because of knowing the researcher may have answered with statements they feel I want to hear. Burtin (2010) discusses this idea commonly seen in qualitative study groups or individual interviewing, and calls it “response effect bias”
Either way, by already acknowledging the potential bias before I completed the study allowed me to consider which points might produce better results.

**Counteracting bias**

Acknowledging the potential bias of my research allows me to consider how I contested the bias within the study. Limiting bias produced better results and findings that are more generalizable. Having bias was not totally eliminated, however, if I allow the bias to go unchecked, it might have produced different, unreliable results. All of these factors can affect my outcome. There would be no point completing a study where the results produced were so completely biased that the findings could not be added to the known education body of knowledge. The purpose of my research was to not only answer my own personal research questions, but also I hoped that the information gained through the study will help others working in the education field.

**Purpose Statement, Research Question(s) and Sub-questions:**

The purpose of this study was to understand how and why non-traditional student learning changes within the classroom when the student is surrounded by another generation, which may create barriers to the student’s learning. Research questions posed to be answered by this study include: What learning strategies do non-traditional students use in the classroom to overcome perceived barriers to their learning with other generations present? What are the barriers the student has experienced?

**Theoretical Framework**

Three main generations are found in today’s undergraduate classroom, Baby Boomers, Generation X, and Millennials. The first two, Baby Boomers and Generation X are considered
non-traditional students. These two groups have work experience, attempting to support themselves and/or a family, along with attending classes, and are over the age of twenty-five. Understanding the generational differences between the three generations is important to the educator since each generation usually prefers a different learning method. Several studies have been conducted to determine the preferred methods of learning for each generation; however, evidence is lacking in how each generation may learn differently when exposed to each other. Using this idea of generational differences, framing the research of understanding the perceived ways of learning and barriers experienced by students using Gardner’s ideas of multiple intelligence along with Malcom Knowles adult learning theory guided the research.

**Generations within the classroom**

The birth years of the Baby Boomer generation was between the years of 1945 and 1960 (Weston, 2006). The Baby Boomer grew up in a time of change; they did not want to conform to their parent’s traditionalist ideas, instead, encouraging change amongst themselves. The Boomers began with a strong work ethic, and the idea of needing to assist others within the workplace, sacrificing their own happiness to support others within their working world. Wanting new information, the Baby Boomer prefers to learn using a lecture style pattern. Little questioning of the authority’s knowledge or background is of concern. Learning is for the masses not the individual. The Baby Boomer will choose books, taking notes, and wanting information explained with little self-exploration of topics and self-learning. Many of the Boomers will want concrete, clear, directions, with little change or modification of the learning activity.
Generation X, students born between the years of 1960 and 1980 are the offspring of the early Baby boomers (Weston, 2006). The Generation X student was the first of many to be the “latch key kid”, needing to be self-reliant due to less parental supervision. Because of their self-reliance, Generation X became more focused on themselves as individuals, thus preferring individual instead of group learning. Beginning to have other resources besides textbooks and a professor, students ask questions, want explanations, but would seek out their own answers to clarify information. Having technology since they were young, Generation X does not have issues with using computers, smartphones, or other devices to assist in the learning process. (Kupperschmidt, 1998).

The final group within a classroom setting is that of the Millennials, those born from 1980 to 2000 (Weston, 2006). Characteristics of this generation include being repeatedly told they are “special” and unique, with no one being excluded during activities or experiences during childhood. The Millennials also considers themselves unique within the larger group (Blake Gleeson, 2007). Looking beyond typical learning applications, the Millennial wants to attempt new ways, likes choices, and prefers to choose what is best for them. Using other sources to learn besides a textbook and professor, the Millennial has never known education without a computer, tablet, or the internet.

Therefore, this study considered how a non-traditional student is learning may change within a classroom of millennial generational students. To understand how this type of study exists, framing the concern by using the theory of multiple intelligence and adult learning theories was done.
Multiple Intelligence Theory

Besides the traditionalist idea of math and language intelligence, Gardner (1993) explored how other prodigies and experts in multiple fields used types of knowing. Gardner describes this intelligence as knowing, others argued they are “talents” (Klein, 1997). Gardner explains that if intelligences were simply seen as talents then some people no matter the amount of practice, will not perform to the same level. Talent implies natural ability; therefore, natural ability means there is an inherent understanding of the ability, which applies to the outside world. Individuals, who are able to calculate large complex mathematical problems, were no more intelligent than the student who played a piece of music flawlessly for the first time. In his theory, Gardner explains this as using the intelligence that is dominant within the person. Each intelligence is needed within society; it is unfortunate that due to long-term understanding and research only two general types, mathematics and language are widely accepted in mainstream education.

Gardner’s (1997) eight intelligences include visual/spatial, verbal/linguistic, musical/rhythmic, logical/mathematical, bodily/kinesthetic, interpersonal, intrapersonal, and the newest addition, naturalistic. The visual/spatial individual, through sight, is able to learn best by visualizing. The musical/rhythmic intelligence requires the person to view the world within what is heard, can easily decipher pitch, melody, and non-verbal sounds within the external environment. Logical/mathematical intelligence is the individual who is more apt at seeing patterns and relationships and can problem solve quickly. Body/kinesthetic intelligence incorporate movement, hand eye coordination, ability to use tools and understand the relationship of the body to the external environment. Interpersonal relates to how well an
individual understands the interaction between others especially relating to religion, policy, or politics. Intrapersonal intelligent people understand what self-motivates them and are in tune to their own emotions. Finally, the naturalistic intelligence refers to the outside world based on what is seen within the environment.

While one intelligence may be dominant, this is not to imply that an individual does not have aptitude for other types of intelligence. In contrast to the general idea of intelligence, Gardner (1993) explores the theory that intelligence can also be harvested. By investing time and exposure to others with the intelligence one area of lacking intelligence can be encouraged and grown.

**Adult learning theory**

The adult student has different needs and drives within himself or herself to learn. In order for the adult student to learn, they must be examined and treated differently than the child. The use of adult learning theory assists in framing this notion. The adult student is driven to do well through internal motivation, the reward of new knowledge, growth within the individual or a job well done. School age children are motivated by external factors of grades, pleasing others, and rewards. Therefore, the use of a pedagogy style classroom in learning situations will not motivate the adult, but rather hinder their education. The andragogy approach within the classroom has been well documented by Malcolm Knowles beginning several decades ago with his breakthrough research in 1973. The idea of creating a learning environment where the student is a stakeholder within their learning and the teacher has the role of guide, instead of an all-knowing entity giving forth knowledge was Knowles premise. This andragogy style defined by Knowles allows active and individual learning for each student. The current undergraduate
classroom has been transformed into a complex learning system where the learner takes on increasing responsibility for his/her own needs (Knowles, 2011; Yorks & Kasl, 2002).

Conclusion: a visual presentation

Using both Gardner’s theory of multiple intelligence to frame the idea of individual students learning differently, and Knowles theory of adult learning allowing for openness and questioning, a qualitative study to consider the non-traditional student’s learning in a classroom needed further exploration. This exploration aimed to understand how students who are returning to the classroom from the Baby Boomer and Generation X may alter their preferred learning method based on exposure of the current generation. Presenting this in a visual display (Appendix A), incorporating the theories of Gardner and Knowles, the student’s learning is the center focus of the design, with influences from intelligence and openness of the classroom altering this learning through constant exposure of others (other generations). Research is needed to understand how these theories, and the generation of the student alter learning of the individual in a classroom.

Chapter 2: Literature Review

Adult Learner Defined

Adult learner, nontraditional student, and experienced student, are all terms used interchangeably regarding a student who is not of the majority generation in a classroom. Higher education has singled out this type of student by labeling them as such, when in reality they are obtaining higher education for the same reason as any other student-- to learn (Ogren, 2003).

Key terms used to search current literature related to the adult student included: non-traditional,
adult student. Research findings were limited to higher education. The adult student is usually defined based on age. Unfortunately, there is no true consensus of a definition but most researchers in education will consider anyone over the age of twenty-five to be “non-traditional” (Milheim, 2005; Ritt, 2008).

Age should not be the only defining factor of classification. Several studies (Donaldson & Graham, 1999; Houser, 2005; Kohler Giancola et al, 2008; Woodson Day et al, 2011) use multiple ideas to define a nontraditional student. Outside life knowledge, work experience, or non-continuous enrollment in education are just a few possible characteristics. The student could have taken a break after high school or started higher education but due to additional outside influences was unable to finish. Thus, the term non-traditional arose because of not taking the traditional entrance into higher education. Schuetze and Slowey (2002) mention the idea of learning not only occurring during the time of youth, but throughout life when worklife demands an increased knowledge base. Additionally, adult learners are thought to be financially independent, their main source of income is their own, not from a parent; tuition payment is not provided by parental figures. In addition, nontraditional students may have dependents, where while traditional students typically do not (Hardin, 2008; Scott and Lewis, 2012).

Today, many institutions of higher learning are beginning to focus more on the needs of adult learners. However, highly sought after institutions may not attempt to entice or encourage non-traditional students (Christensen & Eyring, 2011). As Coulter & Mandell (2012) commented on the changing paradigm seen in community and “second tier schools”, within many these institutions there is flexibility for the non-traditional student who is working and has a family. This so-called flexibility while viewed as evolving by educators is seen differently by
students within the universities. While the idea of educating all is ideal, Coulter & Mandell (2012) comment on the need to not segregate classes based on adult students versus typical students. This lack of separation does not offer the adult student the same opportunities their younger peers have been given. With younger students graduating more recently, they may have been given more direction and find the transition into higher education easier than the older student.

Kohler & Giancola, (2008), completed research separating nontraditional students even further into two groups, first generation or continuing generation. First generational nontraditional was defined as a student who is the first in their immediate family to attend higher education but not directly out of high school. Those who were above the age of twenty-three, and not financially dependent on a parent, were considered the first generation. Additionally, the authors recognized the idea of nontraditional also being a student who may not be the first in their family to enter higher education, but continuing the notion of the need in attending higher education. The idea of nontraditional in this group of going into higher education not directly out of high school, and having work experience remains constant.

The notion of a nontraditional student does not solely occur in higher education within the United States. In Portugal, Baptista, (2011) discusses new legislation where universities now need to have standardized testing for all “nontraditional students”. Students in this area of the world may have no high school or be a non-graduate with work experience and having a desire to learn. Additionally, other modernized countries, including the United States find it difficult to come to a consensus on what is the atypical student and what resources are needed (Schuetze & Slowey, 2002).
The idea of nontraditional students is not new. Many colleges and state universities started as “normal colleges,” colleges founded in the late 19th century for the less economically endowed. Normal colleges or teachers colleges recruited students who had teaching experience but no formal training. In addition, institutions sought students who wanted to enter into the teaching realm and attend an institution of higher learning, but had no means of doing so. Student ages of these groups were not typical for university students at the time. The majority of the students were above the age of twenty (typical age for university students then was fourteen or fifteen).

The “normals” as they were referred to came from non-affluent backgrounds with many never venturing to a larger town or city until they entered college. Many of the normal schools metamorphosed into what was known as a teacher’s college, and today are state universities. At the time, the students who were typical for the normal college were the atypical students for prestigious universities (Ogren, 2003). The students within the teacher’s college had prior work experience, did not have family influence, and many were the first generation to seek additional education. Today, however, the students considered typical are the atypical of the original founding premise of the normal college. The colleges and universities of today have moved away from the needs of the adult student, focusing more on the needs of the typical student. The needs of a typical student are not always the same as the atypical or nontraditional (Bye, Pushkar, & Conway, 2007; Donaldson, 1991; Houser, 2005).

Generations in today’s higher education systems are Baby Boomers, Generation X, and Millennials. Each generation has attributes that are different from one another. Several
standards within each generation have been found. Understanding the foundation of each group is imperative to the understanding of their potential learning needs.

**Baby Boomers**

The birth years of the Baby Boomer generation is between the years of 1945 and 1960 (Weston, 2006). This is the generation which was born at the end of World War II. Men were returning home, and the economy was booming. The number of children born during this time was the largest growth in a generation until the current generation of Millennials were born. The Baby Boomer grew up in a time of change; they did not want to conform to their parent’s traditionalist ideas, instead, encouraging change amongst themselves.

Change to traditional role of the woman in the home, and the ideas of the feministic movements, women were now becoming a majority within the classroom. Due to the changes in economy, higher education became more attainable. The Boomers began with a strong work ethic, and the idea of needing to assist others within the work place, sacrificing their own happiness to support others within their working world.

Wanting new information, the Baby Boomer prefers to learn using a lecture style pattern. The professor is seen as the expert and authority, the student must be told the information to learn. Little questioning of the authoritarian’s knowledge or background is of concern to Baby Boomers. The student enters into the world of academia to follow the rules provided, and there is no questioning or consideration towards uniqueness or alterations needed to better suit the individual; learning is for the masses not the individual. Respect is extremely important for the Baby Boomer.
The Baby Boomer will choose books, taking notes, and wanting information explained. There is little self-exploration of topics and self-learning. Boomers will want concrete, clear, directions, with little change or modification of the learning activity.

**Generation X**

Generation X, students born between the years of 1960 and 1980 are the offspring of the early Baby boomers (Weston, 2006). Within this generation, the economy became less stable, the Cold war was in full swing, and in order to provide for a family, two parents needed to work. The Generation X student was the first of many to be the “latch key kid”, needing to be self-reliant due to less parental supervision. However, this generation also became the first to see the personal computer, typing classes on a computer, and the beginning of intergrading technology within the classroom.

Because of their self-reliance, Generation X became more focused on themselves as individuals. Given the choice of learning within a group context or as an individual, the Generation X student chooses individuality. Beginning to have other resources besides textbooks and a professor, students asked questions, wanted explanations, but would seek out their own answers relying on themselves to clarify information. Having technology since they were young, Generation X does not have issues with using computers, IPhones, or other devices to assist in the learning process. They will seek out alternative methods to enhance their own learning (Kupperschmidt, 1998).

In today’s classroom, these students are among the first population of adults attempting to return to school while having young families and fulltime jobs. Many of these students have multiple responsibilities outside of the classroom, making it difficult to meet with groups or learn
through peer interaction. Family is an integral role for the Generation X student. Family is first, everything else is second. Thinking in this manner, Generation X students have difficulty balancing family and school activities. This has caused workplace concerns by other generations. As Blake Gleeson (2007) found, Baby Boomers who focus on what is needed for the good of the workplace become angry toward the Generation X worker who does not want to focus all their energy on a career, but instead looks for a balance of work and family.

**Millennials**

The final group within a classroom setting is that of the Millennials born between 1980 to 2000 (Weston, 2006). This youngest group is the largest generation since the Baby Boomers. Later Baby Boomers and early Generation X are the parents of the Millennials. Characteristics of this generation include being repeatedly told they are “special” and unique. Attempting to not exclude anyone from any kind of activity or experience is a major theme occurring in his or her childhood. Expecting to have the support of parents, no matter what, the family support system is very important to the Millennials. Parents of Millennials are often labeled as “helicopters” due to their constant need to hover over their children, doing for them and stepping in to oversee all aspects of their child’s life (Blake Gleeson, 2007).

Millennials being the youngest generation to date are termed traditional students in higher education. These students have stepped out of high school and immediately into the ranks of being underclassmen at schools of higher education. Without other responsibilities, Millennials are focused on their education, but also focused on how they can encourage change around them. The environment and long-term effects of their actions help to shape their individual choices. However, the Millennial also considers themselves as unique and while part of a larger group an
individual within the group as a whole (Blake Gleeson, 2007). Therefore, rules are not considered concrete, and the need to understand the effects within a moment of time are different for the individual than the group. The Millennial will struggle with deadlines or concrete ideas. Instead, looking beyond typical learning applications, the Millennial wants to attempt new ways, likes choices, and prefers to choose what is best for them.

Within this context, the Millennial also looks to use technology in their learning environment. Using other sources to learn besides a textbook and professor, the Millennial has never known education without a computer, IPad, or the internet. Therefore, when unsure of content, the Millennial will seek out their own answers. Not relying on someone to instruct them in how to complete a task, the Millennial will attempt to “learn by doing”.

**Ways of Learning**

Learning within the domain of higher education depends on the individual student. However, what drives the student to want to learn and then how best that individual student applies learned knowledge needs to be explored in order to understand how the student chooses learning. Finally, measuring the abilities of students to learn must be understood. Using Gardner’s theory of Multiple Intelligence to assist in looking at the ways in which the student learns assists the educator in better understanding how the student chooses to learn.

**Driven to Learn**

The willingness to learn can be divided into external forces and internal forces that drive the student to want to learn. In the adult student, internal factors affected learning more significantly than the traditional student did. In the traditional student, outside influences cause the need to produce and do well. For the nontraditional student this drive is more internal, the
need to want to learn and apply learned material to the outside world (Bye, Purshar and Conway, 2007; Justice and Dornan, 2001; Spitzer, 2000; Wyatt, 2011). Donaldson, Graham, Martindill, and Bradley (2011) concluded after completing their research on adult students that the adult student inferred success in college to mean success in learning. The researchers supported the idea of internal driving forces were more powerful than any external force. However the application of learned information was seen by the subjects as encouraging their success in the classroom. Therefore, the adult learner is looking for a deeper knowledge in which to move from academia to the work setting. The traditional student is looking at knowledge in a more superficial light.

The indication of who the adult learner is and what drives them into seeking additional education is best described using the definition of Rossiter (2009). In her study, the author discusses the theme of selves and that idea of who we are is constantly changing throughout adulthood. The reason for change can be both internal and external. Internal environment drivers for change are due to the determination to do better, but external drivers are those of others and the outside world (expected values, influence of parents). Educators can assist in the transition process of the adult student from adult to student by role modeling, helping with feelings of security, openness and safety to allow for discussions of emotions and feelings related to the learning environment. Kasworm (2008) and Westland (2004) relate how students attending higher education look at education as a journey within the self and the self-changes as knowledge is gained.
Engaging Students

Due to the many constraints on the non-traditional students’ time, universities and colleges should consider how academics fit into their nontraditional life, not how the nontraditional student will fit into university life. Wyatt (2011), found through interviews and questionnaires that nontraditional students wanted to learn, and that student life was centered on the classroom and assignments, not campus activities. If the nontraditional student were to consider participation in a campus activity, the activity needs to include a theme related to classwork or family. Colleges and universities who seek to have student’s participating in the community as a whole need to consider this when planning events or activities for the adult student.

Outside support for the non-traditional student comes in the form of family, friends, and coworkers, not necessarily others in the classroom. Orientation and educational resources needed by non-traditional students include accessing new technology, common university policies, and communication avenues on and off campus. Additionally students became more engaged in the learning process when treated more as an adult and less as the student (Bye, Pushkar, & Conway, 2007; Houser, 2005; Lundberg, 2003; Scott & Lewis, 2012; Wyatt, 2011). The education process is a partnership, where the professor encourages academic endeavors, and promotion of autonomous behaviors. When this type of partnership is formed, the student takes on a more active role within the partnership of the learning process.

Relationships between the adult learner and instructor can create engagement and promote a learning relationship if the instructor can put the student at ease, allow for open communication, and offer real time feedback (Thompson & Sheckley, 1997, Scott & Lewis,
relationships between peers are seen as mostly positive when the students are both adult students. Nonetheless, Scott and Lewis (2012) studied participants using direct classroom visualization and noted interactions between adult and traditional students had negative connotations at times. A commonality between both traditional and nontraditional students is the need to have instructors communicate classroom expectations, explain objectives and provide feedback in a timely manner. In addition, the nontraditional student seeks an instructor who is straight forward, not overly concerned about the individual, but is respectful of the student. Respecting time spent in class for learning activities and experiences the nontraditional student has gained throughout their life are important factors to the nontraditional and assists in their learning process (Houser, 2005).

There are also several differences between the classroom learning of the traditional and non-traditional student. Non-traditional students learn within a deeper context, wanting to not learn for the sake of knowledge attainment, but to apply this knowledge to the outside world. To do this, educators need to examine how to implement relevant experiences of the non-traditional student to the classroom. Having multiple responsibilities to provide for families, work, and attend school, non-traditional students want purposeful and meaningful assignments. The need to spend time on the task and eliminating outside influences during times of learning have been voiced by adult students (Askhaim, 2008; Scott & Lewis, 2012; Woodson Day, et al, 2011). Lundberg (2003) also found a relationship between learning and the connection between other students. Again, this same theme is illustrated in Donaldson and Graham’s (1993) research supporting the idea that adult learners want to learn and are not utilizing the learning environment as a social outlet unless the activity is family or education focused. Mercer (2007)
also studied how adult students perception of themselves changes when more exposure to higher education. Donaldson & Graham (1999) and Meyer & Turner, (2002), sought to identify what influenced how learning occurred. Meyer and Turner (2002) found a relationship from the theme of emotion. Emotion can either cause positive or negative results in a classroom setting depending on how the student uses these emotions

Burton, Lloyd & Griffiths (2011) noted additional research barriers in higher education for the non-traditional student. Experiences which inhibit learning such as lack of access to resources, tutors, computers, study areas, and advisors, alter the experience of higher education and learning. Burton’s et al results indicted the need for the first contact with higher education professionals will minimize the barriers with simple informal meetings allows for good communication and meeting student needs up front. Woodson Day (2011) expands on the perception of educators and their lack of understanding of meeting the needs of the adult student. Additionally, they point out the lack of preparation of educators in working with adult students.

Little or no formal education was given to those educators seeking a role in higher education in how to assist the adult learner. Lee, McCool and Napiesnalski (2010) researched the preferred methods of learning with adult students using an analytical hierarchy process for decision making. Reviewing specific attributes and then comparing them for statistical significance, the authors looked for commonalities within the adult learner sample. The researchers used four main styles of learning to see which adult students preferred lectures, in class discussions and reflections, group based projects, and individual projects. While this study does assist in reviewing preferred learning styles of adults, the sample was of graduate students who would have already had some exposure to higher education and used only one or two
generations. Results indicated learning styles were independent of the subjects department of study. Area of study is not a prediction of preferred learning style.

While having a concrete idea of what individual non-traditional students sought in a classroom setting and from instructors, a more theoretical concept was needed to broaden the scope of nontraditional student learning in a classroom setting. Reinforcing the type of emotion occurring had an increase in the likelihood of a motivation to learn. Donaldson and Graham (1999) developed a conceptual model to describe how learning influenced the adult student. Primary themes of the model again postulate that the adult learner does not just want to learn information. How the knowledge is applied is of more importance to the adult learner. Giancola, Munz, & Trares, 2008; Houser, 2005; Lundberg, 2003 all have stated in the conclusions of their research that the adult student and the traditional student while similar in some respects, have different needs related to communication, additional resources and emotional support. However, Spitzer (2000) surveyed both traditional and nontraditional students to see if GPA and career decisiveness could be predicted based on personal and learning dimensions. Spitzer (2000) concluded traditional and nontraditional students did not need separate services or programs to facilitate a learning culture. With Spitzer’s research conclusions being different from other studies regarding adult learning, additional research in this area is needed to demonstrate a clear understanding. One consideration to how and why non-traditional and traditional students learn relies on how intelligence is measured and used. This becomes more important as the amount of knowledge is increased, how this knowledge was obtained and applied needed exploration. Using a single method of measuring intelligence is no longer
adaptive to higher education with several different types of students within the classroom. Consideration of all ways of learning must be insured within the classroom dynamic.

However, how the non-traditional student learns information is unclear. In Anderson, Johnson, & McDonald (2011), study of classroom students and their study/learning habits to promote a positive outcome found many non-traditional students remain motivated but are unsure of their own study skills. Students did not seek instructor feedback, but instead discussed with peers or reviewed themselves to increase knowledge of unclear subject matter. The need for more studies to explain the phenomenon of how non-traditional students best learn or study needed to be better understood.

The adult student can learn new information, but how the material is best presented to be learned needs additional exploration. Several theories of adult learning principles must be examined, those of multiple intelligence, including Myer’s-Briggs and Georgic theories, to explain adult learning.

Moving out of one type of Intelligence: Exploring Multiple Intelligence, Application to Nursing

The mainstream definition of this concept is having a measurable higher than normal intelligence score within the realm of both mathematics and language using a standardized testing system (Stanford, 2003). The idea of increasing intelligence in these areas has been thought to be a predictor of success in higher education (Almedia, Prieto, Ferreira, Bermejo, Ferrando, & Ferrandiz, 2009; Whyte, Madigan, & Drinkwater, 2010). In their study, Whyte, et al. (2010) discussed the current use of scores in specifically math and language to predict how well preregistered nurses will be able to pass licensure exams and succeed in higher education
classes. While both math and language are key factors needed within nursing science, there is also an art to nursing, where one needs to have interpersonal skills to communicate with patients and other care providers. Being able to calculate correct dosages of medication is important, but no more important than being able to build a trusting relationship with patients. These necessary interpersonal skills are not questioned during acceptance into nursing education programs; instead, there is a focus on the math and science correlation. However, interpersonal skills are just as necessary in nursing as math and science, but not as easy to quantify thus making them difficult to measure during student interviews by admission counselors. Gardner (1993), proposed a potential answer to this: instead of two types of general intelligence, through research he gathered there were initially seven types, and in more recent years added one more; creating the theory of multiple intelligence (MI).

**Eight Types of Intelligence**

Besides the traditionalist idea of math and language intelligence, Gardner (1993) explored how other prodigies and experts in multiple fields used types of knowing. How could a student who never heard a piece of music before, suddenly be able to play the piece without practice? How can some individuals excel at a sport, with less practice than others can? Klein (1997) described this as talents. Gardner (1993) described them as knowing. If these types of intelligences were simply seen as talents then some people no matter the amount of practice, will not perform to the same level. Talent implies natural ability; therefore, natural ability means there is an inherent understanding of the ability, which applies to the outside world. Individuals who are able to calculate large complex mathematical problems were no more intelligent than the student who played a piece of music flawlessly for the first time. In his theory, Gardner
explained this as using the intelligence that is dominant within the person. Every intelligence is needed within society; it is unfortunate that due to long-term understanding and research only two general types, mathematics and language are widely accepted in mainstream education due to what Kezar (2001, p. 144) refers to as the “westest, bestest, and testest” theory. With this idea, western civilization will only consider something concrete, allows for ranking one idea as superior to another (bestest), or will only choose the idea where the most testing of its confirmation is accepted (testest). Gardner’s theory being more abstract, did not fall in to the westest, bestest, testest theory of understanding intelligence.

Gardner’s (1997) eight intelligences include visual/spatial, verbal/linguistic, musical/rhythmic, logical/mathematical, bodily/kinesthetic, interpersonal, intrapersonal, and the newest addition, naturalistic. This may relate to someone such as Albert Einstein.

Body/kinesthetic intelligence incorporate movement, hand eye coordination, ability to use tools and understand the relationship of the body to the external environment. Major athletes who play multiple sports may have a stronger body/kinesthetic intelligence, as would those working in a craft industry such as wood workers. Interpersonal relates to how well an individual understands the interaction between others especially relating to religion, policy, or politics. Intrapersonal intelligent people understand what self-motivates them and are in tune to their own emotions. This can be a leader within an industry who, through their internal understanding is able to apply this externally to a successful business venture. Finally, the naturalistic intelligence refers to the outside world based on what is seen within the environment. Kezar (2001) relates naturalistic intelligence to that of a farmer. The farmer is able to understand growth patterns, relates this to weather patterns, soil needs, and harvesting to produce a natural product.
While one intelligence is dominant, this is not to imply that an individual does not have aptitude for other types of intelligence. In contrast to the general idea of intelligence, Gardner (1993) explored the theory that intelligence can also be harvested. By investing time and exposure to others who excel in a less dominant type of intelligence, an individual’s recessive types of intelligence can become stronger. However, he cautions, not everyone will excel in all intelligences. There will remain one dominant type. Other types of intelligence can become more refined through learning and use.

Most of the current literature on multiple intelligences is in relation to primary schooling and early years of development. However, higher education must also take into consideration the movement from general intelligence to multiple intelligences within the classroom. Incorporating this theory into practice is not easy. As they type of students entering higher education has changed, the culture within the education system must also be altered. Education is becoming slightly more flexible offering part-time, evening and online programs, the way in which learning occurs must also be altered. There is a need for the implementation of the theory of MI within curriculums. Gardner’s theory, while extreme as compared to the common general idea of intelligence, is not a completely new concept. Using works from multiple disciplines, Gardner wove these ideas into his theory. Throughout education theory history, there has been evidence of an environmental component. Vgotsky (Lourenco, 2012), developed his theory of learning by understanding the way the external social environment can affect learning which contains the same undertones Gardner used in multiple types in his MI theory. General intelligence theories do not consider how intrapersonal and interpersonal intelligence affect intelligence.
While MI is a newer theory of intelligence, it does have value within the realm of higher education. As Barrington (2004) describes the many faces of students in higher education are changing. Along with the changing faces, means and ways of learning and understanding are also changing. The reason learners enter into higher education is no longer heterogeneous. Loss of work, change in family status, and the need to move forward within society has pushed many individuals to return for additional education worldwide (Barrington, 2004). Due to changes in the economy, social needs, and personal changes, the higher education student no longer is a traditional high school graduate seeking additional education.

No longer is every student uniform, and learning is to be imparted to the masses by how the educator sees fit. Barrington, (2004); Dede, (2005); and Ruggieri, (2002) argue that MI does in fact exist and can aid in the teaching/learning process of higher education. Educators cannot assume that all students learn in the same manor. Instead, the teacher needs to view learning from the student’s point of view. The student cannot conform to the teachings of the instructor, but the instructor needs to meet the student at his or her level. To do so, requires the educator to look at how students assimilate information and apply information learned. The main premise MI expands upon is the notion that intelligence comes in many forms. Currently higher education institutions remain constant in using data to support the idea that if limited intelligence is demonstrated in math or language, the likelihood of excelling within higher education is very low (Barrington, 2004). This illustrated the focus on math and sciences. However, one must also consider the role of humanities. Building the structure of higher education around the principle of two intelligences, math and science, it may lead to a decrease in achievement of students who do not poses either of those two as their main intelligence. Instead, Barrington
(2004), calls for the need to begin to intergrade teaching styles where all intelligence types are fostered within the learning environment. The way material is presented to students must change. Therefore, educators should not solely cater to students with only the math and science intelligence, since students with other intelligences will flounder.

Other researchers have assisted in expanding on the use of Gardner’s (1993) theory. Yesil and Korkmaz (2010) attempted to instill additional validity and reliability into Gardner’s theory of MI by developing a scale to measure an individual’s types of intelligence within a student. Using a questionnaire, they tested the items and had students complete the self-reported answers; reliability and validity were shown in student’s intelligence profiles. Yesil and Korkmaz completed this study to support the idea that if there is understanding to the intelligence a student possess, then the instructor can influence learning by adapting material in such a way that uses the individuals intelligence.

**Myers- Briggs**

Myers-Briggs learning model is more well-known and used throughout all levels of education. Within the idea of the module, Myers-Briggs describes learning as a process by which a questionnaire is completed to derive how the learner perceives the world based on his or her personality. Ultimately, the Myers-Briggs type indicator is used to explore personalities of the learner and depending on the dominate findings assists in how best the student will learn or what role they will be best suited for within the work construct. While the actual questionnaire was originally developed to assist in placing women in industrialized jobs, it has been adapted for education (Myers, Briggs, McCaulley, Quenk, & Hammer, 1998). One major limitation for
this module is that it is strictly based for the “general population”. Therefore, the reliability of
the test does not take into account those with learning difficulties.

Application to the realm of education has to do with the individual’s personality and how
his/her personality will alter their own perceptions and ultimately ability to learn. For example,
Myers-Briggs discusses the individual as an introvert or extravert. Depending on their own
perception, the introvert is directed inward towards self and understanding concepts. The
extravert is more action and people orientated. Additionally, other classifications within the
model include the use of the terms judging whereas the individual views the world through
thinking and feeling, or perceiving where sensing and intuition are used. The Myers-Briggs
module is used within learning as it relates to team-building, career counseling, and professional
development.

One of the major criticism of this model is it does not take into consideration social
norms, so that an individual can ultimately “fake” an answer, thus making the test unreliable. If
the test is being used related to job or career objectives it may be in the interest of an individual
to answer how they feel others would prefer, rather than how they truly feel creating a limitation
within the questionnaire (Boyle, 1995).

**Gregorc: Mind styles model**

The Gregorc module of learning is based on the idea of intelligence and learning through
explaining how the mind works using several different modes. Information and learning is
categorized in four ways in which learning occurs: concrete sequential, concrete random, abstract
sequential and abstract random. While each type of learning is used, others have criticized
Gregorc’s model and questioned its reliability in exploring how learning is occurring (Reio and
Wriswell, 2006). The model began with understanding that the student learned through their own perceptions of the world. These perceptions are coded as concrete or abstract. Concrete perceptions are gained through use of senses whereas abstract is gained more through qualities and concepts. The learner arranges the perceptions in an ordering process. This ordering is either sequential which occurs in a linear modality or through randomly chunking of information with no detail to the order.

While perceptions and ordering depend on the individual, Gregorc determined that all individuals do have the capacity to use both concrete and abstract learning, but may prefer one type to another. Additionally, he believed that the way the information is retained; either sequentially or randomly depended on the thinking of the learner. Within all learners, certain types of individuals were more susceptible to one type of perception and ordering than another. Thus the four different categories emerged as ways of learning concrete sequential, concrete random, abstract sequential, and abstract random. He believed those individuals with multiple ways of learning used several of the different categories, but may have one more dominant type (Mills, 2002). Using the different categories, students would form and derive questions differently.

Applying this research to adult learning describes the way in which a student learns may depend on how they mentally process information. Therefore, each student would need to complete Gregorc’s forty-question evaluation to determine what type of learning module is the dominant learning style. There have been arguments within education on the reliability and validity of the questionnaire (Coffield, Moseley, Hall, & Ecclestone, 2004).
Application to Nursing and Higher Education

“Critically think… critically evaluate… critically care for”... are all statements nursing instructors reiterate to students. Because nursing is an applied science whereas information from general sciences is used to plan and modify care for the ill, it requires a higher level of thinking. Learning simple facts at a knowledge base level is not enough to provide safe and effective care for patients. Instead, information must be gathered, considered, and then modified to make decisions. The challenge is for nursing instructors to stimulate the idea of critical thinking early in training.

What is critical thinking

Nursing researchers have attempted to define critical thinking in a multitude of ways. However, no one definition is accurate to express this abstract idea of thinking. Additionally, besides attempting to define the idea, educators need to instill this type of thinking into students prior to practice. Chan (2013) completed a literature review finding key words used consistently to describe critical thinking included: “analytical, evaluative, investigative, calmness, and happiness” (p. 239) One of the most widely accepted definitions is the one that Billings and Halstead (2005), agreed to and use:

“ The ideal critical thinker is habitually inquisitive, well-informed, trusted of reason, open minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit.” (Facione, 1990, p. 3)

Defining critical thinking is difficult, teaching it is even more so. According to Chang, Chang, Kuo, Yang, and Chou (2011), critical thinking is not something acquired and learned
early on; experience is needed in order to acquire this type of learning. Through their research on reviewing competences of currently registered clinical nurses, they discovered only fifty percent of staff were able to demonstrate competent critical thinking. Those with more experience were more apt to display critical thinking. Therefore, they concluded, teaching critical thinking to nursing students must be modified if registered staff is struggling. The authors move to explore if expectations are too elevated to assume that undergraduate students will be able to grasp this with little clinical experience. Expanding on this need, Daly (2001) researched the need to understand if alternative methods of teaching the idea of critical thinking would then enhance the critical thinking occurring during care of patient by students. Through his study, using the “think out-loud” concept, he postulated the encouragement of thinking through decisions verbally to increase critical thinking. Unfortunately, his results showed no significant difference between critical thinking before implementing the method and after. He concluded his findings by asking for a call to action of education to continue the search for methodologies that cause increases in critical thinking.

Lauder, Reynolds, & Angus (1999) discuss the very importance of transfer of knowledge. They conclude the need to attempt to teach information in one environment and expect that same information transferred to another situation far removed from the time of instruction is incomprehensible. The authors discuss the importance of “sparking” the learned knowledge to application of the learned knowledge to the clinical setting. Instead, critical thinking can only occur through experience and application of learned knowledge that is stimulated at the transfer at the time learning occurred.
Teaching principles within the context of the material, application of the information to the clinical setting or situation will allow the acquisition of knowledge. Additional research on how to best transfer information in the clinical setting is needed. Understanding the ideas of both MI and critical thinking, one can see by the definition of critical thinking Facione (1990) describes this idea as multidimensional. Consequently, thinking within the ideas of learning, a student needs multiple ways of learning in order to foster critical thinking.

Currently, nursing education focuses primarily on the student’s science performance. While science does form the knowledge foundation, it is the art and humanity side where students need growth. As Aborn (2006) described, as educators we can no longer consider a student “hopeless”, but instead need to adapt to the student’s needs. Chan (2012) completed a qualitative study devoted to the thoughts and feelings of the learner within the concept of critical thinking. Through group discussions Chan (2012) asked participants their thoughts and feelings on what critical thinking was to them, their feelings about the teaching and evaluation of critical thinking, and whether critical thinking was seen as being critical of their own thinking. From this research it was concluded that additional time must be spent on creative learning within the ideas of nursing, so that key concepts can be applied within multiple situations.

Increasing reasoning, interpersonal reflection and creativity all may assist in the transfer of information. Kezar (2001), describes the call to higher education to continue to move toward learner centered approaches, community learning, and collaboration. Educators need to apply knowledge gained during higher learning to real life settings. After careful consideration, it is up to the educator to deduce the intelligence, which is strongest within the student, and encourage
learning activities, which promote this style. Kezar (2001) touches on this very topic, explicitly stating, faculty need to spend time with students to complete this assessment.
Chapter 3 Research Design: Qualitative

A qualitative approach was best suited to answer the questions of: what learning strategies do non-traditional students use in the classroom to overcome perceived barriers to their learning? What are the barriers the student has experienced? The current undergraduate classroom is a mixture of several generations, Baby Boomers, Generation X and Millennial students. Recent literature and research segregates the preferred learning styles based on generational norms (Askham, 2008; Blake-Gleeson, 2007; Donaldson and Graham 1999; Kupperschmidt, 2000 and 2006; Weston, 2006). However, no one at this point, addressed the relationship between altering styles through exposure. Due to the stressors of the adult student (balancing family, work, and studying), the attrition rate for these students has been high. The need to understand how they best learn within a classroom in order to facilitate understanding of material in the most concise way due to time constraints is a gap in literature.

The purpose of this study was to understand what barriers to learning non-traditional students had in a classroom setting with other generations and how these barriers affected the success of learning where the non-traditional student is the minority generation represented. Therefore, expanding on this idea, the research question that need to be considered is: What learning strategies do non-traditional students use in the classroom to overcome perceived barriers to their learning? Reviewing through an interview process the types of situations where students felt they had learned the most and least was needed to understand their perceived success. In understanding the perceived success of the student, identifying what barriers prevented them from learning needed understanding. Current literature expressed barriers to the adult student ranging from lack of time, commute, non-support services, and activities not
relating to the classroom (Burton, Golding, & Griffith, 2011; Bye, Pushkar, & Conway, 2007; Donaldson, Graham, Martindill, & Bradley, 2011).

The ideal methodology to examine the lived experiences of non-traditional students was to use a qualitative approach. Understanding the lived experience of the adult student through their explanation of barriers and success within the classroom is an individualized phenomenon. In a qualitative approach, the researcher attempts to gain understanding of the personal experiences of the subject. The phenomenon of study is the idea that learning may be altered based on generational differences. I feel this tradition flows nicely into the idea of an interpretive paradigm where the world is interpreted as is, learning through experience as seen by the nontraditional student. In this paradigm according to Burell and Morgan (1979), the sociologist views the world as it appears to others, looking at it as the subject themselves lives within the environment. Therefore, the interpretive paradigm shares the same construct as phenomenology, understanding and attempting to see from other’s experience, which is important for comprehending the subject’s experiences within the study. Qualitative study allows for this more personal understanding of subjects where as a quantitative design reviews relationships between variable, seeking cause and effect. Using a qualitative approach allowed for first hand understanding through discussion of the lived experience of non-traditional students and the barriers they themselves perceive affecting their ability to learn.

The role of the researcher within a qualitative design is much different from that of a researcher conducting quantitative inquiry. The qualitative researcher is interacting with the participants and attempting to understand their world or experience. There is no segregation of the lived experience. The researcher attempted to understand how the experience has affected
the individual. All individuals are unique in their perceptions of a situation; however, experiences may have commonalities. Not able to be statistically measured, but the need to understand the individual experience remains. Therefore, a qualitative deductive approach was best suited for this type of research (Creswell, 2012).

**Research Tradition or Approach**

The specific research approach within qualitative research is the interpretive phenomenological approach (IPA). In the IPA approach there is a need to view and understand the experience of the individual within a group where the group of individuals is having the same experience. Additionally IPA allows the researcher to interpret these collective experiences, giving voice to the subjects, making it differ from a true phenomenological approach (Larkin, Watts, and Clifton, 2006). While IPA is an inductive “off shoot” of the idea of phenomenology, it does not simply describe the experience of others, but also allows for interpretation of the studied group. Additionally, there is no specific method of interpretation followed, while semi-structured interviews with a scheduling of questions is the norm by researchers, it also allowed for flexibility based on the group or topic studied (Smith and Osborn, 2007). The interviewer reviews transcripts and notes, pulling the common themes within the subjects’ voice, usually starting with broad themes, and narrowing as the transcripts are read and re-read.

IPA differs from other general inductive theories due to it allowing for what Smith and Osborne call a two-stage interpretation or double hermeneutic. The researcher is attempting to understand the world of the subject and the subject themselves is attempting to understand their own world through their expression of the experience to the researcher. IPA allows the researcher to interpret the mental and emotional states from what is said based on the semi-
structured questioning. If the individual does not wish to disclose their true feelings or thoughts about a subject or event, the researcher may be able to understand this experience through body language, and dialog. As Smith (2007) states, it is the “theoretical commitment to the persona as a cognitive, linguistic, affective, and physical being and assumes a chain connection between people’s talk and their thinking....” (p. 53).

Finally, IPA allowed for flexibility. There is no single specific way in which to use IPA, the instrument to collect data must be fluid and movable, and the sample size will vary. The sampling size will vary based on the questions to be asked and the process by which it is used may alter the more the researcher works with the data. Larkin, Watts, and Clifton (2006) discuss the need for IPA to move beyond just a complete description, but also allow for flexibility in the understanding of others. There is no clear step by step process to using IPA with qualitative research, instead it allows for a personal detailed analysis of participant’s thoughts and ideas around a subject in which there is an experience occurring or which has occurred.

**Participants and Access**

Ideal participants for the study of non-traditional students and their learning styles within a classroom setting needed to meet several critical points for consideration of participation. Criteria relating to their age, exposure to higher education, ability to speak and read English, along with admitting to altering their learning needs from initial entrance into higher education, and finally having an active e-mail account were all requirements.

Since this was a study to understand the experiences of non-traditional students, the first criteria needing met for sample selection is the age of the student. The student could not be a traditional student in higher education. Traditional student is defined as under the age of twenty-
five and supported through means of a family (a dependent) (Donaldson, Graham, Martindill, & Bradley, 2011). Baby Boomers and Generation X, the two main groups studied are considered non-traditional students. These two groups have work experience, attempting to support themselves and/or a family, along with attending classes, and are over the age of twenty-five. The birth years of the Baby Boomer generation is between the years of 1945 and 1960. Generation X, students born between the years of 1960 and 1980 are the offspring of the early Baby boomers (Weston, 2006). Therefore, the birth year of the participant was students born between 1945 and 1980.

Secondly, there must be a commonality of having this been their first experience within higher education. It is not to say the student must only be completing their first course within a higher education system, but he/she could not have had previous classroom time within a higher education system prior to their current exposure. A student who took classes, stopped, and now years later is returning did not qualify for meeting the set criteria. The student needed to be experiencing learning within higher education for the first time. Students who have graduated were not considered; the student must be actively registered for classes.

Additionally, all students must have admitted to altering how they learn. This was achieved by asking this question in the recruitment materials, explicitly stating and describing the term. In order for the subject to understand the experience, they must have admitted to the phenomenon occurring within their education. By altering, one’s preferred method of learning is defined as: changing how the process of gaining information on a topic is changed related to either internal or external forces (barriers) which have occurred in the classroom or towards the individual student. Examples of this included, seeking electronic media, study groups, individual
studying habits, or note taking. The student was asked if they had: altered how they like information presented to them within a classroom, had they changed their studying routines by either joining a study group, or withdrawing from one and studying on their own, given the opportunity to manipulate equipment over reading information about the content. If the student had answered yes to any of the above statements, then it was assumed there had been some alteration to the initial way of learning upon entering the classroom, to what he/she currently is using.

Finally, the last main criterion which needed met, was the need to be able to express barriers to their perceived learning. All of this information was articulated in English, and the student needed to be able to read English in order to sign the consent and complete the demographic materials. In addition, having an active email account was necessary for the need to communicate times of meeting and confirming availability, all of which was done in English.

With all of these points met for each participant, the sample then became homogenous—students who were non-traditional, have altered their ways of learning, understand there have been barriers to their learning, and finally were able to read and speak English. According to Creswell (2012), in order to utilize a phenomenological design, the sample must be representative of the population at large, with the sample illustrating commonality. Meeting all of the criteria provided this type of homogenous sample.

**Recruiting Participants**

In order to obtain participants meeting the described criteria, recruitment took place using several methods. Prior to recruitment, the institution to be utilized required the study to be approved by their institutional review board (IRB). The main institution where recruitment took
place was a health sciences institution offering both Associate and Bachelor’s degrees in a wide variety of areas of study relating to the healthcare field. Emails were sent to the Dean of Nursing making this the first contact and requested a meeting to discuss the study and requirements for IRB approval. Once the process of obtaining IRB approval was completed, solicitation of students occurred. The initial solicitation was via emails to faculty asking for permission to announce the study at a break time during classes. Students were given an email address of the researcher to contact if they felt they met the inclusion criteria that was discussed briefly at the break time of class. Once a student emailed the researcher, a letter was forwarded to them (Appendix B, general recruitment information, Appendix C individual interview letter).

Through specific contacts, the researcher meet with classes of students to again solicit participation. Once one student had expressed interest, the researcher asked the participant about others who might fit the research criteria. This would allow the researcher to attempt to make a connection with additional students using the “snowball effect”. As Creswell (2013) explains, making contact with one student, allows for the potential of others who may meet the researchers needs for added participants.

No monetary incentive was provided to participants due to the possibility of an incentive creating a potential bias. Also, several of the study students were recent students of the researcher and the receiving of monies by the student may have created an awkward dynamic. The money could have appeared to construed as favoritism leading to the possibility of skewed data. From the research conducted by Patton (2002), use of incentives does not increase participation from potential subjects. Therefore, there was no incentive given.
With any kind of qualitative research, there is no set quantitative number for the sample size. However, when attempting to understand the lived experience of individuals it is ideal to limit to a smaller group of subjects (Creswell, 2013). The sample size was limited to ten students based on the idea of creating a sample representing the proportion of students in nursing who were non-traditional and did not have other higher education experience. Additionally, ten students was enough to create and see commonality within the interview data.

Data collection

Detailed data collection and management is essential for the analyzing and coding process. Therefore, data was collected using several different methods including completion of survey information, recorded interviews, and notations.

The majority of data was collected via an individual interview process utilizing a semi-structured format. This allowed the researcher flexibility with the interview questions to alter format but not meaning to assist in best gathering of data from each individual. All interviews were transcribed showing notations for emotion, emphasis during conversation. Additionally, the spoken word is not the only way communication is shared. The need to include body language cues was necessary in understanding the ideas of others (Rubin and Rubin, 2012). To include this, the transcription allowed for notations within the margins for key observations made during the interview process. The interview was recorded and all participants consented to this process. A test piece occurred prior to the start of the interview to guarantee the positioning of the recorder was adequately picking up the voices of both the interviewer and the subject clearly. Once this was confirmed by playing back in front of the subject, the interview began. The data obtained through the spoken word was transcribed using a consistent template (Appendix D).
This template assisted in further compiling data through observation, and allow for assembling into one document.

Notes were taken during the interview to assist in gathering of data that could not be seen or heard during the recording. This information such as body language, hand gesturing, or pausing is essential in communicating meaning of words and ideas. Therefore, short hand notes were added to the transcription to illustrate additional information which was used during the coding process.

Finally, a short demographic survey of information was asked of the subject (Appendix D). This information assisted in understanding the background of the individual. Information to collected included birth year, to classify subjects generation, name (to be coded using a pseudonym), and background of academic success, how many credits the student had successfully completed verses how many were attempted. Finally, a phone number and email address in which the subject can be reached should there have been any questions after the interview process was obtained. This data was secured in a double locked desk, along with all records and will be shredded/burned three years after completion of the research project.

Once all data has been collected, coding began looking and reviewing for specific codes relating to the ideas of barriers and learning. Coding began with a first cycle, followed by a second cycle. In first cycle coding, codes were obtained related to the ideas of barriers and learning. In the second cycle, pattern coding or a focused coding was implemented to narrow down and review similar ideas related to specific types of barriers and specific learning strategies (Saldana, 2013). All coding was done by hand, meaning that a set computerized program for coding was not used.
**Data Storage**

Data collected from participants either in hard copy format or electronically was secured with passwords if electronic, or in a double locked drawer as suggested by Rubin and Rubin (2012). This type of security will be kept within the researcher’s desk where there is only one individual with access.

Electronic data was kept on a single dedicated jump drive allowing for portability but decreased it be used or seen accidently by others. No other files were stored on that drive. By dedicating one drive solely to keeping data, there was less chance again of someone opening up files.

Any document with identifying information or containing data related to the research was secured. This included transcripts of interviews either recordings or electronic data. Rubin and Rubin (2012) recommend either having double password protected files, or double locking hard copies of information to secure research information. Data collected and used from recording devices was password protected for files. Additionally, personal computers and devices used by the researcher also remained password protected to limit availability of confidential information to others unrelated to the project.

**Data Analysis**

Data analysis for IPA uses the idea of attempting to understand the insider’s perspective to the topic being researched. Therefore, data was analyzed pulling statements from the participant to understand the complexity of the experience. The first step in the data analysis was to review all transcripts pulling words or phrases from their context to help in the understanding of the experiences across all interviews. Next, using IPA, the researcher reviewed
the phrases and words from outside the interview or the subject’s perspective. The movement from understanding the experience of the participant to looking at the ideas from the participant’s perspective is the essence of IPA data comparison analysis (Reid, Flowers, and Larkin, 2005). The researcher continued with the idea of adhering to triangulation as described by Miles, Huberman and Saldana, (2014) the need to confirm, check, and verify data so that there is corroboration from at least three sources. These sources were the individual, transcript, and current literature.

Finally, the data collected after the coding process was completed in an attempt to understand the experience of the non-traditional student and how his/her learning changed due to influences or barriers experienced by the individual. This aided in answering the research questions and helping faculty within higher education to understand what learning techniques students use or prefer. It also described the barriers students experienced which required them to change how they learned.

**Trustworthiness**

Creating and ensuring trustworthiness of the study is of utmost concern. Therefore, when considering the study of understanding adult non-traditional students and their perceived barriers to learning in higher education, one must verify that the information provided is that of the subjects, not bias created by the researcher. To do this, the interviews of the subjects used open-ended questions permitting thoughts and feelings to be expressed. Additionally, the researcher must examine any potential personal bias prior to, during collection and analyzing data; which was completed. By understanding researcher bias, this assisted in decreasing the probability of bias becoming evident during the research process. Polinghorne, (1989) as cited in Creswell
(2013), describes the need to be able to understand and see the connections, which become vivid in the examples described by subject during the research process, thus assisting in validating the data. The use of triangulation as Creswell describes, will assist in ensuring the validity of the study.

Because of using subjects within the researcher’s employed facility, one must be aware of understanding and viewing their barriers as the subject explains, not through how the researcher as faculty perceived them. Creswell (2013) discusses, as the interviewer, one cannot influence the participant’s description due to familiarity with the institution. As a researcher, one must have allowed participant’s experience to be portrayed, as he/she sees, not as thought to be interpreted with bias. Being both researcher and faculty to the student, no information about the interview was discussed outside of the interview process. In other words, what was discussed in the interview did not carry over into the classroom setting.

To minimize threats to validity entails: acknowledgement of the researchers own bias and allowing for the description of the subjects ideas to be heard within the themes during analysis of data. As Machi and McEvoy (2012) discuss, the need to examine researcher bias prior to conducting and during a study will assist in acknowledging possible consequences during the collection of data. As discussed previously, researcher bias was examined and acknowledged including methods related to generational preferred learning methods. The researcher did not want to impose opinions within the coding process, instead the feelings and ideas of the subject must be heard.

Secondly, it was clear to the students participating, that information about their experience is just that, their own. Information about one subject was not discussed with other
students or faculty members. Also to encourage truthful answering of questions, a neutral or comfortable location was used to allow the subject to be able to express ideas and thoughts in a non-threatening environment. To encourage the rich collection of information and to increase validity, subjects had the opportunity to review transcribed interviews for verification of thoughts and ideas. As Creswell (2013) describes, this idea of member checking is used to encourage true ideas expressed by subjects are verified.

Without trustworthiness, validity, and reliability, the results of a study must be questioned. Therefore, to decrease this, as a researcher I needed to examine bias, allow for openness, and described subject’s ideas through their own words and examples. Finally, following up with students by sharing transcripts assisted in insuring data collected reflect his/her true experiences.

**Protection of Human Subjects**

Protecting the rights of human subjects is of utmost important to researchers during the experimental phase of research. During aspects of the process, the researcher must be concerned about the treatment of the subjects. To protect potential subjects during the proposed research of non-traditional students and learning styles, the researcher must consider several points: remaining anonymous, securing documents, and finally doing no harm.

Anytime others express opinions, one must be concerned about how those thoughts and feelings will eventually affect the individual. For sensitive subjects or information, the subject of a study must be protected. The easiest way to protect a subject is not using any identifying characteristics or information available to those outside of the study and allowing the subject to make an informed decision to participate. Therefore, any data, which allowed linking of the
proposed student to an identity, was protected. By securing their protection, the subject may be more inclined to participate in the study or offer information he or she considers “sensitive”. To protect the students during this study, all identifying characteristics were eliminated from the final project including name, current class status (freshman, sophomore, etc.), and their current class enrollment. There was only one document where information was linked to an individual and the access to the document was restricted to the doctoral student. Information in paper format was secured through a locked drawer in a locked desk. As discussed in the National Institute of Health’s online training, the need to do no harm to subjects is of most importance and the risk of benefit must outweigh the harm during research, especially when studying vulnerable populations. The non-traditional student is considered a vulnerable population due to having student status. The risk to the student was low since there is no manipulation of health, however what risk that was present is that of retaliation from other faculty. If a student is open and honest, describing barriers to learning, one potential barrier is the faculty. If names are given and said faculty is aware, this allows the risk of danger to the student. Because of this information, interviews were not conducted in the faculty office area but rather in a more generally used conference area. All participants were given the opportunity to read, ask questions, and sign a consent form. The form explained the major points to be investigated, the need to ask questions, request recording of the interview, and re-enforce the idea of this process being voluntary. As Rubin and Rubin (2012) state, the need to encourage the participant to understand their participation is based upon meeting criteria and if at any point, the subject is uncomfortable with information shared, he/she can withdrawal. However, it is up to the
researcher to encourage and promote a collaborative agreement where the subject feels safe to share information.

Data collected solely for the purpose of the study relating to demographics is seen in appendix A. The student was asked to complete the form after consent is obtained and before the interview began. The student was given a pseudo name, which was be used in all recorded documentation and written works along with what generation the subject was born in, eliminating the use of a specific age. The only key to the pseudo-name and the student’s other identifying information was one handwritten sheet which was and secured. As Creswell (2012) discusses, the researcher must reframe from using identifying factors within the research that can ultimately harm the subject.

At any time during the interview process, the subject could have decided to no longer participate and information shared was deleted, thus eliminating their information and data from the research study. During the collection of data, the subject was be reminded at the beginning of the interview when consent was obtained, at least one point during the interview process, and at the interview conclusion that participation is completely voluntarily and they could have withdrawn at any point.

Finally, those involved within the project must understand that the harm caused to subjects needs to be limited. The risk of involvement must be less than the potential gain from conducting research. No student subject was knowingly placed in jeopardy. Students were given access to their transcribed interview after the recording process, allowing the subject to verify or clarify any points. If after the interview the subject did not wish to have their interview used towards the data collection of the project, then the interview and transcription was held until
the project was complete and shredded/deleted with all other documents and burned. Any potential harm must be discussed with the subject prior to the research, or in this case, an interview is conducted. Consent was obtained prior to participation and required the signature of the participant (See Appendix F for example of consent form).
Chapter 4 Report of Research Findings

After recruitment, participants volunteered agreeing that they found themselves changing their learning based on a perceived barrier to learning. Each interview was conducted in a private room and all participants consented to the recording of their responses to questions. The recordings were transcribed and none of the participants had any additional comments to add after receiving a copy of the transcripts. All agreed to have their data used within the research findings. The group of students was a homogenous sample representing the present non-traditional generations within the classroom. The focus of this research was to understand the experience of the non-traditional student (Generation X and Baby Boomer) when exposed to multiple generations within the classroom setting. Research questions included what learning strategies non-traditional students used in the classroom to overcome perceived barriers to their learning and what were the barriers the student had experienced. Questions to the participants were presented in a semi-structured format allowing them to be flexible depending on the type of conversation and answers provided by the participant.

To protect the privacy of the participant, all participants were given a pseudonym and that name was used within the results. Each student was interviewed separately in a closed-door environment of an empty conference room during a time that was mutually agreed upon between researcher and participant. It was reinforced that participation was strictly voluntary at the beginning of each meeting, during the start of the recording, and again at the conclusion. All students had to meet the set criteria prior to participating which included being over the age of twenty-five at the time of the interview, not having had previous experience in higher education, and having had to alter the way they learn. This final piece of the criteria was the most flexible
and allowed for interpretation by the student. Many discussed times of inadequate performance and how they adapted to overcome the struggle. After all interviews were complete, transcription occurred.

**Homogenous sample**

The sample was one of convenience and based on the individuals volunteering to participate in the study without any repercussion from faculty. All students were enrolled within the associate’s degree in nursing program and were in their final year of the program. Only one student was currently enrolled in a class in which the researcher taught. However, due to the team teaching concept used within the program, all information and testing that the researcher as the instructor had done was already completed prior to the interview. Therefore, the potential for bias to occur was eliminated due to limited contact with the student late in the semester. The other nine participants were not taking a class that I oversaw. This decreased the possibility of bias or as Burtin (2010, p. 97) calls “response effect bias”, since there was no indication of the subject responding in a way that I may have approved or preferred. The sample itself contained ten students, five were in their third semester, and five were in their final semester of the program. Of the ten, only two were full time students, the other eight were registered for the part- time program. Within the part time program, students attended class one evening for a four-hour session weekly for two semesters. They also completed clinical hours every other weekend. The full time day program completed the same content in one semester having class twice a week for four hours at a time and clinical two days a week every week.

The sample was difficult to procure. Many students who were above the age of twenty-five and interested in participating had started taking classes earlier in life or already had a
degree but were returning to school for a second career. This made finding those to meet the criteria difficult. This was a limitation of the study and will be discussed further in chapter 5. The sample was a mixture of male and female students ranging in age from twenty five to fifty one. The majority of the sample was Generation X, (7 students) and the other three students being classified as Baby Boomers based on classification of years by Weston, 2006. John, Tom, Jenna, Janet, Sophie, Jane, and Daisy were the seven Generation X participants, and Pierce, Oliver, and Beth were classified as Baby Boomers.

While many of the participants shared the same ideas and their thoughts about education and have the common goal of wanting to become a registered nurse, each was a unique individual, having entered into higher education for varying reasons. John was a student who had tried other careers but felt he was not where he was meant to be. He had taken vocational training to be a massage therapist and eventually became a Licensed Practical Nurse (LPN) but still felt he needed more education, thus entering into higher education to seek an associate’s degree and become a registered nurse. In contrast, Tom, a male student who had never taken classes beyond the eighth grade level, had only ever done manual labor and found he could not continue working eighty hours a week. After an illness with one of his own children, he realized nursing was the career he wanted.

Just as John was an LPN, so were Jenna, Daisy, and Sophie. Jenna however, found she could not move beyond her current position and sought education for additional career opportunities. Starting now seemed like the most idea time as she and her husband had not started a family yet. Daisy, was an LPN but in contrast to Jenna, had a family. After becoming a single parent due to her husband leaving, she was struggling working over full time hours to
support her children. Once she felt they were in high school, she could begin her journey of advancing her career and increasing her earning potential. Sophie too discussed the need to be self-sufficient and wanting to be a role model for her children, something she did not have as a child. Sophie spoke of her struggles as a young child growing up in a single parent household, moving and not seeing the value of education while in high school. After the birth of her first child, she realized the need to be able to support her children and not to become a “statistic,” Janet on the other hand described how after having children and a career in banking, she was not satisfied with what she was doing and wanted more meaning from her career. She too did not have additional education, only a high school diploma, and wanted to learn more.

Oliver, Beth, and Pierce all classified as Baby Boomers, described how they had made other choices before realizing the need to seek more education. Oliver, who joined the military early on shortly after graduating high school and suffering from a shoulder injury which prevented him from obtaining his dream of playing baseball in college or professionally, realized he needed nursing classes in order to work in a non-military capacity. After leaving the army and marrying, he worked but soon realized his passion for nursing. Beth and Pierce both described the need for family to come first and waited until their children were older to think about taking any classes. Both discussed the need to be mothers first and wanted to be there for their children. After both of their husbands lost jobs each re-entered the work force to help support the family.

When asked about the number of credits they had already completed, most students had completed approximately sixty credits. Only three students admitted to having to drop classes due to their grade in the class not meeting the 74% minimum grade required by the nursing
department for all general education classes, nursing classes, and sciences. Those who did drop the course were successful in their second attempt. Reasons for dropping included not being able to commit to the time needed, knowing they would be unsuccessful at midterm, or feeling overwhelmed at the time.

**Data results**

After all interviews were transcribed, data was collected reviewing each transcript multiple times. During this time, themes became apparent through each reading. During each reading a separate search was completed related to key terms of barriers, learning, and the idea of peers. All themes were then sorted based on the three key terms. Subthemes also emerged. Under the idea of barriers, subthemes were then classified on the ideas of how they related to the environment, other students within the class, expectations, and the idea of time. Subthemes related to the concept of learning also became visible and classified by preferred style of learning and sources to learn. Subthemes related to the key term of peers connected back to either positive or negative experiences, especially when discussed within the classroom experience or within the study group construct.

**Theme of Barriers**

The term barrier was given a very flexible definition; one used repeatedly for all participants, but related to something that the learner or student found hindered them from learning new information. The barrier could be a thing such as the room itself, a person, or even an event that deterred from their ability to learn and be successful in a class. Most of the participants discussed situations and gave examples of barriers they had experienced within the recent past. From the idea of barriers, subthemes developed and were classified based on
relating to environment of the room where learning was to take place, personal effects on how the individual was treated by other students/instructor within the classroom, expectations of the student, and finally, the subtheme of time.

**Barrier of the environment.** Students interpreted the idea of environment differently. Several thought of how the room was set up. Tom, one participant, spoke of how large the classroom was and the number of students within the classroom. He found it difficult to learn at times due to the size and number of students.

“I feel the class is too large and um limits the amount of questions you can ask because if you have 72 students you have two questions that could take up to 10-15 minutes if you let it. But I think it’s just a little too large and you don’t have enough time to elaborate your topic”

The wide-open space made it more difficult to hear and more students in the room meant additional noise. Distractions could be other students speaking poorly about peers as Pierce described. Pierce discussed one time in class, several students around her were chatting about another student and she felt this was not only unfair to the student but also distracted from her learning. She was not there for the social aspect, but wanted to use the class time to learn. Daisy spoke of an example of how younger students were distracting with immature actions, sitting on each other’s laps, not allowing a professor to finish, packing up their things just because it was almost time to leave. She explained that she wanted to hear what was being said and stayed after class to clarify a point, a concept that ended up on the exam. “I cannot stand it when its twelve o’clock and someone is still lecturing and people are putting stuff away, that is my biggest pet peeve, I cannot stand that, cannot, cannot!” To Daisy, this solidified the need for making the connection to stay and clarify instead of simply following along with others and leaving.
**Barrier based upon treatment.** Tom, a part time evening student discussed the disparity that was evident based upon the treatment he felt from the college as a whole. He felt the daytime students had more advantages and were treated better than he and his peers. Sharing the example of needing to make arrangements days ahead of time to simply have equipment available on weekends was a barrier to his learning. Coming to study and finding classroom spaces locked during off hours deterred the meeting space for his study group. After speaking with the Dean and student representation, the students were able to make arrangements for rooms to be open during their set study group times. In addition to the disparity in respect to scheduling, students had the opportunity to practice nursing skills in a skills lab. However, the hours Tom spoke of were not convenient to the working student. When appointments were made other daytime students infringed upon this later period, decreasing the one on one instruction he scheduled giving him the feeling he was less important.

“A lot of times we show up for that and there are you know a bunch of other students that requested this time so they don’t have to stay late. So it kind of gets a little frustrating. We have to fight to get into the classrooms after hours. To the point where we said exactly what you said earlier, we paid for this why? This is our college, why are we locked out?”

**Barrier of expectations.** The subtheme of barrier to expectations became very clear within the ideas of what students discussed as topics they thought they should have known, or skills that should have already been acquired. Daisy discussed this within the context of one of her first classes, an English class. Daisy spoke of the unwritten knowledge that some professors figured was a known to all. In one of her first classes, the English professor was discussing MLA, and finally out of frustration she asked, what is MLA or APA? Through that experience and having her own teenage children, she was able to utilize the concepts. She discussed how some ideas
that may have been taught in high school more recently were not taught years ago, leaving her at a disadvantage. Even simple tasks that many younger students may have been exposed to such as keyboarding skills, basic computer skills such as cutting and pasting, along with emailing attachments were difficult for her.

“….. I can remember sitting in this remedial English. It’s funny because you have an instructor who is younger than you, nice guy, and remember raising my hand, and I am older and I remember in class with a bunch of young kids. I asked, you keep talking about MLA what is MLA? And everybody is laughing and I am like I don’t know. So it was a big eye opener, I had to learn. I didn’t know how to copy and paste, but my kids were more [knowledgeable], they grew up with that. It was like being lost.”

All pieces she first had to learn because it was expected she already knew them. This meant she not only was attempting to learn concepts in class, but also had to learn how to communicate using computers and email skills she had discussed. Skills she said her children take for granted.

Tom also discussed the idea of having a stronger foundation. He cited the example of simply knowing when to write down problems and when not to. Tom came from a strict religious cultural, and was only educated until the eighth grade. He discussed that he was good with his hands, but not so skilled with his mind. Writing down mathematical problems was not something normally done in the culture in which he was raised. This kind of skill was to be done mentally. This was a challenge when he entered into algebra. He spoke of his struggle with trying to do the steps mentally and scoring very low on his first exam. After he realized that writing out problems was a very acceptable and a needed practice, he was able to see his errors and correct them much more easily, scoring better on subsequent tests.

“…. I mean going back to the algebra thing, I used to do a lot of that work in my head. Which doesn’t work because if you miss one step you do twenty more steps and did it all for not. It didn’t work so I had to learn to really train myself to write it and write it”
The barrier of expectation was also mentioned by the students towards the role of the professor. Several discussed this in terms of engagement of the professor to the topic at hand. Sophie, Tom, Oliver, Jenna, Janet, and Pierce all discussed the strong desire to be in class. Many valued the need to be there, Daisy discussed her enthusiasm for simply feeling part of a learning experience “when the screens came down, I just thought wow, this is so cool”, I was so happy to be here”. There was a strong desire to be present even when class attendance was not mandatory. However, many expressed that when the class was not interactive, or the professor simply read from the PowerPoint this was not time served well. Many spoke of not just presenting information in a matter of fact format, but then relating this information to clinical practice. As Sophie discussed the need to understand the why was important not just because it was that way, but applying this information to the science of nursing. She discussed the idea of leaving early. “There was one professor and when I see her everything shut down, it was horrible. “I didn’t want to be rude and get up but I left at break because I was not getting anything”. Several discussed the need for the instructor to be engaged in the information. Jenna described a time where the instructor seemed to really enjoy the topic and she had no problem following along. Another instructor did not show that same engagement and she felt as though she could have simply gotten the handout and read it at home. Sophie explored that same idea stating that when she is engaged and the professor is also, she writes extra notes on handouts, color coding them. When all information was included or taken straight from the text, she felt less like engaging in the learning. Oliver also spoke to this citing an example where if he was not engaged, he was lost, and unable to re-focus his attention towards the information. John too spoke of the need for the core learning coming from the time spent in class and if he felt as
though there is little interaction between the professor and student or class he was less inclined to stay, and left at a break time or early. “I could read this at home; I had a teacher who would read right out of the book, word for word”. Tom related to this also stating, “I could read it from the book, I was looking to learn from the experiences of my teacher, to expand and explain so that I could then apply the information”.

**Barrier of time.** Almost every participant discussed the idea of balancing work, home and school. The idea of trying to do it all expressed by Tom and several of the participants discussed how they viewed themselves to being driven and wanting to learn, but there were time constraints. These time constraints, viewed as barriers, did not allow as much open studying time due to other requirements such as family or work. Jenna and Beth both discussed the need to decrease working time to better prepare for tests and class time. Sophie brought up the idea of not wanting to hear about outside events during class time, and valued her time in class. Many of the students felt attending class was extremely important. While it was not mandatory to attend the didactic time, many felt they gathered important information during this time that was not replicated by reading or note taking from other sources. Sophie explained:

> “I learn better if am hearing it. So if the professor is engaging and explaining I learn better. If you are reading a power point verbatim, I am not getting anything from that, I can do that at home, I need rationale this I why it’s so important. That sticks with me. It helps me remember this is what it is.”

Oliver discussed how story telling did not assist in his learning within the classroom and he would easily be distracted during this time, calling it “wasted time”. When a student within the class would begin to add to the presentation with a personal story, he was unable to pull himself back into what was the content being discussed. He spoke of this being “lost time and unable to refocus himself” until after a break when he could reset his thinking to the topic at
hand. Others such as Tom discussed how story telling did not assist in his learning and found it a waste of time; time which could have been used to answer questions on the material instead of waiting until after class.

**Theme of learning**

The theme of learning emerged from understanding and asking how participants preferred to learn, what kinds of tools did they use to learn, and how have they changed their studying habits. The participants all brought up their preferred learning style, titling themselves as visual, auditory or “hands on”. However, as each idea was explored during the interview process it became apparent that the student did not always stay with one learning style as they titled themselves. Each student listed the resources they used initially but through further exploration brought up other resources they have tried or not tried.

**Learning style.** Every student interviewed would describe themselves in terms of auditory, visual, or hands on learner. When these concepts were explored in more depth it became clear that the students used a variety of types of learning, and did not stick to one form. For example, Jenna stated she liked to be in class because she was auditory. In the past she found if she listened to the professor, she gained what she needed to know and did well. However, more recently, she was finding this harder to do, and needed to add additional ways of learning to assist her. When this was explored a little more, she admitted to taking notes during class, used a handout, which was provided and wanted a visual display of the material. Jenna discussed:

> “yeah, um, I like some sort of visual aid. We have one instructor this semester who doesn’t always was use power point and just uses an outline. But it is something that helps to kind of follow along. I take notes on it so I guess I do use more than just listening.”
No student discussed or mentioned the idea of using a combined method of learning until questioned. Janet mentioned her need to read. Reading wasn’t her favorite way to study, and she found the readings complicated. Thus when she did not understand something she looked for a different source to assist her. She described wanting to read, but preferred and became excited when discussing the videos and pictures she found on websites.

“I really, really like YouTube, you can take any concept like congestive heart failure and just type it in and thousands of videos will come up. ….. It works for my brain better than reading a textbook. I’ll read a textbook and read the entire thing and be like I don’t know what I just read. I was just continuing to read but not really reading [and understanding].”

Additionally, she too wanted to sit in class and made a strong effort to not only come but also sit in the front few rows.

Sophie also described a time when she liked to only use one way of learning, making flash cards. She discussed that was how she was successful in high school and her vocational training. However, she found it more difficult when she began college. Before she simply would look over the cards and could recall the information on them. Now, she was unable to do that and after three days of trying her usual method, changed to a more concept/objective note taking style.

Even those students who voiced being visual learners, when asked how they learned within their study groups, spoke of the verbal exchange of ideas. Again, the verbal exchanged showed that they used multiple different types of learning. The use of multiple ways to learn reinforces Gardner’s theory surmising that a student may have one stronger type of intelligence, but also can use others to assist in the main source of learning. Each student spoke of the need to classify themselves based on preferred learning styles, but none commented on the need to use
several types of learning in order to be successful. For example, Tom spoke of being more hands on citing this was how he was brought up to learn. After discussing how he liked to study and what he used, it became clear that he also was auditory. He enjoyed sitting in class listening to the professor and would also gain valuable information through the conversations held within his study group. Jenna who started out by describing the need to simply hear something and being able to remember it also spoke of the need to write down key concepts and having something to follow within the classroom environment. She discussed that most of her professors used some kind of visual and she liked that to follow along to organize her notes. The idea of visualization when learning was clearly used by many of the participants. All spoke of how they sought out additional learning through the use of internet sites that were colorful or videos with animation to assist in understanding concepts.

**Sources to learn.** Tom went on to explain he learned best through the application of information and even creating case studies around information in his study group to ground the ideas he was learning. Wanting to know more than just the superficial, but understanding the why Tom, Sophie and Oliver described the need to know more, not because that’s the way it should be, but to understand and apply to all different types of situations. The idea of wanting to move beyond memorization and applying it to their life spoke to the ideas of Malcom Knowles and adult learning principles. The adult student moves out of memorization of information and instead wants to be able to pull past experiences and current information into their own life. To many of the subjects, life experiences were a source of their learning. John discusses this point, looking for the assistance of peers and examples of patient care:
“… I always like to go back to my ICU (intensive care unit) crew and I would go and talk to them about things uh just for them to be able to explain things to me sometimes

Many participants spoke of the need to review prior to attending class. John discussed how he tried to get the readings done in the beginning, but as time became an issue, he was down to skimming material prior to class. John spoke about his studying:

“Well every semester I would tell myself at the beginning I’m going to take notes and then go home and retake notes and use the book, and I would start doing that but then realized this is just so time consuming. Taking too much time and eventually I would just make note cards for all my study materials.”

Jenna would prefer to skim through the text to get an idea of the topic and then study additionally after the information was presented in a more formal manner. Several students discussed the idea of using handouts as a tool for learning such as using a PowerPoint to follow the discussion of class material. They added to the class handout with additional notes from resource required by the course as listed in the syllabus (textbooks, laboratory manuals, and online resources). Others discussed the use of outside resources such as online searches, websites, and additional non-required textbooks.

Additionally, several students spoke of the need to attempt to read the text, but many times found it not helpful or did not hold their attention. When concepts were confusing or unclear in the required texts, others sought out work related experts to assist in their understanding. John spoke of discussing questions with his work friends to help in clarifying information. The idea of not wanting to simply memorize information but to apply the key concepts within their working or living environment held true for many of the participants. As Sophie discussed, she did not want to just be told something, she wanted to be able to apply this information. The idea of application of information assisted in the formulation of critical
thinking. Tom discussed too, the need to learn more, hence why he valued the classroom experience so much. Even working over fifty hours a week and having a family at home, he found himself wanting to know more, wanting to spend time looking at information to apply it to his clinical time. John spoke of applying information into his work life, or using work life examples to reinforce the content learned in the classroom.

One resource students repeatedly did not use or only used minimally was the available resources through the college. These resources included tutoring services, online proof reading, or test taking strategy classes. Two of the students spoke of using the resource center to help in test taking, and one student used the tutoring services for math. Many participants voiced concerns about the lack of available times or not finding the services helpful. Daisy spoke of the time she thought about going “but none of the times worked for my schedule”. Instead, students looked to the assistance of their peers.

**Theme of Peers**

All participants discussed the role of their peers within their learning and how it either helped with respect to the use of study groups or hindered and was a barrier when distracting from their learning. Peers and groups seemed to occur in a non-structured format. The groups that students felt comfortable with came from their common experiences, shared work experiences, or through sitting close to each other in the classroom. When asked about how they would study or reinforce newly learned material, every student discussed either a study partner or group they routinely attended. Students joined or created the groups during a time of experiencing a barrier to their learning and found support in their learning by using a group.
Study group

Every student discussed how at some point he or she studied with either another student or a group of students. Study groups would meet on standard days and times, sometimes weekly for hours on end with the same group, or could be semi structured only meeting before a test with whoever was available at the time. Tom discussed the structure of his group being people who were ‘driven”, wanted to learn and who were all about the same age as he (Generation X). There was little discussion of other topics during this time and they focused on creating and understanding information from class that was presented earlier in the week. Tom stated in regards to his study group:

“Its making the most out of what I will say where I have learned to thrive is the study group. That has been, [where I learn]. I will do my reading at home, but I do my studying more in the group.. We have learned that we come in for four hours, were not going to do anything but study and we can chit chat after.”

Janet discussed that she would study more with a peer when needed, typically before a test. Jane explained her studying with a peer who had experienced a failure of a class just as she had, creating a common bond between them. Beth spoke of meeting with her group based on where she sat in the room. “We all starting to hang together since day one. They all sat around me.” Pierce, who was involved with two study pairs, was more of the organizer of her groups, offering her assistance to two students who were struggling. During these sessions, she did most of the speaking, but found it helpful to her in that she was able to explain the information, reinforcing her own learning. Pierce stated:

“There are just two of them [in her study group]. But we don’t always meet together. It is usually me with one, then me with the other because I am trying to help the one that’s struggling in certain areas. It helps me too, it forces me to study a little more too. You know what I mean, so I have to make that time to be at her house so I have to do it. And then other girls is the same way towards the
end of the semester, this is going to make or break her. So I have been helping her the last month.”

Very few groups were of mixed generations. Jenna spoke of her group having two Generation X students, and two Baby Boomers was the only evenly split group. Daisy who was more open to inviting others into her group, invited the “younger students” (millennial) into her study session, but found they would never attend. “I would say come study with us, come on its no big deal, we can help”. She believed she was more open to the younger generation due to her having children close to the same age. Beth spoke of her group and being the oldest member (a Baby Boomer), however, being the one most comfortable with technology, using an iPad, smart TV and different applications within the group.

When speaking about their groups, participants stated study groups were semi-structured or followed a formal structure where studying would occur in one room, and socialization occurred afterward. Semi-structured group meetings would be those occurring closer to a test and topics that group members were struggling with were discussed. Oliver spoke of those in his group would just start reviewing a topic and anyone could add in anything that they felt was important to that topic.

**Positive and negative interaction**

The final subtheme that became evident during the coding process was the idea that of interactions with peers could promote learning in a positive manner or create a negative interaction. Many of the positive interactions stemmed from taking ideas of studying, meeting in groups, or working together to promote learning. Negative interactions decreased the ability to work and learn from other generations within the classroom, thus separating the traditional and non-traditional students.
Students were able to learn from each other and described these interactions as positive. Oliver discussed how from his study group he would pick up and use mnemonics to aid in learning information for his anatomy and physiology class. Jane discussed how having someone else to study with helped her to remain accountable to her study time, requiring her to meet with her study partner (a Millennial) and mark the study time as important. Jenna revealed how by using technology in her study group, she learned how to Skype and use videos to aid in her learning from peers. Just as Beth also spoke of how she incorporated study skills used by peers into her own ways of studying.

However, just as many experiences within the chosen study groups and peers were positive toward learning; other situations prevented learning from occurring. Several students found in class activities somewhat helpful, but when large groups were involved, they lost sight of the learning piece. Janet spoke of the larger groups and not being able to hear or converse well due to the size of the group. Daisy also found a problem with large groups and side conversations where the group may not have stayed on task. Oliver found group activities to be difficult at times when learning new information. He wanted to have ideas presented by the instructor and then reinforced with a group activity. He found problem solving in a group difficult and “guessing” at what the correct answer could be. He explained:

“I feel sometimes people are guessing what it is basically fishing for the answer to figure what right. You may have two or three that are medical who have experienced it and maybe two or three who are not medical and have read the book. Then you have the clash of what’s right or wrong. I like to be fed see what it is see what it is supposed to be so I know what you are looking for, something along that line.”

All of these type of group settings were pre-determined by the professor, assigned individuals randomly or based on their clinical nursing cohort. Not allowing individuals to
choose who they prefer to complete the learning exercise within the group caused a decrease in learning.

**Summary of Findings**

The ten participants in the sample shared many of the same ideas and feelings when asked about barriers to their learning and the environment in which they learned. The main research questions aimed to better understand the experience of the non-traditional student in the classroom setting and how a mixed generational classroom influences the learning of different generations. Common themes and sub themes became clear through the gathering of interview data. Configuring the interviews around semi structured questions aided in allowing the flexibility of the participant to answer questions and clarify, as they needed. Additionally, understanding their experience through an interpretative phenomenological analysis of the data helped to gain insight into their experiences in the classroom setting and the barriers which they perceive to their own learning.

Several commonalities existed among this sample. The students were verily evenly split male and female, had approximately the same credit hours completed, and were a mixture of part time and full time students. Barriers to learning were exposed and grouped based on their environment, time, and expectations. The theme of learning was broken down into the constructs of learning styles and sources used to learn. Finally, the other major theme that influenced the student was their peers and the subthemes of study groups and a positive verses negative interaction was clearly defined. Through these findings, it became more evident that prior research does not adequately describe and apply to the current classroom full of promising nursing students of mixed generations.
Chapter 5: Discussion and Implication for Practice

The purpose of this study was to understand the experience of the non-traditional student in a mixed generational classroom specifically acknowledging the barriers experienced and how each one has adapted to overcome the perceived barrier. The research questions consisted of what learning strategies did non-traditional students use in the classroom to overcome perceived barriers to their learning and what were the barriers the student had experienced. These questions were used to guide the understanding of this population and their learning. The problem of practice developed in a multigenerational class where there could be at least three different generations represented in the learning environment. Additionally, if educators and administrators of higher education do not acknowledge the differences of each generation within the classroom barriers to learning can develop. These obstacles increase the likelihood of students becoming less successful and altering attrition rates. Students representing today’s classroom in higher education have changed and all stakeholders within the learning system must be willing to acknowledge and work to assist the non-traditional student in order for this group of students to be successful.

Current literature has shown all generational groups have a preferred learning style historically based on previous experiences and values. The two groups representing non-traditional students, Baby Boomers and Generation X, also have preferred learning methods that have been previously discussed in research. Past research showed Baby Boomers preferred a lecture style of class experience and would only use resources suggested or used by the instructor (Weston, 2006). Generation X on the other hand, preferred a more individualized learning relying more on their own desire to learn and being resourceful in answering/finding information.
with individual learning rather than a group construct (Kupperschmidt, 1998). However, there was a lack of evidence in the literature discussing what would occur when the generations were mixed. Could an individual from a different generation alter his/her own learning methods based on exposure or barrier within a classroom of a mixed generation? This was the premise for developing the research questions that guided this study and the lack of evidence which became apparent when the topic of generational learning was researched.

To answer the research questions a qualitative research approach was selected, specifically, an interpretive phenomenological analysis approach due to the need to understand the experiences of the individuals. The IPA type of research allows the researcher to question the individual in order to better understand the subjects' experiences based on choices made. IPA differed from the phenomenological approach to research by allowing the researcher to attempt to analyze the findings and apply those findings to others whom may have also gone through the similar experience. IPA allowed this study to better understand how and why students learned and what barriers they had experienced.

The research project was framed around the theories of Gardner’s Multiple Intelligence and Malcom Knowles Adult Learning Theory. Because the sample was of pre-licensure associate degree nursing students, the findings were applied to understand the barriers this population of students’ experiences. The need to move learning from a type of memorization of facts to broader application of information, in order to promote critical thinking in the student when caring for patients, was imperative for safe practice.
Understanding learning through multiple modalities

Every student interviewed in the study discussed what he/she felt was their preferred method for learning using the idea of visual, auditory, or tactile. However, when questioned more deeply about the method of choice, discussion revealed the use of multiple modalities. Each student expressed what they considered their preferred method however most when questioned, discussed the use of multiple methods beyond their stated learning style. For example, a student who discussed the need to be visual also found auditory learning a necessity. The same occurred with a different student who spoke of being more auditory but also wanted to take notes and follow along with a visual display. Therefore, as Gardner researched, most individuals have one stronger intelligence, but also may have similar other lesser used intelligences that when used in combination assist in the learning process; strengthening the ability to learn and understand new ideas. This holds true for many of the students within the study; the need to use multiple modalities in order to find success in their learning process.

Gardner discovered and classified eight main types of intelligence that helped to express intelligence/learning beyond the idea of traditional math and linguistics. Applying this to the idea of nursing education helped to demonstrate the need to move beyond learning of factual information and into a higher level of application of new knowledge. A need to move to a higher level of thinking was what Gardner explained must occur within the students preferred method. If the preferred method is not used, the student is forced to attempt to learn using a lesser valued form of individual intelligence. This could be seen when a learner who is strictly given auditory directions and was expected to apply the information but would prefer to work through the problem using a kinetic type of learning. The principle of forcing a learner to learn how the
instructor saw fit only causes frustration and a potential loss in learning by creating a barrier for the student. In application to nursing education, the instructor was always attempting to show how information was applied to multiple situations in which the student was exposed or could potentially be exposed, thus requiring the student to take the information presented and critically apply it differently.

Learning by a younger student is based more on external motivation than internal drive. The school age student wants to do well for a reward or adult praise. However, the non-traditional student is an adult and therefore learns differently. This must be acknowledged when working with adult students. What drives the juvenile student to learn was completely different from the adult. Knowles discussed how the adult learner looks to understand and apply information not simply memorize. The adult learner must be able to pull past experiences into their current learning. This again was evident in how the subjects used their prior experiences to help understand current learning and related this information to the clinical setting. Several of the study participants looked to peers to help in the application of information to the world of nursing. The adult student found value in their education to apply concepts not simply pull information together for an external reason, but the reason for learning was internally driven. Several of the participants spoke of the need to learn because they wanted to, that they wanted to be able to apply information in order to excel in the clinical setting, not simply to learn information for a test.

Besides Knowles, more recent studies have discussed the nature of the adult student and the need to adapt learning. Bye, Purshar and Conway, 2007; Justice and Dornan, 2001; Spitzer, 2000; Wyatt, 2011 discussed the adult student wanted to pull information learned and apply it to
a real life situation. Others have looked at the adult student addressing multiple barriers in higher education forcing them to seek assistance from others who have experienced the same problems (Anderson, Johnson, & McDonald, 2011). This was also seen within the group studied. Many of the group preferred to remain with the same generation or not venture far from those around them. Others were more willing to mix with traditional students but found they were not always accepted.

**Traditions to each Generation**

As previously discussed current literature describes each generation having a norm to their preferred methods of learning. However through exposure; this assumption was no longer accurate. Baby Boomers who were thought to want lecture style education sessions would stick to resources approved by the instructor, or accepted what the professor stated as correct. There was no questioning of information, however what Weston, (2006) researched did not always hold true. For example, several of the study participants who were classified in the Baby Boomer category used websites, IPads, and outside non-required resources. With this new information, educators cannot assume that others based solely on age would not also follow this example and use additional resources. The major finding to consider within this group, was their background and ability to use technology. The professor must not assume that simple current everyday knowledge such as how attaching files to an email message was known. Instead, higher education institutions need to consider adding courses or orientation within the curriculum to expose the student to applications needed to complete assignments or use technology. This could be implemented within English classes touching on MLA or APA formatting, and offering supplemental courses in technology to be taken before enrolling into classes. Another option
would entail the institution being very clear on the requirements of basic skills needed by all students prior to their first class.

Additionally, as Kupperschmidt, (1998), discussed Generation X was more self-reliant, not wanting to participate in group activities was also an assumption that may no longer be true. All of the participants in this research engaged in study groups of their choosing. Where the participants found learning to be negatively impacted by groups was when groups were chosen for the participants or were too large. Today’s educator needs to consider the size and the dynamics among the individuals when considering the use of group learning activities.

Each participant learned or altered their learning based on a barrier that they experienced. While one must be careful in applying these findings universally, the points gained from this research can be applied to the scholar-practitioner within nursing education. Application of alternative teaching methods, encouraging learning through application of information to clinical practice, and the need to understand the barriers non-traditional students may experience in a mixed generational classroom.

**Altering methods to meet student needs**

One area of concern within this classroom dynamic was the preferred way in which information was shared. Several students discussed how they preferred the professor to present new material in a lecture style, a favored style of Baby Boomers, and then follow up with a reinforcement activity. Interestingly, the participants who voiced this were not classified in that generation (Baby Boomers), in reality they were Generation X members. This example showed the need of the educator to not assume learning styles solely based on generation as previously
published. Today’s classroom allows for a mixture of generations and because of this exposure, students may alter their learning based on need not on generation. With these alterations to student learning, the educator needs to be aware of the potential for change, and modify teaching methods to meet student needs.

**Considering Barriers**

Much literature has been published addressing the potential barriers that non-traditional students have been exposed to (Burton, Lloyd, & Griffiths, 2011; Donaldson and Graham, 1999; Giancola, Munz, & Trares, 2008; Houser, 2005; Lundberg, 2003; Meyer and Turner, 2002). As Burton, Lloyd & Griffiths (2011) noted barriers in higher education for the non-traditional student which included lack of access to resources, tutors, computers, study areas, and advisors, all of which altered their experience of higher education and learning. Some of these same barriers held true to the group of nursing students interviewed. Several students spoke of the lack of a study area, or time-frames that assisted in their learning, along with decreased access to supplies/laboratories. If classes are offered at off times from the normal business day (8am-4pm), then other support services must be available to students who choose to attend classes at off times. Classes during evenings and weekends cannot be offered without allowing the same services to be available to the evening student as those students attending during the day. This must be done within reason. The amount of students partaking in a part-time or evening program may be less than those traditionally attending during the day, therefore services need offered in the same proportion. Staffing offices twenty four hours a day is unrealistic, however, having one day where services are offered for a longer period or flexibility in evening meeting times based on appointments are plausible alternatives. Allowing those students to have access but not
financially or physically burdening the institution must be considered. Secondly, altering or providing access for study areas would not cause a financial or increase the need for manpower to increase student access to classrooms. Because of this decrease in accessibility, students sought out others to answer questions.

Anderson, Johnson, & McDonald’s (2011), study of students found that the non-traditional student is motivated to learn, but unsure of their own study habits. This statement held true for the group of ten non-traditional who participated in this research. The purpose of this study that was to understand how adult students learn and perceived barriers to education. The participants discussed why they needed to change their study/learning based on a barrier. Just as Anderson, Johnson, and McDonald (2011) found, this too held true in this study. Many of the participants discussed their drive to learn, to succeed, and explained they needed to alter their study habits when they were not doing well. Most examples of changes to study habits were based on a negative experience such as testing or not being able to apply information. Students also spoke of how they wanted to move beyond memorization and knowing just to know, but being able to apply information to their clinical experiences.

To reinforce the idea of motivation and study habits in order to enhance learning, educators need to apply multiple ways of instructing within the classroom exposing students to other methods. This may mean moving from a lecture style to flipped classrooms, or group activities. However, educators of mixed classrooms need to be cautious with the use of group activities. As seen with these participants, groups should not be chosen by the professor, but allow groups to form independently. Additionally the size of a group should be minimized to aid in the ability of all to participate, hear what is shared, and remain on topic.
The educator may alter the environment, seek to spark interest in learning by using different delivery methods, but ultimately, the student must choose to want to learn. The idea of being driven to learn occurred in all of the students and this drive is what is needed in education and nursing. Faculty cannot motivate the student who does not wish to learn, but instead can encourage and foster the drive to want to do well and excel within education, and explicitly nursing education. Nursing is a field that requires a unique and passionate individual. Not every student who wants to be nurse can or should be. Nursing faculty must be prudent in determining which student demonstrates constant, safe care; and which students do not. Instead, educators need to harvest the determination of the student and use this drive to seek new information in a positive light.

**Application to Nursing: critical thinking**

Currently, in order to analyze a student’s ability to do well within the nursing curriculum, several factors are considered including the students past achievement in science, math, and humanities classes. Whyte, Madigan, & Drinkwater, 2010 study assisted in supporting the idea of using past experiences to predict future abilities. However, while prior knowledge is needed, this only measures intelligence using mathematic or linguistic thinking; instead focus must be on application. Using Gardner’s idea of multiple types of intelligence, learning must include multiple ways of applying new information. This should then spark the idea of critical thinking that so many nursing professionals discuss as a needed skill for newly licensed nursing staff. The idea of critical thinking needs to occur within the curriculum of nursing education. Because critical thinking is a more complex idea, there is no set standard of measurement other than the idea of applying information learned in one situation to a broader idea when faced with similar
circumstances. Within nursing practice, there must be an ability to not only use science to guide practice, but also be able to build and learn through interpersonal relationships. Intelligence relating to inter and intrapersonal relationships needs to be obtained so not only can the new nurse apply learned concepts but also build trusting relationships and assess nonverbal cues when caring for the patient. This type of intelligence is rarely measured and used as indicator for success in nursing courses. Currently with higher education, there is more of a focus on aptitude of mathematics and science as indicators of ability for the student to think critically.

The ability to apply information, compile assessment findings, and come to a conclusion of needed care is the basis of critical thinking in nursing. This cannot be done unless there is a drive to learn and apply information. In the non-traditional student, the drive to move beyond knowledge attainment and onto the application level is evident in the study participants. Application of this idea needs to occur by allowing the past experiences of the student to be utilized in present learning. This requires the educator to not ignore the rich background of the student but use this to spark the learning and internal drive for knowledge. Again the findings within this study support those found by Bye, Purshar and Conway, 2007; Justice and Dornan, 2001; Spitzer, 2000; Wyatt, 2011, the drive for non-traditional students of applying learned material to the outside world. This is the beginning step towards the needed skill of critical thinking. Finally, within this group of students, the idea of learning new ideas and the ability to apply them especially to the clinical setting meant their learning was successful in the course. There was not an external drive, but rather this became more personal, internalizing the learning as important and needed was supported by previous findings of Donaldson, Graham, Martindill,
and Bradley (2011) who found that those students who were successful within their college courses equated this success in learning material.

Today’s nurse must be able to apply information consistently to many different scenarios. Therefore, nursing educators must begin to have the nursing student acknowledge this concept early within their education. Waiting until the final semesters for nursing students to begin to apply concepts is unrealistic and setting students up for future failure. Instead, the idea of applying the same concept to different contexts is needed. As students move into the working world of nursing, it is expected they have the fundamentals of critical thinking already started. The increasing complexity of care needed to be delivered to the ever more critical patients does not allow for the newer nurse time to learn application of an idea to all types of setting (Chan, 2013; Chan, 2012; Chang, M. J., Chang, Y. J., Kuo, Yang, & Chou, 2011). Today’s educator needs to instill within the student the need to move beyond memorization of information into the level of application of information. To do this means the student needs the internal drive and the desire to learn, not memorize data.

**Conclusion and future research**

The purpose of this study was to understand the lived experience of the non-traditional learner in a mixed generational classroom and the barriers they have experienced. By using interviews of students from a health sciences institution, it was understood that barriers occurred based on several subthemes of environment, other students, expectations and time constraints. Besides the main themes of barriers, learning, and the idea of peers subthemes were also present. Several subthemes present relating to the idea of peers were positive or negative experiences connecting to the classroom or study groups, and sub themes of learning showed preferred
learning style and sources to learn. The two main generations found within the group were Generation X and Baby Boomers. Past literature and assumptions made that each generation will remain steadfast to their traditional way of learning was unrealistic. Instead, through exposure to others within the classroom or study groups, students found other ways to overcome their barriers and be successful. The drive for this success has been more internal and seen as necessary in order to be able to apply information, sparking the beginning of the construct of critical thinking. This study cannot be generalized to all mixed generational classrooms and had several limiting factors.

This qualitative study had a sample size of ten, which was a representation of students who met the criteria of being older than twenty-five, not having prior experience in higher education and who experienced a barrier to their learning. All students attended the same institution and were within the same program of study, an associate’s degree program in nursing. While this created a homogenous sample for the current study, it may not represent all non-traditional students in other disciplines or institutions. Another limitation to this study was it strictly looked at those who were newer to higher education. Future studies may find that looking at those who had prior degrees in higher education and how those past experiences shaped their current study habits within a mixed generational classroom. Due to the changes in the current economy, many individuals with prior education or degree may be seeking career changes or returning to higher education for different degrees. Returning students may experience different barriers or may have already altered studying to meet their needs. Only considering those without prior educational experience decreased the likelihood of past experiences shaping their learning
process. However, as discussed previously, past experiences may actually assist in shaping the student’s ability to learn. Therefore, this is an area of need to be studied in the future.

The group of students interviewed for this study shared their personal feelings and experiences in an attempt for the researcher to understand their experience within higher education for the first time. Those experiences of the non-traditional student in a mixed classroom may be different the longer they are exposed to others. The experiences shared are very personal to the individual and their own learning. Future studies within the non-traditional population may find similar results of being driven to learn and wanting to learn for application purposes. Finally, each learner is different, and in today’s classroom the educator needs to find the best way of encouraging learning without discouraging the student. Students learning needs and intelligence cannot be assumed to be measured using only two standards. The educator must adapt and be willing to meet or encourage learning to occur using multiple different modalities based on the preferred method of the student not simply based on age. The scholar-practitioner in today’s classroom must have the ability to understand the learner and allow past experiences to help shape future education free of learning barriers.
References


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Appendices

Appendix A

Visual representation of theories and adult learning
**Appendix B**

Date:

Dear Student,

Currently there is a research study being conducted by Mindy Guinard MS, RN, CEN on how non-traditional students learn within the classroom setting. I am currently in search of students who meet the following criteria to participate in one sixty-minute interview:

1. Are born before 1982
2. This is the first time you have attended higher education (have not started before, took a break and now are returning)
3. Have found yourself changing how you study, use information, or technology to learn due to influence from a peer.

If you are interested in helping a faculty member understand how you learn and what could assist you in learning better, please contact me at your earliest convenience to set up a time to meet.

Sincerely,

Mindy Guinard

mclarge@pacollege.edu

717 575-1324
Appendix C

Individual Student Letter Example

Date:

Dear (insert student name),

Thank you for volunteering to participate in this research study on learning. As a participant please be aware that this is strictly voluntary and your participation in no way affects or influences your grade/course work. I would like to outline what is required of you and how this process will occur. You will be asked to read and sign consent (see attached document). The interview will also be recorded, (unless you specify not to have this done). The interview will take place in a mutual, comfortable location where we will have privacy. The interview itself will take approximately sixty minutes. All information you share will be kept strictly confidential and will not be shared with anyone else. You will receive a pseudo name, and your real name will not be used during the publication process. I ask that you answer any question to the best of your ability and honestly. I will also have you complete a short demographic form (see attached form) about your education to this point.

Again, thank you for your willingness to participate, this is again strictly voluntary and at any point you stop participating. However, the information and ideas you supply will aid in understanding how others like yourself learn in the college setting and how as faculty I may better assist you in learning.

If you have any questions, please feel free to contact me, otherwise I will meet with you as we have determined on ______ (date) and ____________ (time) at _____________ (location)

Sincerely,
Appendix D

Template for Dictation

Date of interview:

Consent received:

Recording number:

Pseudo-name:

Line numbering to begin:
Appendix E

Demographic Survey

Name:_______________________________

How many credits have you successfully completed:_________

How many credits have you attempted total (this includes classes you have dropped or have not passed) __________

What year were you born?________

When did you start taking classes (year) _________
Appendix F

Consent for participation

Title of Project:

Institution: Northeastern University

Participant (name) _____________________________

In signing this consent to participate, please review the following:

1. This is voluntary participation and at any time, you may withdraw from the study, interview process, or not have your data included.

2. During the interview process I ask permission to record the interview. All recordings are confidential and used to obtain your opinions and answers. The interview itself should last no more than approximately 60 minutes.

3. The information shared is for educational purposes and does not affect/influence grading.

4. There is no monetary compensation for participation.

5. As a participant after the interview has been transcribed, you will be contacted and offered the opportunity to review the transcript.

6. As the researcher, information shared within the interview will be reviewed for data collection purposes and to assist in answering/understanding the proposed research questions of: What learning strategies do non-traditional students use in the classroom to overcome perceived barriers to their learning? What are the barriers the student has experienced?

7. It is assumed there is little potential harm to those who are participating within the study, however, if you feel uncomfortable at any point, you may withdraw from the study.
If you have additional questions or concerns please contact myself or the principal investigator
_____ at ____ or the Director of Human Subject Research at Northeastern University,
_____ at _____.

Signing below indicates the participant has read and understands all information contained
within the consent.

Name of participant (print) _________________________________

Date:___________________

Signature of participant:_______________________________

Date:___________________