Online RN to BSN Education: Characteristics of Student Success

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This dissertation titled
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Abstract

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Online RN to BSN Education: Characteristics of Student Success

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Non-traditional college students enrolled in online academic studies experience higher attrition rates than traditional aged students in a campus setting. In recent years, the body of knowledge regarding academic success of not only online students has been widely examined, as has the success of students enrolled in undergraduate nursing programs. However, research that utilizes available survey instruments to determine characteristics of successful students in online RN to BSN programs is minimal to this point. Increased retention of students in online RN to BSN academic programs is critical to ensure student satisfaction, education institution revenue generation, and to address the projected future nursing shortage.

Using Bean and Metzner’s non-traditional student attrition model as a framework, existing instruments were modified and utilized to capture student characteristics at the onset of their online baccalaureate nursing study in an effort to determine whether student academic success in an online RN to BSN program could be determined by similar characteristics as online students in general. Quantitative statistical analysis was completed of Likert-scale data aligning with Bean and Metzner’s non-traditional student attrition model. Additional student characteristics examined were age, gender, marital status, computer availability, educational background, hours worked weekly, current
semester hours of enrollment, previous online college education enrollment, length of
time since previous college enrollment, and current educational funding source.

It was concluded that characteristics affecting attrition and success of online
undergraduate students in general are dissimilar to characteristics affecting RN to BSN
student success. However, it was determined that grade point average level of the initial
baccalaureate course in question was found to be positively correlated to future
enrollment in subsequent terms. Other factors specific to this academic program warrant
further research, including the utilization of a compressed, five-week course format, and
the fact that all students have demonstrated academic success in their prior associate
degree nursing programs.
Dedication

GMZ and GPZ, thank you both. You are loved.

Strength and honor are her clothing; and she shall rejoice in time to come.

Proverbs 31:25
Acknowledgments

Thanks to Dr. Henderson, Dr. Williford, and Dr. Moore for your wisdom and for allowing me to pursue this work. Thank you, Dr. Mather for your assistance, patience, and insight. I appreciate all of you and your passion for learning, teaching, and student excellence.
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Chapter 1: Introduction

Introduction

Baccalaureate educated nurses are increasingly the standard in modern healthcare settings. Health systems seeking to provide quality patient care and reduce patient mortality rates demand nurses with well-developed critical thinking and problem solving skills (AACN, 2012; Kalish & Kalish, 2004; Joint Commission on Accreditation of Healthcare Organizations, 2002; Unruh, 2003). Additionally, modern healthcare demands nurses with leadership and management skills who not only possess adequate clinical experience, but are able to competently function as members of an interdisciplinary healthcare team (AACN, 2012).

In order to understand the academic programs aimed to bridge the educational gap between RN educated nurses and the BSN degree, it is essential to examine the progression of nursing education from the 1800s to the beginning of the 21st century. Formalized nursing education in the latter 1800s was not academic in nature, but rather was akin to apprenticeship training in hospital settings, providing free care for patients under the supervision of BSN educated nurse educators (Baer, 1999).

In the early 1900s, states recognized the value of oversight and control in the nursing profession, as evidenced by zealous entrepreneurial hospitals with little regard for standards and who profited from nursing trainees’ free labor, and by the early 1930s, nursing regulation was effective in 48 states (Birnbach, 1999). Pivotal world events during the first half of the twentieth century, including an influenza epidemic and America’s entry into World War I, generated a need to train large numbers of skilled
nurses (Schorr & Kennedy, 1999). As a result of these times of increased demand, leaders in the nursing profession seized the opportunity for additional funding to further develop nursing education on both the civilian and military fronts (Plotnick, 1999).

Wartime also created additional need for nurses long after war’s end, as it is estimated that only one of six nurses returned to their prewar nursing jobs (Kalish & Kalish, 1995). This post-World War II shortage, coupled with an expansion of healthcare facilities and private insurance coverage, meant that more people sought medical treatment more frequently, and skilled nurses were in short supply (Haase, 1990).

Nurse educators responded to evolving needs in the profession by creating the associate degree nursing (ADN) educational program model. This educational program would be housed in the 2-year community college educational setting, rather than in the traditional, 3-year, hospital-based nursing apprenticeship training environment. This new ADN program functioned to produce intermediately-skilled nurse technicians who met college admissions and graduation requirements, completed curriculum in nursing, as well as courses in physical science, biology, social sciences, and necessary general education classes. Eligible to sit for the registered nurse board exam upon completion of the associate degree, these nurses were primarily educated for patient care roles, leaving the nursing management and leadership roles to baccalaureate-educated nurses (Montag, 1963).

Technical advances in medicine, as well as a progression towards community-based managed healthcare, have produced a need for baccalaureate educated nurses who possess increased problem solving skills. As a result, the trend in nursing education is
again gravitating towards four-year nursing degrees, with the RN to BSN educational bridge program being a highly-sought route for working RNs to obtain the BSN degree (Kalish & Kalish, 2004). RN to BSN degree program enrollments have grown 288% from 31,215 in 2003 to 89,975 in 2011. As of 2015, RN to BSN educational programs totaled 679, with over 400 of these offered at least partially online (American Association of Colleges of Nursing, 2015). Employers of nurses, in an effort to provide better patient care and decrease employee turnover, are increasingly looking within their own ranks to address the nursing shortage by offering employment packages that include educational benefits in the form of time off for education, forgivable educational loans, scholarships, and tuition reimbursement (Spetz & Adams, 2006).

The standard or generic baccalaureate nursing program is designed for high school graduates with no nursing experience, and merges liberal arts and general education requirements, clinical experiences, and professional nursing education. Typically, the first two years consists of basic sciences, social sciences, communications, nutrition, and humanities. During the junior and senior years, the educational setting transitions into healthcare facilities and away from the classroom. Nursing courses focus on leadership and management, health promotion, community health, psychiatric care and mental health, medical and surgical care, family planning, and home health care (AACN, 2012).

Students enrolled in RN to BSN academic programs are practicing nursing professionals already in possession of the valid registered nursing license, and who have already completed an associate nursing degree, or a hospital diploma school program.
These nurses have already completed the required clinical training in healthcare facilities, as well as some basic science courses as a part of their previous pre-licensure education. The RN to BSN curriculum bridges this prior technical nursing training, and expands nursing knowledge and depth of understanding of health prevention and promotion, nursing leadership and management, and develops critical thinking and problem solving skills (AACN, 2012). By incorporating liberal arts and general education requirements along with nursing curriculum, the BSN earned by reentering nurses is comparable to the BSN awarded to students completing the standard or generic baccalaureate nursing program. Both paths to the BSN embody general education requirements, and nursing learning objectives are designed to develop the critical thinking and problem solving skills necessary to competently perform in an increasingly complex healthcare setting.

Students enrolled in online RN to BSN academic programs are typically non-traditional aged students who are working as registered nurses, they are predominately female, and have many outside responsibilities including family and community. They commonly work nights and weekends, and as caregivers by nature, are often summoned by extended family to assist with healthcare of ailing or elderly relatives.

Despite completion of associate degrees or hospital diploma programs leading to registered nursing licensure, RNs can be compelled to pursue the baccalaureate degree in nursing for either personal reasons or career advancement. However, as more and more hospital systems require the BSN as standard, associate degree and hospital diploma nurses may be required to earn the BSN to maintain their current jobs. Therefore, online education is an attractive option that provides students with flexibility and the ability to
complete a BSN degree from a distance, and allows them to fit education into their busy schedules rather than molding their lives to adapt to on-campus education timetables.

Online course delivery format is conducive to meeting educational needs on multiple levels. For working, non-traditional nurses, it offers the flexibility and accessibility they need to pursue baccalaureate nursing education. For healthcare organizations, online RN to BSN study is accessible to their nursing workforce where and when it is needed and contributes to better patient outcomes. Our aging society as a whole benefits when nursing and nurse educator shortages are appropriately addressed. For this reason, educational research on student attrition and retention of this particular student group is significant.

Nurses, like other healthcare professionals, can work nights, weekends, and long work shifts. Asynchronous online education permits nurses to complete coursework and assignments when it is convenient for them, beyond the offerings of traditional, college course schedules. This flexibility is also appealing to nursing employers who can partner with academic institutions to provide BSN education from a distance for their nursing workforce that does not interfere with work scheduling of their staff.

Due to the nontraditional nature of this student demographic group, it is therefore most fitting to consider the theoretical frameworks of non-traditional student attrition by Bean and Metzner (1985) and also Carol Kasworm’s (2003 & 2010) Adult Undergraduate Student Identity (AUSI) model for the purpose of this study. Bean and Metzner’s model, unlike models of traditional students (Spady, 1970; Tinto, 1970; and Pascarella, 1980), does not focus on socialization, shared values, and friendship. Rather,
they contend that the lack of socialization is a primary defining characteristic of non-traditional students as these students participate less on campus and use fewer campus services. Kasworm corroborates this concept, noting that while working non-traditional students do not participate on campus, their perceived lack of involvement is due to the students’ differing values regarding their undergraduate education as compared to traditional students. Although non-traditional working students may not appear to be involved students, their identities are anchored in their various important life roles. In contrast, traditional students juggle fewer life responsibilities and instead have identities centered on their student roles within the campus community (Kasworm, 2003 & 2010).

**Statement of the Problem**

Non-traditional college students enrolled in online academic studies experience consistently higher attrition rates than traditional aged students in a campus setting (Levy, 2007; Osborn, 2000; Institute for Higher Education Policy, 1999). Prior to the advent of online education, distance learning and correspondence course dropout rates were also similarly high (Levy, 2004). Higher attrition rates of online and non-traditional students can increasingly impact academic institutions’ enrollment and revenue streams as higher numbers of these students enroll in undergraduate programs. Academic dropout affects these students personally by limiting career advancement and employability, which is problematic for independent students who do not have parental financial support. More specific to the field of nursing, attrition in RN to BSN online academic programs potentially affects patient care and outcomes, and contributes to a shortage of nurses and nurse educators.
The body of knowledge regarding the academic success of online students in general has been widely examined in higher education literature. Likewise, research on the predictors of the National Council Licensure-RN (NCLEX-RN) exam pass rates and in BSN academic programs in general has also been the subject of inquiry. Areas of interest when examining NCLEX-RN licensing and prelicensure BSN academic programs include ACT or SAT scores and subscores, prenursing GPA, prior science GPA, necessity to repeat college science courses (Breckenridge, Wolf, and Roszkowski, 2012; Crow, Handley, Morrison, and Shelton, 2004). Prelicensure BSN research on nonacademic predictors has focused on family income, test anxiety, marital status, employment status, number of children, and speaking English as a second language (Breckenridge et al. 2004). However, research that utilizes available survey instruments to better predict success of online RN to BSN students in online academic programs is virtually nonexistent to date, despite significant increases in online RN to BSN student enrollment in recent years, and a need to better address nursing shortage. As RN to BSN programs now outnumber entry-level BSN academic programs and widely deliver academic content in the online format, increased retention of students enrolled in these programs is critical to ensure student satisfaction, educational institution tuition revenue generation, and to address the projected shortage of nurses and nurse educators in the future.

**Purpose of the Study**

The purpose of this quantitative investigation is to determine whether existing survey instruments used to identify academically successful online students in general...
can also identify successful students enrolled in online RN to BSN education. By adapting existing survey instruments developed for online college students in any major, the goal of this study was to examine the attitudes and unique characteristics of RN to BSN online students specifically. Additionally, the unique educational backgrounds and other demographic characteristics of online RN to BSN students were probed to learn how RN to BSN student success predictors may or may not be similar to those of online students in general.

**Significance of the Study**

It is important to study online RN to BSN students solely as these students tend to share some unique background and educational characteristics that have not previously been examined in other investigations of online student success. RN education is unique, as it is not uncommon for registered nurses to complete their RN education in a hospital diploma school nursing program without ever being enrolled in a community college setting. This hospital diploma RN educational background is distinctive to the field of nursing, and investigation of this educational setting as it relates to the academic success of online RN students seeking a baccalaureate degree in nursing may be valuable in the future development of effective services tailored to better support these students’ needs.

A majority of those enrolled in online RN to BSN educational programs are non-traditional students (O’Brien & Renner, 2000) who are also employed full- or part-time. It is also not uncommon that nurses’ sole motivation for pursuing the BSN corresponds to the necessity of the BSN to keep their jobs or to be eligible for promotion as hospital
employers are increasingly hiring only baccalaureate educated nurses (Boylston & Jackson, 2008).

Through examination of the characteristics and attitudes of registered nurses enrolled in an online academic BSN bridge program, it may be possible to discover whether the unique characteristics of these students differentiate them from online students in other undergraduate academic programs. Learning whether characteristics of success for online RN to BSN students differs from those of online students in general has the potential to assist nursing educators in the modification or development of programming and practices that will increase student retention and academic success, ultimately contributing to improved patient outcomes and a better-educated nursing workforce.

**Research Questions**

**Research question one.**

Research Question One is stated as follows: Do (a) Computer Skills, (b) Independent Learning, (c) Dependent Learning, (d) Need for Online Learning, (e) Academic Skills, (f) External Locus of Control, (g) Background Characteristics, and (h) Enrollment Encouragement characterize academic success or failure for RN to BSN students at the onset of their baccalaureate nursing program?

This research question focuses on independent variables that may describe academic success or failure for non-traditional students as noted in Bean and Metzner’s model of non-traditional student attrition (1985), to be applied to RN to BSN online students for the purposes of this study.
**Research question two.**

Research Question Two is stated as follows: Do demographic variables (a) Gender, (b) Marital Status, (c) Age, (d) Hours Worked Weekly, (e) Computer at Home, (f) Educational Background, (g) Current Term Hours of Enrollment, (h) Previous Online Enrollment, (i) Years Since Previous College Enrollment, and (j) Educational Funding Source characterize academic success or failure for RN to BSN students at the onset of their baccalaureate nursing program? This question will examine whether there is any difference in background and demographic characteristics of students who are academically successful in NRSE 4510 and those who are unsuccessful or non-completers.

**Research question three.**

Research Question Three is stated as follows: Is academic performance in NRSE 4510 related to student attrition and persistence? For this question, final course grades and student enrollment in future academic terms are examined to determine if there is any relationship between academic performance in NRSE 4510 and continued enrollment in the program.

**Definition of Terms**

**Associate degree of nursing (ADN).**

The associate degree nursing (ADN) program is a 2-year nursing education plan of study set within the community college environment. Developed in the early 1950s by Mildred Montag to address the post-World War II nursing shortage, the ADN curriculum was developed as an alternative to the 3-year hospital diploma nursing program in an
effort to produce skilled nurse technicians (Montag, 1963). Students were accepted through the community college admissions process, enrolled in college course work the classroom setting, and completed clinical requirements across numerous clinical environments.

**Hospital diploma school.**

In the 1870s, hospital diploma schools were formed as training programs in hospitals to qualify women to work as skilled, private duty nurses upon program completion. Not unlike an apprenticeship program, all training was work based, and took place within that hospital’s setting. Hospital diploma schools were sometimes formed as the result of zealous hospital entrepreneurs who profited by the free labor of student nurses. Once the primary pathway into a nursing career, hospital diploma school-educated nurses now make up less than 14% of registered nurses (AACE “Fact Sheet,” 2012).

**Registered nurse.**

This term has been utilized since the early twentieth century at the onset of American nursing regulation and reform (Birnbach, 1999). Registered nurses must complete an associate degree nursing program (ADN), a baccalaureate nursing degree (BSN), or an approved hospital diploma nursing program, and also pass a national licensing examination (NCLEX-RN) (U.S. Department of Labor, 2012).

**Non-traditional student.**

Non-traditional students may possess any or all of several characteristics: a delay of college enrollment after high school completion; attendance in college as a part-time
student; remaining employed full-time while attending college; financially independent
for financial aid eligibility reasons; has other dependents besides spouse; and, completion
of GED rather than high school diploma (Horn, 1996). Students may be considered
minimally non-traditional with few of the aforementioned characteristics, or they may
possess numerous non-traditional student attributes. Understanding the traits of non-
traditional students is essential, as virtually all nurses in RN to BSN academic programs
are working adults who are financially independent, and who commonly have
dependents.

**Adult student workers.**

The adult student worker term is utilized by Kasworm (2010) to emphasize the
complex life roles and responsibilities of adult undergraduate students whose school
involvement centers on academics rather than extracurricular campus involvement. For
these students, Kasworm affirms they are dedicated to their academic study, and
participation outside of class is focused on family responsibilities, employment, and other
life roles off campus.

**Online education.**

Academic course delivery methods can vary widely in their use of online
resources to facilitate learning. Courses may be solely traditional, using no online
technology; web-facilitated, using minimal online technology to facilitate a face-to-face
course; or blended courses that rely heavily on web technology and reduce face-to-face
class time. Online courses represent the course delivery format in which most or all
academic content is conveyed using web technology, with typically no face-to-face class
sessions (Allen & Seaman, 2011). Virtually all courses offered within the RN to BSN course offerings at Ohio University are solely online.

**RN to BSN education.**

Although baccalaureate nursing education has its beginnings in 1919 at the University of Minnesota (Schorr & Kennedy, 1999), the post-World War II nursing shortage fueled a need for skilled, entry-level registered nurses. This nursing shortage was instrumental in Margaret Montag’s conception of the two-year associate degree nursing education model based in today’s community colleges. Rather than a three-year hospital-based program, the associate degree nursing program could be completed in two years in an effort to address the post-war nursing shortage.

However, as healthcare became increasingly complex in the latter half of the twentieth century, the trend towards the baccalaureate nursing degree as the preferred educational attainment level spurred the development of educational bridge programs as an effective solution to better educate the current RN workforce. RN to BSN educational programs are defined as allowing RNs to transfer course credit from their ADN programs, complete additional baccalaureate nursing and general education requirements, to earn the bachelor of science in nursing degree. Most RN to BSN programs offer flexible course scheduling, and extensive use of online educational delivery (Bentley, Cook, Davis, Murphy & Berding, 2003).

**Pre-licensure nursing education.**

Nursing education programs that prepare students to sit for nursing licensure examinations as either licensed practical nurses (LPN) or registered nurses (RN) are
known as pre-licensure nursing educational programs. Pre-licensure curriculum consists of not only academic coursework, but also clinical learning experiences that comply with standards of safe nursing practice set forth by regulatory entities at federal and state levels (Kentucky Legislative Research Commission, 2013).

**Technical nursing.**

In order to comprehend the need for RN to BSN education, it is worthwhile to understand the educational backgrounds of RNs who enter the field from associate degree nursing programs, which is often referred to as technical nursing. Technical education in nursing is likened by Montag (1963) as the preparation necessary for entry-level work as a registered nurse, with the bachelor’s degree in nursing as the minimum standard for the professional nurse. Not met enthusiastically within the nursing profession when it was introduced, the technical nursing term coined by Montag continues to remain arguably defined. Montag likened the concept of the 2-year community college nursing academic program to other community college technical education programs. All professionals in any occupation require the support of a great number of technicians, and Montag reasoned the entry-level registered nurse with a 2-year community college nursing education background could function in supporting technical roles in greater numbers alongside baccalaureate educated nurses who possess more developed critical thinking and problem solving skills (Montag, 1963).

However, the technical nursing definition varies within the nursing profession, fluctuating with the nursing education level attained and practice readiness of newly graduated nurses (Wolff, Pesut, & Regan, 2009). Although Montag envisioned technical
nursing as the 2-year educational model necessary to meet minimum requirements for licensing as a registered nurse, graduates of 4-year baccalaureate nursing programs sit for the same registered nurse licensing examination. Additionally, 1-year practical nursing programs leading to eligibility of licensure as a licensed practical nurse (LPN) are also classified as technical nursing by some in the nursing field (Stanton, 2004).

**Clinical education.**

Historically, learners in the nursing profession were both students and hospital employees with much of the learning being fulfilled at the patient bedside under the direction of experienced nurses. Clinical education in nursing takes place in the patient setting, and allows students to apply previously learned knowledge to patient care situations (Wong & Wong, 1987). The clinical portion of undergraduate nursing education takes place prior to students being eligible to sit for the registered nurse licensing examination. Therefore, RN to BSN education has not required any clinical component, making online education delivery an effective format for baccalaureate-level nursing education. At the time of this investigation however, the American Association of Colleges of Nursing has mandated that all baccalaureate nursing students complete a clinical component regardless of academic program type. For RN to BSN students, this means an additional required nursing practical experience must be completed despite the fact that a majority of these students are already employed as registered nurses in clinical settings (AACN, 2012).
Grade point average.

The grade point average (GPA) is the calculation for determining the student academic standing at Ohio University on a 4.0 scale, and is computed by dividing the total number of grade points earned by the total number of semester hours of credit attempted (Ohio University, 2016).

Student success.

For the purpose of this study, student success is defined according to academic requirements of the Ohio University School of Nursing’s bachelor of science in nursing program. Per program requirements, students must complete all courses with the NRSE prefix with at least a B- or better. NRSE 4510 is the initial required course that must be completed with a minimum grade of B- before students are permitted to enroll in further NRSE courses (Ohio University, 2014).

Student retention.

Student retention for this research is defined by determining if students returned to academic study in subsequent semesters since the term of enrollment in NRSE 4510, thus making progress towards completion of the bachelor of science in nursing degree.

Student attrition.

The definition of student attrition used for this investigation is taken from Bean and Metzner’s attrition model of non-traditional students (1985). Considering that as non-traditional students, the RN to BSN student participants in this research are often enrolled part-time and step away from their academic studies more frequently, it is appropriate to utilize a definition congruent with the student group in question. For the purpose of this
study, student attrition is defined as not enrolling in courses in any subsequent academic terms and making no academic progress towards degree completion.
Chapter 2: Review of the Literature

Introduction to the Literature

**History of nursing education in the United States.**

In order to better understand the contemporary landscape of nursing education in the United States, it is essential to examine formal nursing education from a historical perspective. Nurses make up the largest group of healthcare professionals, and nursing is the only group of healthcare professionals that is predominately female (Raffel, Raffel, & Barsukiewicz, 2002). Throughout history, a maternal instinct was considered a necessary skill to be a caregiver; therefore, only women were encouraged towards nursing as a career (Donahue, 1985).

**Formalized nursing education history.**

Nursing education in the United States can be traced back to 1873, with the formation of nursing schools in New York, Connecticut, and in Boston. These schools were created as training programs in hospitals, admitting women for a two or three-year course of study that qualified students upon graduation to work as private duty nurses in the homes of the sick. Few formally trained nurses worked in these hospitals, and these nurses supervised and trained nursing students, whose labor was exploited as free caregivers for hospital patients as part of their training programs. Private duty nursing—rather than hospital nursing work—constituted most of available nursing employment positions in this early era of nursing education. (Baer, 1999).

By 1900, approximately 400 nurse training schools had quickly been established unchecked in the United States, but training was lacking in uniformity and content
quality. Early nursing school graduates advanced to roles in nursing supervision and education at the more highly regarded schools, and observed a startling disregard of standards by zealous entrepreneurs who exploited nursing student labor for their own financial increase (Birnbach, 1999).

The necessity for legal oversight and control in the nursing profession gained momentum, and in 1901, New York, Virginia, Illinois, and New Jersey were the first to organize state associations, and North Carolina was the first state in 1903 to legislate nursing registration laws. During this time, similar movements in nursing were taking place internationally, and indeed the impetus for American nursing reform was based upon the organization of the British Nurses Association (Birnbach, 1999).

By 1909, 33 states had nursing associations, and by the early 1930s, nursing regulation was in effect in 48 states, Hawaii, and the District of Columbia. Most laws utilized the term “registered nurse” and almost all states established boards of examiners (Birnbach, 1999).

**Early twentieth century nursing education.**

The onset of World War I resulted in nursing programs being developed that granted baccalaureate degrees, with the first nursing baccalaureate degree program offered by the University of Minnesota beginning in 1919. Yale School of Nursing, opening in 1924, was the first established as a separate university department with a dean (Schorr & Kennedy, 1999). These baccalaureate graduates, upon passing the same state licensing examination as their hospital diploma school counterparts, also became
registered nurses (RNs) (Raffel, Raffel, & Barsukiewicz, 2002), and often went on to function in nursing education roles.

When the United States entered World War I in April 1917, 3.5 million men joined the Army, and 2 million of these were sent to fight in France. This war, as well as an influenza epidemic, brought about a need to train a large number of skilled nurses, and almost immediately upon American entry into the war, a National Emergency Committee on Nursing was established to meet both military and civilian nursing needs (Schorr & Kennedy, 1999). The Army School of Nursing developed a nursing program that incorporated academics with army hospital training. The Vassar Camp in New York was also launched in June 1918 and was the first collaboration of colleges and hospital schools of nursing, with academic portions of the program being completed in the college setting that complemented nurses’ hospital training.

Vassar’s intensive, 3-month nursing education program during the summer of 1918—equivalent to two years’ worth of nursing study—accepted 435 qualified applicants who were then taught in the most up to date facilities by the highly sought-after experts in the medical field, using the most advanced equipment available of the day. Days were long and resembled military training, beginning at 5:30 am, chores, 8 hours of lecture, laboratory in nearby hospital facilities, studying in the evenings, and lights out at 10pm. Of the 435 students who began the 12-week nursing immersion program, 418 completed the program in September. 169 went on to complete full nursing certification, 9 went on to earn medical degrees, and several alumnae went on to achieve leadership roles in nursing education and as healthcare professionals (Vassar, 2012).
The stock market crash in 1929 and the subsequent Great Depression era left many nurses out of work, as few could afford to hire private duty nurses. The American Nurses Association advocated the hiring of nursing graduates in the hospital setting, but morale was low among nurses as hospital work was viewed as menial labor most fitting to nursing students (Schorr & Kennedy, 1999). These were hardship years that forced the nursing profession to self-examine and improve nursing education and the distribution of nursing services. During the 1930s, 400 hospitals and 600 hospital nursing schools were closed (Schorr & Kennedy, 1999).

The United States’ entry into World War II again brought focus to the beneficial interrelationship between the military and the nursing profession. During 20th century military conflicts, demand for nursing skills was created and provided the funding to pay for it. Nursing leadership seized these opportunities of increased demand to further develop nursing education and enhance prestige in the profession on both the military and the civilian fronts (Plotnick, 1999).

**Associate degree nursing education.**

During the 1950s, community colleges developed 2-year associate degree nursing (ADN) programs that allowed graduates to sit for the same state nursing license examination to become registered nurses. This helped to alleviate the shortage of nurses post-wartime, as it was estimated that only one in six nurses returned to prewar hospital positions (Kalish & Kalish, 1995). Increased demand for nurses during the 1950s also was attributed to expansion in healthcare facilities, advances in medicine, and also because Americans were increasingly enrolled in private health insurance (Haase, 1990).
Examination of nursing education practices during wartime to address the shortage of nurses paved the way for postwar nursing education. A primary goal of nursing education restructuring was to move away from the apprenticeship nurse hospital setting training system, and into the American higher education system. Medical and surgical advances required a more advanced skill set of nurses, and not only was the apprenticeship nurse training system inadequate in addressing these educational needs, but also negatively impacted patient care standards (Haase, 1990).

The modern two-year associate degree nursing program model was developed by Mildred Montag, who was then a doctoral student at Columbia University in 1950. Her philosophy was that nursing could be viewed as a continuum, and nursing responsibilities ranged from simple to highly complex. Nurse aides would perform at the simple end of the spectrum, with highly skilled nursing clinicians functioning in complex roles. The ADN educated student fit into the model at the intermediate level with a deeper level of understanding as a nursing technician, where it was assumed that a majority of nursing functions lay (Haase, 1990).

Breaking from the 75-year-old, hospital based nursing apprenticeship program stereotype, the Montag ADN model would instead be housed within the mainstream collegiate educational framework at community or junior colleges. These nursing “technicians” would complete not only nursing curriculum, but also general education courses, and related nursing support courses in biology, physical science, and behavioral sciences. Another key difference between Montag’s model and traditional hospital diploma school programs is that clinical learning experiences would take place in many
different healthcare facilities, and no single hospital or healthcare agency would be sufficient for this purpose (Montag, 1963).

Students in these ADN programs would be required to meet college admission and graduation requirements, and would enjoy all student rights and privileges. They would pay the same tuition and fees as other students in the college, and would be awarded the associate degree upon graduation. Upon graduation, the student would be eligible to sit for the nursing licensing examination in the state where the college was located. Nursing faculty would be employees of the college rather than a hospital, and would be responsible for curriculum development and teaching.

Beginning as a pilot project of 26 students, seven colleges and one hospital in 1952, Montag’s ADN education model steadily increased and enrolled over 3,000 students by 1962 in 120 programs (Montag, 1963). These early programs were successful, and graduates consistently passed their state board (RN) examinations.

According to Montag (1963), the nurse technicians who completed ADN programs were quite capable of and prepared for quality patient care, and could work alongside of professional nurses. Patient care was the focus of the ADN, rather than supervisory or management roles, which were functions of the professional, baccalaureate educated nurse.

In the latter half of the twentieth century, hospital diploma school graduate numbers decreased as associate degree nursing program graduates quickly rose (Raffel, Raffel, & Barsukiewicz, 2002). By 2008, 13.9% of RNs completed hospital diploma
school programs, while 36.8% earned baccalaureate nursing degrees, and 36.1% earned associate degrees in nursing (AACE “Fact Sheet,” 2012).

**Rise of Baccalaureate Nursing**

By 1957, projections made through 1970 by the National League of Nursing (NLN) pointed towards a need for baccalaureate educated nurses to fill foundational roles anticipated for graduate study, teaching, administration, supervision, and clinical specialization (Kalish & Kalish, 2004). These findings estimated that one third of nursing graduates should hold a baccalaureate degree in nursing, yet the actual number of baccalaureate educated nurses in 1962 was only 14% of the nursing workforce. This education attainment deficiency was also reflected in the nursing educator statistics at this time when master’s level education was acknowledged as minimal necessary for quality nursing instruction, as only 4% of nursing faculty members in baccalaureate and graduate nursing programs held doctoral degrees, 76% held master’s degrees, and 20% held bachelor’s degrees (Kalish & Kalish, 2004).

**Nurse Training Act of 1964.**

Nursing education received significant financial support from the Federal government in the form of the Nurse Training Act of 1964 (HR 10042). This 5-year legislation authorized $287 million for nursing programs, including $90 million for nursing facility construction and renovation, $55 million for diploma and ADN programs, and $35 million for collegiate programs. Also authorized was $85 million in student loans funding for nursing students, $17 million for special grants and projects, and $50 million
for training programs aimed to increase the number of nursing administrators, supervisors, teachers, and clinical specialists (Kalish & Kalish, 2004).

During the 1980s, a shortage of qualified nurses in the United States was identified, due to wage compression, or the lack of meaningful step raises in pay for nurses entering the profession until retirement, as noted by the U. S. Department of Health and Human Services commission report in 1988 was also estimated that hospitals could actually save money by paying their nurses more, as this would decrease nursing employee turnover, training, and recruiting costs (Kalish & Kalish, 2004).

**Contemporary nursing education.**

The post-World War II RN shortage that resulted in the rise of ADN programs in community college settings to more quickly address the need for skilled registered nurses has shifted towards a need for better educated registered nurses who are able to competently function autonomously in today’s complex healthcare system. Also, the move towards more managed healthcare that is community based also contributes a greater need for baccalaureate educated nurses who are better able to assess, plan, implement and evaluate care (Joint Commission on Accreditation of Healthcare Organizations, 2002).

**Magnet hospital designation.**

Concurrent with this nursing shortage and enrollment decline near the end of the twentieth century, there was an increasing amount of evidence that a better educated nursing staff correlated with higher quality patient care. These findings were documented
by the American Nurses Credentialing Center (ANCC, 2012), who sought to recognize outstanding healthcare facilities as “magnet” hospitals.

The magnet program had its beginnings during the 1980s nursing shortage when a nationwide study was conducted to determine why some hospitals more easily recruited and retained nursing staff members. This final report to the American Academy of Nursing identified 14 characteristics in the successful nursing workplace, including competitive salaries and benefits, cooperative and professional relationships between nurses and physicians, nursing leadership quality, participatory style of management, emphasis on professional development, and autonomy (ANCC, 2012). The magnet designation process includes written documentation as well as an on-site evaluation that assesses the hospital’s ability to meet the 14 quality standards (Kalish & Kalish, 2004).

Reinforcing the movement towards magnet hospital designation were several studies that concluded that quality nursing care is significant to unexpected hospital deaths decreased patient mortality following surgery (National Institute of Nursing Research, 2002), shorter hospital stays, and that nearly all adverse events occurred in hospitals with fewer licensed nurses (Unruh, 2003). Currently, there are 387 facilities throughout the United States that have been awarded magnet status, in addition to three in Australia, and one each in Singapore and Lebanon (ANNC, 2012). For nurses working in healthcare systems that have achieved magnet status or are seeking magnet status, just keeping their nursing jobs may be the primary motivator for earning the BSN degree
Online Education Trends

In 2016, it is reported by the National Center for Education Statistics that 14%, or over 2.8 million college students are enrolled exclusively in distance courses. Of these students, 48% or nearly 1.4 million students are enrolled online at public postsecondary institutions. For-profit institutions account for approximately 30% of online student enrollment. While private non-profit institutions online enrollment grew by 11.3%, while private, for-profit online enrollment decreased by 2.8% (Allen & Seaman, 2016).

Non-traditional students.

A majority of students in online RN to BSN academic programs do not fit the traditional student mold (O’Brien & Renner, 2000). For the purpose of this study, it is useful to examine characteristics of non-traditional students in general on a continuum, based on the number of non-traditional characteristics possessed. These characteristics may include:

- delay of enrollment by not entering postsecondary education the same year in which his or her high school education was completed;
- attends college as a part-time student;
- works full-time (35 hours per week or more) while attending college;
- is considered financially independent for financial aid eligibility reasons;
- has dependents other than spouse (like children, aging parent);
- completion of GED rather than high school diploma (Horn, 1996).

Using these characteristics, Horn’s (1996) definition of non-traditional may range from “minimally non-traditional” if only one characteristic is evident, “moderately non-
traditional” with two or three characteristics, or “highly non-traditional” if four or more characteristics are evident. Horn’s characterization of the non-traditional student continuum is in line with Bean and Metzner’s (1985) concept that differences between non-traditional and traditional students is a matter of extent—they cannot simply be categorized into two distinctly separate groups.

Non-traditional students are an increasingly prevalent student demographic group on college campuses today, with 39% of today’s undergraduate students being aged 25 or older, compared to 28% in 1970. In 2000, only 27% of undergraduate students could be classified as “traditional,” being that they enrolled in college immediately after completing their high school diplomas, depend on their parents for financial support, and work only part-time or not at all. Therefore, 73% of all undergraduate students in 2000 could be considered “non-traditional” in some way (U. S. Department of Education, 2002).

**Online Nursing Education**

Given the increasingly non-traditional nature of undergraduate students, it is understandable that they seek out online education as a practical way to earn undergraduate degrees off campus while managing work, family, and other life responsibilities. Online education is defined by the Sloan Consortium as having at least 80% of course content delivered online. As a portion of total enrollment in the U. S., students in online education have increased from 9.6% in 2002 to 31.3% in 2010, with now over 6 million students studying online (Allen & Seaman, 2011).
Within nursing education, online curriculum delivery is a practical and efficient method for bridging the RN to BSN educational gap and making the degree attainable for nurses who otherwise would not have baccalaureate nursing education within their grasp due to time constraints and distance from campus. Asynchronous online education is flexible in that nurses can continue to work and keep up with their studies on their own time rather than fit their life responsibilities around strict classroom schedules. RN to BSN education translates well to the online format, as all nursing clinical training has been completed at the RN pre-licensure level in ADN and hospital diploma nurse training. At the point of RN to BSN academic program admission, virtually all nursing course work for the baccalaureate degree can be completed online (Bentley, Cook, Davis, Murphy & Berding, 2003), with transfer credit being awarded for pre-licensure nursing courses.

**Student attrition in nursing education.**

It has been noted in previous nursing education research that higher rates of student attrition in nursing academic programs are evident in younger students, and those students possessing minimum education qualifications as opposed to better qualified students (Pryjmachuk, Easton, & Littlewood, 2008). For associate and baccalaureate degree pre-licensure nursing programs, aligning admissions criteria with registered nurse licensing examination is beneficial to identify those students better qualified for academic and nursing licensure success (Higgins, 2005).
Non-Traditional Student Development Theoretical Framework

Theoretical framework.

Bean and Metzner’s model of student attrition (1985) is a useful framework for examining student attrition for the predominately non-traditional RN to BSN nursing student demographic group. In contrast to student attrition theoretical contributions by Spady (1970), Tinto (1975) and Pascarella (1980) that focuses heavily on socialization, shared values, and friendship, Bean and Metzner’s model contends that the lack of social integration is a defining characteristic of non-traditional students, due to non-traditional students having less interaction on campus and less use of campus services, and participating in fewer activities. Likewise, non-traditional students also have greater interaction with the external, non-collegiate environment than their traditional student counterparts. Since the non-collegiate setting bears more importance to non-traditional students and social integration is not critical to their higher education success, Bean and Metzner propose that the underlying attrition process therefore differs for non-traditional students. Metzner and Bean’s concept of social integration as a non-factor to the attrition of non-traditional students was verified in their 1987 study guided by their 1985 non-traditional student attrition model.

The Bean and Metzner (1985) conceptual model of non-traditional student attrition focuses on four variable sets that impact these students’ dropout decisions:

- defining and background variables;
- academic variables;
- environmental variables, and
social integration variables.

**Defining and background variables.**

Defining variables, including age, enrollment status, and residence are discussed, and it is assumed that older students will have more family responsibilities, will work more hours, and will have higher rates of absenteeism. Also, students who are enrolled part-time are more likely to drop out of college. Students who do not reside on campus and commute to college tend to be more concerned about financing their education, are employed in greater numbers, and often are conflicted with family and work responsibilities. Bean and Metzner (1985) contend that off-campus residence is the most critical defining characteristic of non-traditional students. These aforementioned factors also are in line with characteristics of online nursing students seeking to bridge their RN licensure with baccalaureate degrees in nursing (Della Vecchia, 2010).

Bean and Metzner (1985) also include educational goals, high school performance, ethnicity and gender in their set of background and defining variables. Specific to RN to BSN online students, this group embarks on the baccalaureate educational journey with a clear educational goal in mind. As conditions of program acceptance include an associate degree in nursing or graduate of a hospital nurse training program, as well as registered nurse certification, these students possess educational goal attainment aspirations that studies indicate should have a positive effect on their persistence in college (Bean & Metzner, 1985).

High school grade point average is a strong predictor of college academic performance for both residential and commuter students, yet research does not clearly
indicate any relationship as such with older students (Kuh & Ardiolo, 1979). However, Bean and Metzner (1985) contend that ethnicity may be a factor of poorer GPA due to inferior secondary education access available to minority students.

Bean and Metzner (1985) acknowledge the importance of gender to the nontraditional student attrition model, due to often distinct stereotypical roles and family responsibilities of men and women. As nursing continues to be a predominately female field, it therefore may be anticipated that gender will play a major role in attrition of RN to BSN students.

**Academic variables.**

Bean and Metzner (1985) noted academic variables in their model that include study skills and habits, absenteeism, academic advising, absenteeism, major certainty, and course availability. Although course availability was not perceived to be a significant factor in non-traditional student attrition by Bean and Metzner, major certainty relates to this particular student demographic group. Students in RN to BSN academic programs are already professionals in the nursing field, having already made career choices prior to graduating with associate degrees in nursing or completing hospital diploma nursing programs. Major certainty has been found to be positively linked to persistence in older students (Greer, 1980, Roelfs, 1975), therefore, this variable is not deemed relevant for the purposes of this study as the career path and major has already been determined by these students.

Authors have long contended that poor study habits and study skills are positively related to higher attrition rates of college students, and students who persist in college
report more study time than those who drop out (Balduf, 2009; Kuo, Hagie & Miller, 2004). Additionally, it is noted by authors that older students returning to college after a lengthy absence from the formal education setting report a greater lack of confidence in their ability to succeed (Golden, 2004).

Quality academic advising as related to student persistence has also been long investigated, and numerous authors in recent years point towards advising as a means to promote student success (Kuh, Kinzie, Schuh, & Whitt, 2005; Drake, 2011).

**Environmental variables.**

Variables over which academic institutions have little control, but for which are very relevant to older students, can be driving factors in student attrition. For older students independent of their parents, financial apprehensions relate directly and indirectly to academic success. Besides the direct cost of college tuition, older students tend to have family responsibilities and must remain employed while attending school (Perna, 2010). More specific to RN to BSN education, working as a full-time registered nurse while completing a baccalaureate nursing degree is a challenge for students, but also allows employed students to take advantage of employer tuition reimbursement programs. Additionally, another indirect financial concern for registered students enrolling in baccalaureate degree programs is that they may be at risk of losing their jobs without the BSN degree. Simply put, RN to BSN students may be pursuing further college education not because they necessarily choose to for their own personal satisfaction, but because they want to keep their jobs.
Adult students return to college often for work-related reasons including career change or advancement (Furst-Bowe, 2002), but it is unclear how RN to BSN students’ educational motivations may differ from the general adult student population. Registered nurses have already determined their career goals; and, more often than not, are pursuing further education as a means for advancement within nursing rather than a departure from the nursing field.

The priorities of working RNs who are pursuing a BSN degree focus on their work and career, and it shapes their reasons for choosing an academic institution, academic program, and educational delivery format. For these students with complex life responsibilities and work, their identities are anchored in these important life duties, around which they fit their undergraduate education and other aspects of their lives.

In nursing RN to BSN education, these students come to the BSN bridge program with prior academic success at the community college or nursing diploma school level, and may also have prior academic unsuccessful experiences as well. They may be open and involved learners, or indifferent and resistant towards their education. This reluctance may certainly be applicable in the case of many RNs enrolled in BSN educational programs, and who are being required to earn BSN degrees as a condition of their employment.

**Adult undergraduate student identity model.**

In order to better understand the online RN to BSN student, it is useful to examine their characteristics by making use of a relevant student identity model. Kasworm’s model of Adult Undergraduate Student Identity (AUSI) offers a framework that identifies
the unique characteristics of adult workers who are also undergraduate students, and how these factors influence their participation in undergraduate education (2010).

Not unlike employers in other fields in recent decades, health care and hospital systems increasingly require nurse employees to advanced skill sets and to attain higher levels of educational credentials (Joint Commission on Accreditation of Healthcare Organizations, 2002; Unruh, 2003). This educational need in the nursing field creates a unique motivation for adult workers to attain additional higher education, as workers therefore are driven to enter academic programs due to looming job instability, job dislocation, or lack of job advancement (Kasworm, 2010).

In response to the unique needs of adult workers who are also undergraduate students, Kasworm (2010) offers a model of student identity that considers the complex life roles of these undergraduate students and identifies the factors influencing their participation in academic programs. Although collegiate participation is an important facet of their lives, adult workers who attend college have other competing life priorities, unlike traditional undergraduate students. Rather than time investment and involvement being key factors in undergraduate student success, Kasworm’s AUSI model and supporting research indicates that adult workers’ motives for being successful in higher education lie in their complex life worlds.

The multiple life roles of adult workers and adult students are not contained in separate, distinct silos, but are tightly intertwined within the individuals. Also at the center of this framework is the assumption that the individual makes choices and engages in actions through both the adult worker and student identities (Kasworm, 2010).
The Adult Undergraduate Student Inventory model is defined by Kasworm (2010) by four vectors, including (a) the life world of the adult student; (b) epistemology and agency of knowledge of the adult student; (c) intersubjective coconstructed self as learner and student (identity anchors); and (d) intersubjective coconstructed self in other key adult roles of worker, family member, and community citizen (identity anchors).

**Life world of adult working students.**

In order to understand the *life world of adult working students*, Kasworm’s framework takes into account students’ history of formal education, their age and maturity levels, their career paths, and their experiential learning in multiple key life roles. From this perspective, adult working students are a student population whose identities can never be solely summarized by their role as undergraduate students. Rather, these students’ identities also encompass prior educational experience that may be either successful or unsuccessful, and their educational endeavors may likely be based on external work-related motivations rather than an internal, personal desire to pursue an undergraduate degree. Additionally, the educational delivery format, institution, and financial cost quite often factors into adult working students’ educational choices (2010).

**Epistemology and agency of knowledge.**

The epistemology and agency of knowledge component of Kasworm’s AUSI model relates to students’ engagement in learning based on their engagement in other life world roles, specifically their work roles. Various patterns of learning engagement, or voices, are identified by Kasworm (2010) and embedded in adult students’ views of knowledge and its usefulness. Learning engagement may only deemed applicable by
students in their work world roles (Outside Voice), may be perceived as merely a formalized credential that validates the current work knowledge level (Cynical Voice), or the Straddling Voice, which values both academic and real world practical knowledge. Other epistemological learning patterns noted by Kasworm include the Entry Voice, which primarily values academic knowledge as judged by good grades, professor guidance, social connections as well as study and basic skills (Kasworm, 2003).

**Intersubjective coconstructed self as learner and student.**

Kasworm’s *intersubjective coconstructed self as learner and student* is the third component of the AUSI model and is grounded in the notion that unlike traditional aged students, adult working students’ sense of positionality as learners and students comes primarily from their academic engagement (2010). Kasworm notes that prior educational research suggests that the key to college student success is a full, well-rounded college life experience both in and out of the classroom. Applying this assumption to non-traditional adult students with minimal or no participation in life on campus should therefore indicate less satisfaction and lower grades by these students, when in fact the opposite is true. Unlike their traditional-aged student counterparts, non-traditional, adult, working students’ involvement as students is derived from their academic experiences instead of campus involvement. Rather than the traditional college campus environment, the collegiate world of the working undergraduate student is the classroom world.
Intersubjective coconstructed self as worker, family member, and community citizen.

The intersubjective coconstructed self as worker, family member, and community citizen (Kasworm, 2010) facet of the AUSI model is rooted in the concept that adult working students’ higher education engagement is influenced by the character of the college environment and also by the worker identity. The collegiate environment most conducive for effective student engagement is a supportive atmosphere where these students are valued and their various life roles beyond the academic role are considered. It is critical to understand these students’ identities are anchored in their expertise in the work setting, as well as their roles as responsible agents in their families and communities. These students are expected to be proficient in these life roles, which is in contrast to the traditional novice or apprentice student role (Magolda, 1999).

Rather than the student role being the primary life responsibility as it typically is for traditional aged college students, the academic role of adult working students is deeply embedded in the work world. Adult working students respond positively and are more engaged in an educational culture that is supportive of their non-negotiable link between college and work. In contrast, a college environment—whether directly or indirectly—that is perceived by adult workers to be negative or in conflict with their student identities, has an adverse effect on student engagement. Because their work is a primary life responsibility for these students, periods of college enrollment may often be intermittent and dependent on timeframes when students can best devote adequate time needed to succeed, and monetary resources to pay for tuition and fees (Kasworm, 2010).
Dynamic interrelationship of learning contexts.

Kasworm’s AUSI model’s fourth and final component identifies students’ differing learning experiences and expectations, and levels of engagement as contingent on the institutional community type. As a result, community colleges, research universities, and liberal arts adult degree programs appear to attract different types of adult students and adult workers. Moreover, adult working students in these dissimilar educational settings have varying expectations about their student roles, institutional support, and academic engagement (2010).

Adult student knowledge voices.

Kasworm (2010) identified patterns of learning engagement among adult students, who were predominately employed, through which are useful to examine RN to BSN online students. These five belief structures, or voices, are defined as being embedded in students’ views of knowledge and the value or utility of that knowledge. The Entry Voice framework focuses on students learning how to be successful in their roles as college students. These students’ primary concerns include learning to be proficient in the academic world exclusively, while excluding their adult life and real world roles. From the Entry Voice student perspective, academic success is judged by grades earned, study skills, and clear evaluations that show academic accomplishment on tests and essays. Likewise, professors are valued for their guidance in helping students to be successful as judged by grades (Kasworm, 2003, 2010).

Students of the Outside Voice are firmly rooted in real world knowledge, rather than academic knowledge. These adult students appreciate learning actions that support,
value, and validate their current knowledge base and expertise beyond the classroom. Similarly, students of the Cynical Voice also are steadfastly grounded in their real world roles. However, Cynical Voice students are skeptical about the value and application of their academic studies to their own real world roles. These adult students tend to be uninvolved, socially isolated, and view their academic studies as only necessary to gain a desired credential (Kasworm 2003, 2010).

Adult students of the Straddling Voice recognize the value of both academic and real world knowledge. These students have an appreciation for learning that connects their academics to their real world life roles, evaluations that reveal increased understanding synthesis, and they selectively engage in activities that are relevant to adult students (Kasworm, 2003, 2010).

The Inclusion Voice encompasses adult students who not only value both academic and real world knowledge, but also the creation of new knowledge. These students are explorative, critical thinkers, intellectually engaged in academic and research activities, and appreciative of theoretical ideas and applying these concepts to real world cases (Kasworm, 2003, 2010).

Review of Relevant Educational Research

Research literature examined for the purpose of this study focuses on nursing education, the online education format, characteristics of non-traditional students, and student persistence in online courses. Although student characteristics relating to persistence in online education has been a well-studied topic in recent years (Kerr, Rynearson & Kerr, 2006; Levy, 2004; Rovai, 2003; Osborn, 2000, Muse, 2003),
available data suggests that students enrolled in online RN to BSN education have not specifically been targeted as a focus of similar study.

**Online education and baccalaureate nursing.**

The need in healthcare settings for baccalaureate educated nurses with better problem solving and critical thinking skills is supported by research that indicates that patients receive better care and hospitals experience lower mortality rates (AANC, 2012; Kalish & Kalish, 2004; Joint Commission on Accreditation of Healthcare Organizations, 2002, Unruh, 2003). Although ADN education requires extensive technical, hands-on clinical experience in numerous clinical facilities (Montag, 1961), RN to BSN nursing programs build upon the technical ADN education skill set to develop critical thinking and problem solving skills, management and leadership abilities, and to provide a better base of scientific knowledge. Additionally, these programs also enhance RN patient care design and management, help nurses to better understand their roles as members of interdisciplinary health care teams, and improve communication skills (AANC, 2012).

From the perspective of modern nursing education history throughout the twentieth century, the RN to BSN academic program represents a return of the academic discipline to a baccalaureate level educational standard prior to the post-World War 2 nursing shortage that resulted in the shift towards 2-year associate degree nursing programs prevalent in the last half of the twentieth century.

As a means to bridge the gap between the RN licensure and the Bachelor of Science degree in nursing, the online educational delivery format is practical solution for institutions, students, and nursing employers. The learning objectives of RN to BSN
education can be taught from a distance and differ from the technical, hands-on nature of ADN nursing. For nurses working full time and juggling family responsibilities, being able to enroll in RN to BSN asynchronous education online means that they can fit education into their lives, rather than scheduling their work and responsibilities around traditional classroom schedules. Being pressed to complete the BSN for professional or employment purposes, these students are attracted to institutional settings that offer academic programs that meet this educational need, in delivery formats that accommodate their primary roles as workers (Kasworm, 2010).

Online RN to BSN education is an attractive option for healthcare organizations as a way to improve their overall care of patients and to decrease employee turnover by offering tuition assistance as part of employee benefits packages. For educational institutions, dedicating resources into online RN to BSN education programming is a fairly efficient way to reach greater numbers of students and generate tuition revenue in an in-demand academic field beyond customary geographic boundaries. As a result, offering RN to BSN education is a logical programmatic undertaking for 4-year colleges and research universities that attracts and meets the educational needs of adult working students (Kasworm, 2010) while generating much needed revenue for institutions.

**Student persistence in online education.**

Success of students enrolled in online education has been attributed to numerous factors, including student characteristics, development of student orientation programming, the level of institutional academic support, quality of interaction with faculty and other students, and education delivery format (Hart, 2012). It has also been
noted that online college students experience a significantly higher dropout rate than students in the traditional campus setting (Levy, 2007; Osborn, 2000; Institute for Higher Education Policy, 1999). Even prior to the prevalence of the Internet as an online education delivery format, distance learning and correspondence course dropout rates were estimated to range from 25% to 60% (Levy, 2004).

Although there is a body of general educational research to indicate a wide range of factors contributing to online student persistence and dropout, no single obvious reason is clearly defined. Additionally, traditional nursing education and student retention has been the subject of a large amount of research (Jeffreys, 2007; Sayles, Shelton, and Powell, 2003); however, RN to BSN online education relating to student persistence and retention has not been widely explored to date.

**Institutional support of undergraduate student workers.**

As the RN to BSN educational program leads to a 4-year Bachelor of Science degree in nursing, it is typically housed within 4-year college and research university settings. However, it is not uncommon for these institutions to provide support services that are more focused on younger, traditional aged students. Also along these lines, community colleges characteristically are better equipped in their student support services to non-traditional students, but lack the 4-year BSN sought by working RNs. Kasworm accentuates the need for institutions to embody the needs of working adult students in their institutional mission commitments, program design and delivery systems, revision of policy and practices that are conducive to the needs of working
undergraduate students, and creating an atmosphere that is perceived by working adult students to be a supportive community (2003).

Since all clinical coursework has been completed prior to admission to an RN to BSN academic program, the online educational delivery format is conducive to completion of the degree as virtually all work can be accomplished from a distance (Bentley, Cook, Davis, Murphy & Berding, 2003). The ability for working adult students to access all required courses consistently and sequentially is critical for academic success and student satisfaction, given the importance of work roles and life responsibilities of adult working students (Kasworm, 2010).

Institutions that effectively meet the needs of working adult students take a campus-wide approach to best practices directed towards their required institutional interactions. Admissions, advising, registration, and orientation all are key areas where thoughtful departmental and policy design, access, and understanding of adult students sends an intentionally positive message to this student group (Kasworm, 2003, 2010).

Unfortunately, adult working students pursuing baccalaureate degrees often feel frustrated by the educational environments that are difficult to navigate, and that reflect the structures, institutional policies and commitments, educational delivery systems, and student support services that tend to focus on their younger, traditional aged students. As a result, working adult students often express disappointment in the inefficiency of institutional policies and procedures, and the perceived lack of sensitivity in customer service (Kasworm, 2003).
Identifying Predictors of Student Success

Viola Osborn’s (2000) study investigated at-risk students who receive instruction in higher education courses primarily through technical media and telecommunications. Osborn defines distributive learning as a course in which the instructor acts more as a guide rather than the information gatekeeper, uses information technology to deliver the course content, provides for synchronous and/or asynchronous communication for student communication and for communication between instructor and students, and for which students and instructor can enter the virtual classroom environment at different time and from different places. The students sampled in Osborn’s study included both undergraduate and graduate students in distributed learning courses.

Osborn notes that available research lacked direction and that variables explaining student success are often difficult to isolate. Drawing from a range of theoretical models of higher education student persistence, Osborn’s framework takes into account the multiple, interdependent functions in the lives of students. Additionally, Osborn’s theoretical framework considers surrounding premises of correspondence course completion (Billings, 1989), student persistence in a traditional classroom format (Tinto, 1997), student characteristics and institutional factors (Powell, Conway, & Ross, 1990), and Kember’s (1995) open learning model.

The only model examined by Osborn focusing on nursing, Billings’ 1989 model likened the attrition of students in correspondence courses to that of students enrolled part-time on campus. The Billings’ model aligned with four sets of variables developed by Bean (1980), including background, organization, attitudinal, and outcome variables.
It is significant to note that related research on nontraditional student attrition by Metzner and Bean (1987) also serves as a primary theoretical foundation for research put forth by this author.

The core of Tinto’s student persistence model (1997) is the idea of social integration, extended from his earlier research focused on the traditional classroom setting, to which he then applied to classroom communities facilitated through the use of computer-mediated communications. He hypothesized that students not finding their place socially on campus are more at risk for dropping out of college. Tinto identified student attributes including skills and abilities, previous educational background and family background, student goals and commitments, as factors of course completion and continued enrollment. Tinto also notes that the levels of academic and social integration attained by students also contribute to student success.

Kember’s (1995) Open Learning Model, was largely drawn from Tinto’s (1975) model of persistence and also focuses on the levels of social and academic integration as factors contributing to the success of students. Specifically, Kember sought to learn how well adult, part-time, distance learning students manage the demands of work, family and other social obligations in addition to their academics. Kember developed the Distance Education Student Progress questionnaire to shed light on the external reasons for attrition, and included questions about distractions, study habits, and doubts about the value of study.

For the purpose of this research endeavor, Osborn’s (2000) study is useful to scan as a precursor to more recent, similar educational investigation undertakings that also
seek to better understand the educational experiences of distance learners and non-traditional students. Osborn looked to Billing’s Model of Correspondence Course Completion (1989), which addressed attrition of nurses enrolled in correspondence courses, as well as examining Bean’s related research on non-traditional student attrition (1980), which was influential in Kasworm’s work as well (2003, 2010).

Osborn’s (2000) research instrument was analyzed for content validity, or whether the instrument samples the domain it claims to represent, as a part of her study. In Osborn’s study, the instrument addresses student’s background, attitudes, situation and learning skills necessary to complete a distributive learning course. With completion or non-completion of the course as the primary dependent variable, Osborn’s data collection consisted of utilizing a background survey, a Likert-scale distributive learning survey, and a student satisfaction instrument. Construct validity, or the degree to which a variable really measures the construct that it is supposed to measure (Warner, 2008) was taken into consideration as well and Osborn’s instrument included items previously tested for reliability and validity whenever possible. The distributive learning survey in its final form utilized by Osborn encompassed six indicators of student academic persistence: computer confidence, enrollment encouragement, locus of control, study environment, motivation, and tenacity. Predictor variables from the background survey consisted of age, grade point average, number of years out of college, educational level, current credit hours, number of hours working per week and number of distributed learning courses taken in previous semesters.
Data from the 5-point Likert scale distributive learning survey was evaluated using six-factor analysis, then the stability of the data was tested by randomly dividing the sample data into two groups and performing six-factor analysis on computer confidence, external locus of control, study environment, enrollment encouragement, tenacity, and motivation. The solution of these six factors accounted for 56.81% of the sample variance of the entire group of data (Osborn, 2000).

Discriminant analysis was then utilized to determine the predictive validity of the distributive learning survey, with respect to the background survey data. Educational level, grade point average, credit hours currently enrolled, study environment, motivation, previous distributive courses, and computer confidence, were the primary variables responsible for distinguishing between students who successfully completed the course and those who did not (Osborn, 2000). Data was double cross-validated and predictive validity was tested by dividing student data into two unequal groups, completing students, and non-completing students. Finally, two equal groups were examined, including one group of all non-completers and a second group of randomly selected completing students. In summary, Osborn’s brief survey instrument consisting of categorical, interval, and ratio-level items and twenty Likert-scale items provided a weighted combination of the indicators of completion and identified at-risk students with 62.50% to 64.30% accuracy (2000).

Somewhat replicating Osborn’s 2000 study of the identification of at-risk students, Muse (2003) administered a modified version of the questionnaire to online community college students, with variance similarly being explained by seven ranking
factors. Explaining the most variance was computer skills (25.14%), study environment (11.63%), external locus of control (6.6%), computer confidence (5.19%), web skills (4.9%), motivation (4.27%) and background preparation being accountable for 4.11% of variance. Similar to Osborn’s study, Muse also randomly divided the sample into two equal groups and performed seven-factor analysis of each group. Discriminant analysis with all variables included in the model produced one discriminant function and results indicated that older students who have been away from college longer, with a higher grade point average, a more satisfactory study environment, and greater confidence in background preparation, are more likely to be successful online students.

Recognizing the significant impact of the proliferation of online education delivery format, Kerr, Rynearson, and Kerr (2006) also note that related educational research in this area is scant. These authors’ Test of Online Learning Success (TOOLS) was developed and validated to measure online student learning success. By searching the Internet for educational institutions of all kinds, offering any kind of online instruction, fifty randomly selected institutions were surveyed for the availability of an online, self-report student assessment. Issues assessed and retained due to frequency went into the initial version of TOOLS.

Kerr et al. (2006) sought to focus on statements that reflected student behavior rather than attitudes or perceptions, which is in alignment with learning styles literature (Delahoussaye, 2002) and to reflect research findings that indicate what we believe is not necessarily what we do (Fishbein & Ajzen, 1975).
To develop the TOOLS instrument, Kerr et al. (2006) sought qualitative input from a wide range of higher educational institutions offering online instruction of any kind, assessing student characteristics including computer literacy, technology use, communication skills, readiness, persistence, self-efficacy, learning styles, and lifestyle. This effort yielded 428 individual items, with 68 of these being unique, and 360 appearing on multiple institutions’ assessments, suggesting that a majority of institutions surveyed shared similar values regarding student characteristics for academic success. These ideas and values were then adapted to create simple statements to reflect student behaviors, rather than abstract attitudes or perceptions.

The 45 survey items comprising the TOOLS instrument were therefore chosen to identify behavioral strengths and weaknesses regarding online academic performance. By calculating Pearson product-moment correlations to address construct validity, it was revealed that TOOLS measurement of learning success was significantly related to self-esteem. Students with higher self-esteem had more of a tendency to be independent learners with high reading and writing skills. Conversely, significant negative correlations indicated that students with an internal locus of control were more independent learners. TOOLS content areas include computer skills, independent learning, need for online learning, academic skills, and dependent learning.

Although tested by Kerr et al. for three years and found to be a valid and reliable instrument measuring the characteristics of online students, those researchers do recommend that further study of TOOLS would include more diverse samples of geographic location, university type, and academic discipline (2006). The current study
by this author anticipates to further expand the body of knowledge of online student characteristics and academic persistence, specifically applying TOOLS as part of a survey instrument to students enrolled in an online RN to BSN academic program.

Summary

As of fall 2011, 635 RN to BSN academic programs exist in the United States, with over 400 of those offered at least partially online (AACN, 2012). The U.S. Bureau of Labor projects that the registered nursing workforce will be the fastest growing occupation through 2020, with a growth rate of 26%, from 2.74 million in 2010 to 3.45 million nurses by 2020. However, it is also reported by AACN that even though nursing education program entry-level enrollments have increased by 5.1% since 2011, a nursing shortage still exists. A shortage of nursing faculty, increasing age of the registered nursing workforce, and an aging baby-boomer population are all cited by AACN as contributing factors to today’s nursing shortage. Additionally, inadequate nursing staffing due to shortages contributes to exacerbated employee turnover and job dissatisfaction, as well as a diminished level of patient care (2012).

Student attrition as it relates to traditional college students has been the topic of educational research. However, there is limited exploration of attrition of undergraduate online students and very little existing research that focuses specifically on attrition in undergraduate online nursing education. The Test of Online Learning Survey (TOOLS) developed by Kerr, Rynearson, and Kerr (2006) and other similar studies (Osborn, 2000, Muse, 2003) have contributed to the body of knowledge of online student attrition, but have not been applied to online nursing RN to BSN education. Educational theories
surrounding non-traditional student attrition (Bean & Metzner, 1985) and working adult students (Kasworm 2003, 2010) provide a relevant framework from which to examine online RN to BSN nursing education and students.

It is the purpose of this research undertaking to apply current educational theories and knowledge of online RN to BSN education to learn more about the characteristics of this student demographic group in an effort to add to the body of current research. The goal is to be able to predict student characteristics that are indicative of persistence and attrition in undergraduate online nursing education to aid administrators in the admissions process, modify existing academic and student services practices, and develop initiatives to increase student retention and satisfaction.
Chapter 3: Methodology

Research Design

Introduction.

Originating in early hospitals as apprentice training programs and gaining momentum during wartime need, nursing education evolved throughout the twentieth century to meet the demands of nursing shortages and increasingly complex medical care. Although the associate degree nursing programs that were developed in the 1950s were an effective educational pathway to registered nurse licensure, advances in medicine and healthcare necessitated better equipped nurses with more advanced leadership and problem solving skills, capable of functioning as interdisciplinary healthcare team members.

To bridge the educational gap between the associate degree and the bachelor of science in nursing, RN to BSN academic programs such as the one established at Ohio University in 1975 gave registered nurses the opportunity to further their education and careers by attaining the BSN. Advances in computer and online technology now deliver nursing education to nurses who, due to work schedules, distance, and family responsibilities, are attracted as non-traditional students to the flexibility afforded by online education.

Non-traditional students experience higher attrition rates in college than their traditional college student counterparts and tend to derive educational satisfaction from their academics rather than social integration on campus (Bean & Metzner, 1985). Similarly, students enrolled in college online and correspondence courses also drop out in
greater numbers (Levy, 2007; Osborn, 2000; Institute for Higher Education Policy, 1999).

Research instruments have been previously developed and implemented to learn more about student characteristics impacting academic success of online students (Kerr, Rynerson & Kerr, 2006; Osborn, 2000; Muse, 2003), framed by non-traditional and adult student attrition theories (Bean & Metzner, 1985; Kasworm, 2003; Kasworm, 2010). Additionally, traditional baccalaureate nursing academic success has been the subject of numerous educational research endeavors (Jeffreys, 2007; Sayles, Shelton, and Powell, 2003). However, this study seeks to contribute to the body of educational research relating to online nursing student attrition and student characteristics that indicate academic success.

This chapter contains details of the research methodology, including the targeted population, RN to BSN academic program curriculum, sampling, survey development and administration procedures, operational variables definitions, data collection, and data analysis.

**Identification of the population.**

The target population is students who are enrolled in online courses as required for their baccalaureate nursing program at Ohio University. Ohio University is a public research university in southeast Ohio with an enrollment of 23,000 students on the main campus in Athens, Ohio; 10,000 students enrolled at 5 regional campuses, and 6,000 enrolled online. Criteria for student admission to the RN to BSN online academic program include associate degree or diploma in nursing, active registered nurse licensure,
previous college grade point average minimum of 2.0, and residency of Ohio, California, Delaware, Florida, Indiana, Kentucky, Michigan, New Jersey, Pennsylvania, or West Virginia (Ohio University, 2014).

Because this study seeks to identify characteristics of new online RN to BSN students at Ohio University that may be indicative of their academic success, only students enrolled in the first required nursing course in the academic program were sampled. This professional nursing practice course is a requisite for all other nursing courses in the program, and all admitted RN to BSN students begin their baccalaureate nursing education with the same professional nursing practice course. Each section of the course is capped at 510 students, so approximately 2,000 nursing students in their first semester of the RN to BSN program were solicited for this research.

It is important to note that the Ohio University students examined for the purpose of this study share similar demographic age and gender characteristics with the overall nursing population in the United States. In 2014, university undergraduate admission figures indicate that 13% of enrolled students in the RN to BSN online program were male, and that 87% of all baccalaureate students in the program were at least 25 years of age. Likewise, the National League for Nursing reports similar percentages of male BSN students (14%) and 71% of all baccalaureate nursing students at least 30 years of age (National League for Nursing, 2013).

**Baccalaureate nursing curriculum.**

The RN to BSN curriculum consists of nursing courses designed to successfully transition students from technical nursing to professional nursing. Nine nursing courses
address ethics and legal components of nursing, professional communication and collaboration, health promotion intervention design, family and community health, integration of research into nursing practice, gerontological nursing issues, cultural sensitivity, strategic planning and leadership, and health care policy (Ohio University, 2014).

All RN to BSN students must complete nursing support courses in chemistry, microbiology, psychology, sociology, statistics, nutrition, and anatomy and physiology. Additionally, these students must complete undergraduate general education requirements as prescribed for students in all academic majors university wide (Ohio University, 2014).

Because Ohio University’s RN to BSN online program is one of over 400 online programs that are accredited by the Commission on Collegiate Nursing Education, curricular requirements at Ohio University and other accredited programs have learning objectives that are developed and implemented to reflect current nursing professional standards. CCNE accreditation requires that all programs maintain a high level of accountability to prepare students for professional nursing practice. Also, all students enter RN to BSN academic programs with similar minimum technical nursing skills and educational background that has made them eligible for prior registered nurse licensure (CCNE, 2013). For this reason, it was assumed that students in Ohio University’s program have embarked upon a baccalaureate nursing education program not dissimilar to hundreds of RN to BSN online programs of study nationwide, and that findings from
this study may be generalizable and applicable to other RN to BSN students and programs at other institutions.

**Sample.**

Sampling for this study is taken from students enrolled in the professional nursing practice course which is the first nursing education course that students must successfully complete, and which is a prerequisite course for all other required nursing courses in the online RN to BSN academic program.

NRSE 4510 course content introduces students to professional nursing education and focuses on communication and collaboration, legal and ethical issues in nursing practice, and health care technologies affecting patient care. Like all other required nursing courses, the professional nursing practice course must be completed with at least a B- or 80% per academic curriculum requirements, and is offered in a compressed format to be completed in five weeks.

As it is the first course in which students enroll upon their admission to the program, self-reported student characteristics data provided a snapshot of student attributes at the onset of the RN to BSN academic program. Students were targeted for survey participation via e-mail solicitation in the week prior to the start of the NRSE 4510 course, and in the first 2 weeks of the 5-week course. This insight may be valuable for administrators in the development of admissions criteria, student orientation programming, student services programming, and curriculum improvements.

Enrollment for the professional nursing practice course is capped at 1,020 students per 5-week session—with two, 510-seat sections of NRSE 4510 offered each 5-
week session, and three sessions starting each fall and spring semesters. The survey instrument was sent to the total enrolled population of students immediately after the enrollment deadline for each respective session, which is typically one week prior to the session start date. Registration for the course closes and the roster is finalized seven days before the course start date, to ensure that students have textbooks and are prepared to begin the course without delay.

Survey procedure.

In an effort to best capture student characteristics at the onset of their first nursing course, the online survey web link was sent via e-mail to students’ e-mail accounts, using Qualtrics, four days prior to the start date, on the start date, and the start of week two of the introductory nursing course. Students who chose to participate followed the e-mailed survey link sent to their student e-mail accounts, consented to the research, then completed and submitted the survey.

At the end of the five-week terms, data were updated with final grades and course withdrawal information. Grading information determined if students passed the course successfully with a B- or better; or if it was necessary to retake the course due to failure by completing with grades that range from C+ to F, failure with no participation (FN), or failure due to stopping participation prior to the end of the course (FS).

Administering this instrument at the onset of the students’ first required nursing course in the program served to capture data on student characteristics at the beginning of their online academic education, which was relevant to help identify traits that indicate academic persistence and attrition.
Instrumentation

Survey instrument development.

The survey utilized for this study was taken from three similar survey instruments developed to predict student success in an online learning environment (Appendix A). The survey instrument consists of the 45 TOOLS survey questions (Kerr, Rynearson & Kerr, 2006), and continues with questions 46 through 53, taken from Muse’s (2003) study, which relate to locus of control and background confidence. The instrument concludes with enrollment encouragement items (questions 53-55) from Osborn’s 2000 study. The 55 Likert-scale survey items are ranked by participants ranging from (1) “strongly disagree,” (2) “disagree,” (3) “neither agree nor disagree,” (4) “agree”, and (5) indicating “strongly agree.” Ten questions relating to student demographic and background information are taken from Osborn’s study, with some minor modification of question 61 to make it more relevant to the online nursing student population by adding the “hospital diploma graduate” option. A final background question to gain information on educational financing was added due to the increasing number of hospitals that provide tuition reimbursement to nurses (Spetz & Adams, 2006) and also to address Bean and Metzner’s environmental finances variable, as financial difficulty is positively related to student attrition (1985).

The questions utilized in this study were chosen to address the variables put forth in Bean and Metzner’s 1985 conceptual model of nontraditional undergraduate student attrition. Rather than being founded on student socialization as a theoretical foundation, the Bean and Metzner model recognizes that nontraditional students lack the defining
characteristic of being socially integrated into an institution while experiencing much more interaction with the external, off-campus environment. The purpose of this study was to learn what academic, environmental, and student background and defining variables—as theorized by Bean and Metzner—were able to describe students who may be at increased risk in RN to BSN online study.

**Operational definition of the variables.**

This study seeks to present a new perspective on nontraditional, online student attrition by examining online RN to BSN students as a specific student group and academic discipline. The operational dependent variables for this study were chosen for their compatibility with Bean and Metzner’s (1985) model of nontraditional undergraduate student attrition, and to also address the unique characteristics of online RN to BSN students. Intangible student attitudes, preferences, and characteristics can be difficult to measure in educational research. Therefore, it is appropriate to quantify the variable constructs by crafting questions that reflect behaviors rather than attitudes or perceptions, as findings suggest a low correlation between attitudes and behaviors (Fishbein & Ajzen, 1975). Reasoning for this is that although attitudes are not easily changed, individuals can more readily adapt or create new behaviors that compensate for attitudinal weaknesses (Delahoussaye, 2002).

Taken from the Test of Online Learning Success (TOOLS), items 1 through 45 address computer skills, independent learning, dependent learning, need for online learning and academic skills variables. Additional Likert-type items were added, employing Muse (2003) and Osborn’s (2000) research instruments variables focusing on
external locus of control, background confidence, and enrollment encouragement, to complete the eight independent variables. Questions 56 through 65 not only contribute student demographic information, but also insight on the hospital diploma school educational background unique to the nursing field, employer tuition reimbursement, and length of time since last college course enrollment. The compilation of survey items for this research sought to embody Bean and Metzner’s nontraditional student attrition model (1985) and to appropriately address the nursing student population chosen for this study.

Computer skills.

Online courses can be defined as containing at least 80% of content delivered online (Allen & Seaman, 2011). Therefore, students enrolled in RN to BSN academic programs must not only master the curriculum, but must also be able to confidently navigate the Internet and required technology in order to be successful in their studies. Required computer skills for online learning include sending and receiving e-mail messages and attachments, downloading and uploading files, installing, and using necessary software, online research, accessing course content in the online learning management system platform, participating in online discussion boards and chats, and assignment submission. Computer competency not only includes the capability to perform the basic tasks associated with online learning, but also the ability to troubleshoot technical problems (Hung, Chou, Chen, & Own, 2010).

Independent learning.

Non-traditional nursing students are attracted to online RN to BSN education programs because of employment, accessibility, distance, or time constraints that make it
difficult for them to pursue a nursing baccalaureate degree in a traditional, on-campus setting (Della Vecchia, 2010), and online study allows the student more flexibility in those areas. However, more flexibility requires that students be able to work more independently without a structured traditional classroom environment to achieve educational goals. Independent learners assume responsibility for identifying their own learning needs, goals, and outcomes, planning and organizing the learning tasks, evaluating its worth, and constructing meaning from it (Volery & Lord, 2000).

Need for online learning.

RN to BSN students seek online nursing education because they are able to fit the online academic program into their busy lives, rather than trying to mold their employment, family, and life schedules around rigid traditional classroom schedules. Hospital employers are increasingly offering tuition reimbursement benefits to their nursing staff employment professional development and continuing education packages. Therefore, many nursing students must remain employed while attending school in order to be eligible for their employers’ tuition reimbursement benefits, placing students in the difficult position that makes it necessary for them to balance full-time work and college study (Rowan-Kenyon, Swan, Deutsch, & Gansneder, 2010). For students in areas with no easily accessible traditional education options nearby, online RN to BSN programs bring the education to the student via the World Wide Web. Otherwise, RN to BSN education may be difficult if not impossible to attain for many students.
**Academic skills.**

For the purposes of this study, academic skills include reading and comprehension, ability to follow directions, writing skills, the ability to work and solve problems independently, good time management and study habits (Kerr, Rynearson, & Kerr, 2006; Bean & Metzner, 1985).

**Locus of control.**

A determining factor of student success in relation to student interaction with technology, locus of control refers to the concept that the results of a person’s behavior depends on that behavior, rather than the results being dependant on random, chance events. Students possessing a strong internal locus of control believe strongly in personal responsibility for academic results. In contrast, students who have an external locus of control feel that their academic success is determined by chance or powerful people (Osborn, 2000).

**Background confidence.**

The background confidence variable refers to students’ self-confidence in their prior educational and life experiences as relevant to academic success in their current academic program.

**Enrollment encouragement.**

Enrollment encouragement refers to support and encouragement in students’ decisions to enroll in the online academic program. RN to BSN students may be externally motivated for pursuing baccalaureate nursing education, often from hospital employers who offer tuition reimbursement benefits as a way to improve the quality of
patient care and address the shortage of baccalaureate-educated nurses (Spetz & Adams, 2012). Non-traditional students may also be inclined to pursue education due to unstable jobs and career issues, the need to better support families, and also for personal goal attainment (Kasworm, 2010).

**Academic success.**

For the purpose of this study, the academic success dependent variable is defined as successful completion of NRSE 4510 with a final grade of B- or better, which is a requirement of the academic program. Students who earn a C+ or lower must retake the course in order to earn credit towards the nursing baccalaureate degree. Additionally, students who withdraw from the course after the start of the term are considered unsuccessful for the purpose of this study.

**Pilot Study**

Prior to surveying the targeted nursing students at the onset of their academic study in the online RN to BSN program, the instrument was administered on a small scale to volunteer participants to determine the value of the questions and their ability to elicit relevant responses to appropriately address research questions. The pilot study also served to gather feedback about the instrument itself and to verify there were no software issues to prevent successful completion of the survey and collection of student data. Information collected as a result of the pilot study was solely used to determine the efficacy of the instrument and was not being used for research purposes in any way.
Reliability Issues

For variables that are difficult to measure directly, such as personal traits, knowledge, attitudes, and abilities, the utilization of multiple questions is usually necessary to get reliable, consistent results. A score that corresponds to a sum or an average of multiple measurements allows for easier assessment of the consistency of instrument results (Warner, 2008).

For all variables tested by the survey instrument, multiple questions are used to obtain complex variable information to avoid any limitations of single item measures. Multiple-item measures provide more fine-tuned discrimination of variables and are generally more reliable than scores based on single-item assessments (Warner, 2008).

The TOOLS assessment portion of the instrument was found to be internally reliable by that instrument’s authors, with alphas ranging from .63 to .84 in computer skills, independent learning, dependent learning, need for online learning, and academic skills (Kerr, Rynearson, & Kerr, 2006). Muse’s items on external locus of control and background confidence produced Crohnbach alphas of .678 and .599, respectively for that author.

Validity Issues

As the student characteristics in question for this study are not often directly observable, obtaining indirect information about these characteristics through a relevant survey instrument was necessary. For self-report questionnaire measurements such as the one utilized for this study, validity is evaluated by examining the survey instrument content, or content validity; and criterion validity, which is defined as how well one
measure is able to predict the same performance or behavior in another situation (Warner, 2008).

Content validity was addressed in this study through thoughtful and organized selection of survey items in order to provide reasonably complete treatment of Bean and Metzner’s theory variables of nontraditional student attrition. Developers of the TOOLS survey instrument originally sought input from educational entities offering online instruction to yield data on areas of concern relating to student characteristics that potentially impact online academic success. This development phase resulted in the first rendition of TOOLS, a 50-item, Likert-scale survey of six content sub-scales, including computer skills, time management, motivation, academic skills, need for online course delivery, and learning skills. Further revision and testing yielded the final, 45-item version of the TOOLS survey (Kerr, Ryner, & Kerr, 2006), which was chosen for the purposes of this study due to its attention to academic variables also central to Bean and Metzner’s non-traditional student attrition theory (1985). Additionally, the TOOLS instrument sub-scales appropriately address computer skills, independent learning, dependent learning, and need for online learning as relevant for examining student success specific to the online RN to BSN student population in question for this study.

Content for Bean and Metzner’s (1985) background and defining variables are addressed in the Likert-type sub-scales focusing on background confidence and enrollment encouragement. Supplemental and demographic items supply background information on age, enrollment status, gender, and educational goals. Environmental
variables also addressed by the supplemental and demographic survey items include finances, family responsibilities, and employment information.

External validity, or the degree to which results can be generalized beyond the study setting of Ohio University students, was not anticipated to be problematic and findings should be indicative of what can be expected in other sections of the same introductory baccalaureate nursing course at other institutions. However, the focus of this descriptive statistics study was to examine authentic student characteristics and their effect on academic persistence in an existing online nursing education setting.

**Data Collection Procedures**

To learn whether attitudes affect academic performance in an online RN to BSN program, it is important to capture data from students at the onset of their baccalaureate nursing education. All students have met minimum required admission standards of the program, and the targeted course of enrollment is the requisite class for all other nursing courses in the BSN curriculum. Therefore, the timeframe just prior to, or at the onset of online academic study was sought to gauge student characteristics at the time of admission.

Survey instrument and consent information were sent to eligible students via e-mail link during the week preceding the 5-week term start of NRSE 4510, in an effort to capture student data at the starting point of the RN to BSN academic study, after registration for the course closes.

Waiting until the week prior to the term start date to begin survey instrument administration provided assurance that the course roster had been finalized and all
appropriate test subjects received notification of the survey. Any survey administration prior to one week before the term starts would not have captured the full roster of prospective research participants. The goal was to capture as many participants’ responses in the week prior to the start of the class. A follow-up e-mail message with survey link and consent information was sent to survey non-completers on the first day of the course, then again during the second week of the five-week term. Participants were not sought after the second week, in an effort to only obtain student data representing characteristics as close as possible to admission to the program.

All identifying student information was replaced with a code to ensure student anonymity and confidentiality, with the master list being kept separately and securely under password protection. After data was updated with final grades, all identifying student information was destroyed. Any hard copies were kept securely locked, to be destroyed after three years per institutional review board directives.

**Data Analysis Procedures**

**Research design.**

For this descriptive study, participants were not selected randomly in a laboratory setting, but rather the entire population of an entry-level baccalaureate nursing program course was targeted. The focus of this research was to learn what academic, environmental, and student background characteristics describe students who may be at increased risk of academic failure in online RN to BSN study. Student consent for the researcher to access final grades was obtained at the time of initial secure login to the
instrument, at which time students were informed that their participation indicates consent to obtain grades and that they could elect not to participate for this reason.

Data collected for this study resulted from administering the five-point, Likert-scale survey questions, in addition to student demographic information inquiry also a part of the survey instrument (Appendix A). Multiple Likert-scale questions relating to each operational independent variable were included in the survey to combine and compute as the mean of those selected questions. In practice, statistical analysis of ordinal data is typically nonparametric in nature. However, five-point, Likert-scale ordinal data is often subjected successfully to parametric statistical tests when the $n > 20$ (Warner, 2008).

It was anticipated that the number of participants for this study was reasonably large enough to assume normal distribution, and to successfully utilize parametric statistical methods. For computer skills, independent learning, dependent learning, need for online learning, academic skills, external locus of control, background confidence and enrollment encouragement independent variable means, $p > .05$ for Levene’s test for equality of variances. Therefore, equal variances were assumed for these variables.

At the end of the course, which can essentially be considered the administration of treatment, student outcomes were assessed in the form of grade assignments. For the purpose of this study, grade assignments of A, A-, B+, B, or B- were considered academic success per nursing academic program requirements. Final grades of C+ or lower were coded as course failure, with FS indicating that students failed by stopping participation, and FN indicating failure with no course participation noted. Course withdrawals after the start of the term was also be noted to indicate non-success for the
purpose of this study; however, withdrawals do not adversely affect students’ grade point averages. Students could only belong to either the academic success or academic failure group, not both groups. Statistical analyses was used to compare student characteristics scores of both successful and unsuccessful student group means, and to assess how strongly the student characteristics variables and the supplemental and demographic items relate to academic success or failure. At the end of the five-week term, data was updated with final grades for the course to determine student outcomes using the master code list.

**Analysis.**

Data were analyzed for their ability to describe the differences in student characteristics of those students who successfully complete the online course, and those who are unsuccessful in their attempt at the introductory BSN course. Those students who were unsuccessful either dropped the course, or earned a letter grade lower than B-, which makes it necessary for them to repeat the course for a better grade to meet nursing academic program requirements.

Each Likert-type item was grouped together according to the academic variables as put forth in Bean and Metzner’s model of non-traditional student attrition (1985), which provided operational variables for this study. Other categorical variables, taken from the TOOLS instrument (Kerr, Rynearson, & Kerr, 2006), were chosen to address computer skills, independent learning, dependent learning, and need for online learning—all of which have been previously suggested to impact online student academic success. These groups of items that focused on the student characteristics of this model were
calculated for composite group scores, and analyzed at the interval measurement scale. Statistical tests appropriate for interval variable data included calculation of the mean, standard deviation, ANOVA, and independent t-test.

Student background characteristics of the survey completers were analyzed to report online nursing student demographic data. These data were compiled from ten questions which followed the Likert-type portion of the instrument, and also addressed. These data were used to describe student characteristics including gender, marital status, age, hours worked per week, home computer access, prior educational background, hours of current enrollment, number of prior web-based courses completed, length of time since completion of last college course, and type of financial aid. These characteristics and associated data may also warrant consideration as independent variables for further study in addition to the Likert-scale data obtained as a result of administering the survey instrument.

Student attrition was examined using the final letter grade for each participant as an independent variable, and matching with student enrollment data in upcoming terms. Logistic regression analysis of these variables was analyzed to determine whether student grade for the initial baccalaureate nursing course was related to student persistence in the program after the semester in question.
Chapter 4: Results

Introduction

To extend research of online student success as it relates specifically to undergraduate students studying in an online RN to BSN academic program, existing survey instruments were adapted to examine the attitudes and unique characteristics of this particular student group (Kerr et al., 2006; Osborne, 2000; Muse, 2003). Moreover, demographic characteristics of online RN to BSN students were also investigated to learn whether the student success predictors of this group may or may not be similar to student success predictors of online students in general. Bean and Metzner’s model of nontraditional student attrition (1985), and Kasworm’s (2010) adult undergraduate student identity model both function as a foundational basis of this research.

This chapter reviews analysis of data collected and subsequent academic performance of students completing the survey instrument in their first term as students in the online RN to BSN program at Ohio University during summer and fall 2015. Likert-type data concentrated on these student characteristics variables: computer skills, independent learning, dependent learning, need for online learning, academic skills, external locus of control, background characteristics, and enrollment encouragement. Student demographic questions provided additional data on age, marital status, gender, computer availability, educational background, hours worked weekly, semester hours of enrollment, previous online college education enrollment, length of time since previous college enrollment, and BSN educational funding source.
Additionally, final letter grades were examined with student enrollment data in an attempt to determine whether student persistence and final grade for the initial baccalaureate nursing course were related.

Participation was solicited from students enrolled in NRSE 4510 at Ohio University during the first session of summer semester, and the first session of fall semester in 2015. Total summer session enrollment was 290 students, and 510 were enrolled in the fall session in question. Of the total 800 students enrolled and solicited for research participation, 120 students completed the online survey in entirety, yielding a 15% student response rate.

Table 1

**Personal Characteristics of Participants (N = 120)**

<table>
<thead>
<tr>
<th>Student Characteristic</th>
<th>Successful Completion of NRSE 4510 (B- or better)</th>
<th>Unsuccessful Completion of NRSE 4510 (C+ to F)</th>
<th>Drop NRSE 4510 prior to completion (Withdraw)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>6 5%</td>
<td>0 0%</td>
<td>2 2%</td>
<td>8 7%</td>
</tr>
<tr>
<td>Female</td>
<td>100 83%</td>
<td>3 3%</td>
<td>9 8%</td>
<td>112 93%</td>
</tr>
<tr>
<td>Marital status</td>
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<td></td>
<td></td>
<td></td>
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<td>Single, never married</td>
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<td>1 1%</td>
<td>2 2%</td>
<td>23 19%</td>
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<tr>
<td>Married</td>
<td>72 60%</td>
<td>2 2%</td>
<td>8 7%</td>
<td>82 68%</td>
</tr>
<tr>
<td>Divorced</td>
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<td>0 0%</td>
<td>1 1%</td>
<td>15 13%</td>
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<td>3 3%</td>
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<td>9%</td>
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<td>11</td>
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<td>Employer reimbursement</td>
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<td>18%</td>
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<td>Loans, grants, employer</td>
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<td>31%</td>
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<td>reimbursement</td>
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<td>Self-pay</td>
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<td>14%</td>
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<table>
<thead>
<tr>
<th></th>
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</tr>
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<tbody>
<tr>
<td>Student loans, grants</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Employer reimbursement</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>Loans, grants, employer reimbursement</td>
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<td></td>
</tr>
<tr>
<td>Self-pay</td>
<td>14%</td>
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</tr>
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</table>
Test of Student Attrition Model

Analysis of the student attrition model was completed using descriptive statistical techniques. Likert-scale items were grouped together by the eight corresponding independent variables as presented by Bean and Metzner’s model of non-traditional student attrition (1985), with group composite scores being calculated and the interval data then analyzed using the independent $t$-test, and also by one-way analysis of variance (ANOVA).

Test for reliability.

Descriptive statistical testing for the Likert scale data was first analyzed for reliability of each of the student characteristics independent variables by finding Cronbach’s alpha ($\alpha$) for each scale. For most research situations, statisticians suggest that in order for scales to be considered appropriately reliable, Cronbach’s alpha should be at least .7 (Warner, 2008). Five of the Likert scales were therefore found to be reliable ($\alpha > .7$); (a) Academic Skills, (b) Dependent Learning, (c) Independent Learning, (d) Computer Skills, and (e) Background Confidence. Scales found to be less reliable included External Locus of Control ($\alpha = .638$), and Need for Online Learning ($\alpha = .627$). However, Need for Online Learning attained an $\alpha = .739$ with the deletion of item “I need online courses because of my geographical distance from universities.” Enrollment Encouragement scale items were found to be not reliable with $\alpha = .184$.

Independent samples $t$-tests.

Independent samples $t$-tests of the Likert type data of the eight corresponding independent variables were analyzed for ability to determine whether there was a
statistically significant difference in the means of the (a) student group that passed the initial RN to BSN nursing course with a B- or better, and the (b) group of unsuccessful students who either failed or withdrew from the course. The null hypothesis for this statistical analysis was $H_0$: There is no statistical difference between the conditions of successful students who passed NRSE 4510 with a B- or better, and unsuccessful students who failed NRSE 4510 with lower than a B- grade or did not complete the course.

In a few cases, minimal missing data was noted. Statistical analysis was completed using complete cases only, and then again by employing the creation of test variables in SPSS to include cases that were deemed adequate despite minimal missing data (Warner, 2008). As a result of this imputation of missing data procedure, the Computer Skills and Dependent Learning dependent variables were tested with $n = 118$; Independent Learning, Need for Online Learning, and Academic Skills were tested with $n = 119$; and External Locus of Control, Background Confidence, and Enrollment Encouragement were tested using $n = 120$.

Regardless of minimal missing data, results of independent samples $t$-tests of each of the eight student characteristics variables indicate a failure to reject the null hypothesis, with no statistically significant difference in any of the mean scores of the two groups of students that were (a) successful in the course, and those who were (b) unsuccessful through course failure or withdrawing prior to the end of the course.

Despite no statistical significance between the groups of successful and unsuccessful NRSE 4510 students, noticeable difference in the means of the student
characteristics Likert-type data is observed in Table 2 for the groups of academically successful and academically unsuccessful students.

Table 2

<table>
<thead>
<tr>
<th>Student Characteristic</th>
<th>Academically Successful</th>
<th>Academically Unsuccessful</th>
<th>Cohen’s d</th>
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<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
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<tr>
<td>Computer Skills</td>
<td>4.59</td>
<td>0.43</td>
<td>4.47</td>
</tr>
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<td>Independent Learning</td>
<td>4.24</td>
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<td>4.04</td>
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<td>Dependent Learning</td>
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<td>Academic Skills</td>
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<td>Background Characteristics</td>
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<tr>
<td>Enrollment Encouragement</td>
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One-way ANOVA.

Further analysis of Likert type data corresponding to Bean and Metzner’s eight independent variables included one-way analysis of variance (ANOVA) of the student characteristics by grouping student outcomes into three categories, whereas the
independent t-test categorized students into successful and unsuccessful groups only. This was accomplished by examining each of the characteristics and whether students (a) passed the course with a B- or better, (b) completed the course in entirety with a failing grade lower than B-, or (c) withdrew from the course prior to the end of the term.

Examination of descriptive statistics in Table 3 indicates minute, yet notable, differences in independent variable means between students who were academically successful, those who completed the course unsuccessfully, and those who withdrew from the course prior to the end of the term. With the exception of Dependent Learning and External Locus of Control, the remaining six variable means of successful students in NRSE 4510 were higher than unsuccessful and non-completing students.

Despite mean differences noted in the aforementioned variables, ANOVA analysis of each of the Likert scale data confirms the outcome of the independent t-test inquiry on each of the Bean and Metzner (1985) characteristics. Essentially, there is no statistical difference in the means of the groups of successful, unsuccessful, and non-completing students.

Therefore, the student characteristic variables consisting of computer skills, independent learning, dependent learning, need for online learning, academic skills, external locus of control, background characteristics, and enrollment encouragement are not related to course outcome for the purpose of this study.
Table 3

Means, Standard Deviations, and One-Way Analyses of Variance of Student Characteristics for Students Passing, Failing, and Withdrawing from NRSE 4510

<table>
<thead>
<tr>
<th>Student Characteristic</th>
<th>Successful Completion of NRSE 4510 (B- or better)</th>
<th>Unsuccessful Completion of NRSE 4510 (C+ to F)</th>
<th>Drop NRSE 4510 prior to completion (Withdraw)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>n</td>
</tr>
<tr>
<td>Computer Skills</td>
<td>4.59</td>
<td>0.43</td>
<td>105</td>
</tr>
<tr>
<td>Independent Learning</td>
<td>4.24</td>
<td>0.35</td>
<td>106</td>
</tr>
<tr>
<td>Dependent Learning</td>
<td>1.99</td>
<td>0.62</td>
<td>105</td>
</tr>
<tr>
<td>Need for Online Learning</td>
<td>4.28</td>
<td>0.58</td>
<td>106</td>
</tr>
<tr>
<td>Academic Skills</td>
<td>3.88</td>
<td>0.33</td>
<td>106</td>
</tr>
<tr>
<td>External Locus of Control</td>
<td>1.99</td>
<td>0.48</td>
<td>106</td>
</tr>
<tr>
<td>Background Characteristics</td>
<td>3.97</td>
<td>0.68</td>
<td>106</td>
</tr>
<tr>
<td>Enrollment Encouragement</td>
<td>3.18</td>
<td>0.52</td>
<td>106</td>
</tr>
</tbody>
</table>

Student Demographic and Characteristics Data Analysis

In addition to gathering Likert scale data in administration of the survey instrument, student demographic data was also sought to learn whether other student characteristics may impact student success at the onset of an online RN to BSN academic program. These additional research instrument questions provided categorical data on marital status, gender, computer availability, educational background and BSN
educational funding source. Interval data were also obtained on age, hours worked weekly, semester hours of enrollment, previous online college education enrollment, and length of time since previous college enrollment. These data were grouped and frequencies noted in Table 1, and also analyzed utilizing Pearson’s chi-square testing.

The student characteristics and demographic data were analyzed with Pearson’s chi-square for (a) the successful student group earning B- or better, (b) the unsuccessful student group who completed the course with a failing grade, and (c) the unsuccessful student group of non-completers of the course.

Analysis of Pearson’s chi-square statistical testing for student characteristics and demographic data reveals that none of the demographic characteristics consisting of age, hours worked weekly, semester hours of enrollment, previous online college education enrollment, length of time since previous college enrollment, marital status, gender, computer availability, educational background, and BSN educational funding source were indicative of student success, failure, or non-completion of NRSE 4510.

Areas of interest among these data in Table 1 include noting that 88% of student participants reported work hours 31 or more hours per week, with 14% of those reporting employment of 41-50 hours per week, which aligns with Horn’s non-traditional student characteristics set. Also supporting Horn’s (1996) concept of non-traditional student characteristics, 84% of respondents are at least 26 years old or more. As is characteristic of the nursing profession (Raffel, Raffel, & Barsukiewicz, 2002), 93% of students responding indicated they are female.
Course Success and Student Persistence

Analysis of student success in NRSE 4510 with at least a B- or better and subsequent academic term enrollment was conducted, using Pearson’s chi-square statistical testing. Findings of this testing procedure were significant and did indeed indicate a strong association between academic success, failure or course withdraw; and student persistence in subsequent academic terms (Pearson chi-square value of 48.127 and \( p = .000 \)).

Clearly, the academic goals of higher education institutions anticipate favorable outcomes for their students rather than academic failure. Whereas 82% of students who were academically successful, earning a minimum B- grade in NRSE 4510, only 7% of successful students opted not to return to academic study in subsequent terms (Table 3). While none of the failing students chose to return to academic study in subsequent terms, it is interesting to note that of the students who were non-completers, 3 of them opted to re-enroll in NRSE 4510 in an upcoming term. The attrition rate for this sample is 17%.

Table 4
NRSE 4510 Outcome and Student Persistence or Attrition

<table>
<thead>
<tr>
<th>Course Outcome</th>
<th>Persisted/Returned</th>
<th>Non-Returning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( n )</td>
<td>%</td>
</tr>
<tr>
<td>Pass/B- or better</td>
<td>98</td>
<td>82</td>
</tr>
<tr>
<td>Fail/C+ or lower</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Withdraw</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

*Note. \( \chi^2 = 48.127 \), df = 2.
*p = .000
**Course grade and student persistence.**

Upon conclusion of NRSE 4510, letter grades data were utilized as an independent variable, with frequency distributions for the sample noted in Table 5, and for the population as noted in Table 6. These final course grades were then paired with data indicating whether or not students continued their studies in subsequent semesters. Analysis of these data was then completed utilizing logistic regression to ascertain the effect of NRSE 4510 grade on the likelihood that a student returned to their academic studies in subsequent semesters. The logistic regression model including course final grade correctly classified cases of student return or attrition 90.8% of the time. The model was statistically significant, with the obtained odds ratio of 2.992. Therefore, grade for the initial baccalaureate nursing course significantly increases our ability to predict RN to BSN student attrition in this online academic program.

Table 5

*Course Grade Distributions of Sample (n = 120)*

<table>
<thead>
<tr>
<th>Course Grade</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>40</td>
<td>33</td>
</tr>
<tr>
<td>A-</td>
<td>36</td>
<td>30</td>
</tr>
<tr>
<td>B+</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td>B</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>B-</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Lower than B-/non-completers</td>
<td>14</td>
<td>12</td>
</tr>
</tbody>
</table>

*Note.* Totals of percentages are not 100 due to rounding.
Table 6

*Course Grade Distributions of Population (N = 1873)*

<table>
<thead>
<tr>
<th>Course Grade</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>423</td>
<td>23</td>
</tr>
<tr>
<td>A-</td>
<td>590</td>
<td>32</td>
</tr>
<tr>
<td>B+</td>
<td>394</td>
<td>21</td>
</tr>
<tr>
<td>B</td>
<td>165</td>
<td>9</td>
</tr>
<tr>
<td>B-</td>
<td>78</td>
<td>4</td>
</tr>
<tr>
<td>Lower than B-/non-completers</td>
<td>223</td>
<td>12</td>
</tr>
</tbody>
</table>

*Note.* Totals of percentages are not 100 due to rounding.

Table 7

*Summary of Logistic Regression Analysis Predicting Student Attrition*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>OR</th>
<th>95% CI</th>
<th>Wald statistic</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Grade</td>
<td>1.096</td>
<td>0.212</td>
<td>2.992</td>
<td>[1.97, 4.54]</td>
<td>26.637</td>
<td>.000</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.41</td>
<td>0.660</td>
<td>0.245</td>
<td></td>
<td>4.54</td>
<td>.033</td>
</tr>
</tbody>
</table>

*Note.* CI = confidence interval for odds ratio (OR).

Summary

This chapter presented the data analysis procedures utilized to address the research question put forth by this study. Specifically, Bean and Metzner’s model of non-traditional student attrition (1985) and existing online education survey instruments were adapted to target students at the onset of their online RN to BSN academic program.

Eight Likert scale items addressing computer skills, independent learning, dependent learning, need for online learning, academic skills, external locus of control,
background characteristics, and enrollment encouragement were analyzed with
descriptive statistical testing and were presented in table and narrative forms.

Additional descriptive statistical testing was completed on student demographic
and personal characteristics including age, marital status, gender, computer availability,
educational background, hours worked weekly, semester hours of enrollment, previous
online college education enrollment, length of time since previous college enrollment,
and BSN educational funding source.

Results of descriptive statistical analysis indicate that these aforementioned
student characteristics do not indicate whether students are prone to be successful or
unsuccessful in their initial required RN to BSN online course, or whether they are more
likely to withdraw from academic study prior to the end of the term.

Logistic regression analysis performed using final course grade and subsequent
term enrollment data did provide significant findings (Table 7). The level of success as
noted in the final course grade does indicate whether students return to the online RN to
BSN program in upcoming academic terms.

Chapter Five will present a summary of research findings, conclusions, and
recommendations for further research.
Chapter 5: Summary

Introduction

This chapter includes a summary of the study, in addition to conclusions and recommendations for further research based on results. The research question conclusions are provided, as well as recommendations for future study by other nursing educators and higher education professionals.

As more undergraduate academic programs transition to an online format to address the educational needs of non-traditional working adults, it is anticipated that the continued study of students enrolled in online academic programs at the undergraduate and graduate levels will yield data leading to a deeper understanding of how educators can improve student academic success in these programs. Specifically for nursing educators, this is increasingly important as more graduate and undergraduate nursing programs launch online programs and program components, and more students enroll in these programs (Gazza & Hunker, 2014). Moreover, online nursing education may be viewed as a component of a larger solution to address the global nursing and nurse educator shortage (Nardi & Gyurko, 2013).

This study utilized instruments and previous research of online students in general, and targeted RN to BSN students specifically to learn more about what student characteristics may indicate academic success and whether this student group differs from other online student groups. Of particular interest for purposes of this research are some unique characteristics of this student group, including (a) nursing continues to be a predominantly female profession, (b) many registered nurses are required to obtain the
BSN in order to keep their jobs, rather than being personally motivated to further their education, (c) employers commonly provide an educational funding stream as an additional incentive to obtain the BSN, and (d) the hospital diploma nurse training path presents a unique educational background that may be possessed by students pursuing a baccalaureate nursing degree. Although clinical experiences are a major component of pre-licensure nursing education, this factor is not relevant to RN to BSN education as these students have previously completed clinical education in their associate degree or hospital diploma programs (Bentley, Cook, Davis, Murphy & Berding, 2003).

The instrument, modified and adapted for this population, was administered at the onset of the initial required nursing course in an effort to capture characteristics as they commence their baccalaureate nursing academic study. At the conclusion of the course, final grades for course completers and course withdrawal information was added to survey data to determine student success or failure. Success in this course was defined by academic program requirements of a B- or 80% grade. Anything less than B- was considered course failure. Dropping the course (withdrawing) prior to course completion was also considered course failure for the purpose of this study.

**Summary of Findings**

This section provides a summary of the data analysis of the eight previously identified operational dependent variables consistent with Bean and Metzner’s model of nontraditional student attrition (1985). Also summarized will be the analysis of student demographic data and personal characteristics reported by participants. Each research
question will be restated, along with statistical measures utilized. Statistical testing results will be reported and identified, and any significance in potential variable differences.

**Research question one.**

Research question one is stated as follows: Do (a) Computer Skills, (b) Independent Learning, (c) Dependent Learning, (d) Need for Online Learning, (e) Academic Skills, (f) External Locus of Control, (g) Background Characteristics, and (h) Enrollment Encouragement characterize academic success or failure for RN to BSN students at the onset of their baccalaureate nursing program? This research question focuses on eight independent variables as put forth in Bean and Metzner’s (1985) non-traditional student attrition model, and whether these characteristics describe academic success or failure of RN to BSN online students at the onset of their baccalaureate nursing program.

All eight of the Likert scales were compiled and a mean was calculated for each scale. Each mean was tested for reliability by calculating Cronbach’s alpha, ranging from 0 to 1, to determine the level of covariance, or how well each group of survey items measure that scale’s underlying student characteristic (Warner, 2008). Highly reliable scales (\(\alpha > .7\)) included (a) Academic Skills, (b) Dependent Learning, (c) Independent Learning, (d) Computer Skills, and (e) Background Confidence. Scales with less than desirable reliability included External Locus of Control (\(\alpha = .638\)) and Need for Online Learning (\(\alpha = .627\)). However, Need for Online Learning attained an \(\alpha = .739\) with the deletion of one item (“I need online courses because of my geographical distance from universities”). Enrollment Encouragement was found to not be reliable (\(\alpha = .184\)), and
required reverse recoding of “I chose to enroll in this online RN to BSN program for my own sense of personal accomplishment” to attain this reliability. The Enrollment Encouragement category and lack of reliability, demonstrate that the 3 survey items lack in internal consistency or relationship to each other, and this category would require additional and better related survey items to be effective.

The data were analyzed using two methods, (a) independent samples $t$-test, and (b) one-way ANOVA. Analysis by independent samples $t$-test with successful students passing the course with B- or better, and unsuccessful students failing or withdrawing from the course. None of the independent variables examined by independent samples $t$-test ($p = .05$) demonstrated any statistical significance in the mean differences between successful and unsuccessful student groups.

Further analysis of the Likert-scale data was then conducted by use of one-way ANOVA. Data of successful students earning a B- or better in the course, students who completed and failed the course with a grade of C+ or lower, and course non-completers were examined. One-way ANOVA calculations also confirmed that there was no statistically significant difference between the students who passed the course, those who failed, and non-completing students.

These findings could mean that more subtleties may become apparent with a larger pool of data, especially considering the fact that only three students failed and eleven dropped the course prior to the end of the term. Other previously studied populations have not focused on this specific academic major, indicating that specific student groups and academic programs of study do not conform to previously developed,
easily generalized frameworks. Another unexamined area of study of this specific student population may focus on the compressed format of the nursing courses in this online program, in which full-semester courses are condensed into an intense, fast-paced, five-week time frame.

**Research question two.**

Research question two is stated as follows: Do demographic variables (a) Gender, (b) Marital Status, (c) Age, (d) Hours Worked Weekly, (e) Computer at Home, (f) Educational Background, (g) Current Term Hours of Enrollment, (h) Previous Online Enrollment, (i) Years Since Previous College Enrollment, and (j) Educational Funding Source characterize academic success or failure for RN to BSN students at the onset of their baccalaureate nursing program? Student data including demographic, environmental, financial, enrollment, and employment information provides additional insights on other characteristics that may impact online RN to BSN student success.

Chi-square tests were conducted and analyzed for these independent variables. As the nursing profession is prevalently more female and therefore is also more predominantly female than many online academic programs, it was relevant to examine what role, if any, that gender may have as relating to student academic success or failure. However, investigation of gender as a possible factor in determining student success or failure concludes that it is not related to whether or not students perform satisfactorily in their first RN to BSN course \( p = .224 \), despite Bean and Metzner’s contention that gender is a background and defining variable, and that gender also impacts family responsibilities (1985).
Marital status, despite being related to the family responsibilities environmental variable in Bean and Metzner’s model of non-traditional student attrition (1985) that presumes that environmental variables are of greater consequence than academic variables, it was found to not be related to student success in NRSE 4510. Also, educational funding source, and hours worked weekly as two of the environmental variables in the non-traditional student attrition model likewise were not related to course outcome.

Background and defining variables as suggested by Bean and Metzner (1985) addressed in this research include educational background and enrollment status. Survey questions on current term hours of enrollment, previous online enrollment, years since previous college enrollment did not yield results related to NRSE 4510 course outcome. Specific to this student population and to nursing education is the hospital diploma nursing pathway to registered nurse licensure (AACE “Fact Sheet,” 2012), therefore it was of value to examine this unique educational background as a possible link to academic success in an online RN to BSN program. However, examination of educational background does not appear to be related to academic success in NRSE 4510.

Computer availability in previous studies (Osborn, 2000; Muse, 2003) was suggested to be essential when examining online academic success. However, this student characteristic variable proved to be inconsequential for the purpose of this study. A possible reason for this is the availability of technology as it has permeated society in the years since Muse’s and Osborn’s investigations.
Research question three.

Research question three is stated as follows: Is academic performance in NRSE 4510 related to student attrition and persistence? The methods to approach and address this research question were twofold.

Pearson’s chi-square analysis was employed to determine whether an association existed between the categorical variables of course success, failure, or drop out prior to term completion, and whether students returned to academic studies in subsequent academic terms. This chi-square analysis identified a statistically significant relationship between the aforementioned categorical variables. Therefore, academic success in NRSE 4510 with at least a B- is an appropriate indicator of whether students continue to pursue the BSN degree at Ohio University.

Student data utilized to address this research question includes final grade for the initial baccalaureate nursing course, and whether participants continued to pursue the online RN to BSN program in subsequent semesters.

Logistic regression analysis was also conducted on final course grade to determine whether academic performance in this initial baccalaureate nursing course was related to student attrition or continued persistence in the academic program. Findings were statistically significant, with an odds ratio of 2.992. Therefore, it can be concluded that a relationship does exist between academic performance in NRSE 4510 and student persistence.
Discussion

Analysis of research data yielded mixed results. Only the analysis of relationships between course outcome and enrollment in subsequent academic terms produced statistical significance. Clearly, persistence or attrition is impacted by students’ experiences and performances in this initial baccalaureate nursing course required of all RN to BSN students in the program.

As several of the variables analyzed for the purpose of this study did not yield results similar to results of undergraduate online students in general (Kerr, Rynearson & Kerr, 2006; Levy, 2004; Rovai, 2003; Osborn, 2000; Muse, 2003), it is essential to address other factors beyond the scope of this research that may be influential and worthy of further examination and discussion.

As time and technology progresses, more students have increased computer access at home and in the workplace. Additionally, younger, yet non-traditional, students are coming up through the ranks that start college with computer skills and experience that surpass those of older students. Therefore, it may be reasonable that the number of college students having inadequate computer skills will decrease, unlike their older student counterparts—especially at the time of similar previous studies (Osborn, 2000; Muse 2003).

Unlike many students embarking in undergraduate online academic programs, a majority of all RN to BSN students begin their baccalaureate study with either an associate degree or a previous bachelor degree. Although the online educational experience is much different from the traditional classroom, RN to BSN students are
already accustomed to rigorous academic requirements in a selective admission associate degree nursing program. Therefore, all of these participants have already demonstrated an ability to succeed in an academic program, unlike similar previous studies (Osborn, 2000; Muse 2003). Furthermore, those from the pool who responded to the survey may have been more likely, still, from their counterparts who did not participate.

Beyond the characteristics of the students themselves, the format of curriculum delivery may warrants further examination as well. The compressed, five-week format meets with student approval. However, for busy, working students, the compression of a full semester course into five weeks may be counterproductive. The accelerated pace of the NRSE 4510 suggests that students’ first foray into online baccalaureate education may be more demanding than they anticipate. Ohio University data indicates that students enrolled the capstone NRSE 4600 course overwhelmingly are successful, with only a 1-2% of course D-grade, withdraw and fail rates (DWF). However, students enrolled in the introductory NRSE 4510 course experience DWF rates of 9-12% (Ohio University, 2014).

It is useful to note that undergraduate entering online study at Ohio University at the time of data collection for this research were required to complete an online orientation module and orientation quiz to determine student knowledge on academic policies and procedures. This online orientation requirement was launched in an effort to improve student satisfaction and academic success, and it is reasonable that it has had a positive impact in this program. Also worth considering is that students who are highly engaged in their studies may be more inclined to complete the survey, as opposed to
those who are not participating, who are not checking email regularly, are unaware they are enrolled, or are not aware the course has started. Therefore, students who may be the most at risk of attrition for these reasons would have not likely participated in the study, resulting in a sample of students more inclined towards academic success.

**Recommendations for Practice**

1. Research outcomes examining student enrollment in subsequent academic terms indicate a strong relationship between course outcome and GPA and whether students persist in the program. Not only does this impact student success and satisfaction with the program, but also tuition revenue for the institution. It would be prudent for institutions to examine current practices and student resources in place that are both facilitating and hindering student academic success.

2. Results of this study demonstrate that students enrolled in online RN to BSN academic programs do not tend to share the same differences and characteristics of online undergraduate students in general. This is based on finding that studying the characteristics of these students differed from prior research results, which did not focus specifically on RN to BSN online education (Osborn, 2000; Muse 2003; Kerr et al. 2006). Therefore, it would be wise for practitioners and institutions to carefully consider implementing changes in admissions and student support programming based upon research of online education in general. Consequently, such endeavors may not have the same desired positive effect on RN to BSN student success as in other undergraduate online programs.
3. In determining factors that may be negatively impacting RN to BSN student success in online programs, it may be valuable to examine other aspects of the academic program beyond the scope of this study. The RN to BSN academic program at Ohio University only delivers online nursing courses in a compressed, five-week format rather than a full, fifteen-week semester. This accelerated learning format is in great demand by students and research indicates that well-developed accelerated courses present non-traditional students with opportunities for excellent learning outcomes (Wlodkowski & Kasworm, 2003). Often perceived by students to be an attractive, more time-efficient academic study option, compressed online courses may not as effectively deliver learning that is as productive as full-semester courses. This in turn may be a factor affecting academic success for RN to BSN students who are working towards the nursing degree in a solely online format. Compressing a full semester course into one-third of a semester constitutes quantitative change of time and lesson frequency, while qualitative change involves applying effective instructional tools and strategies to maximize learning efficiency in the shortened time frame (Serdyukov, 2008).

**Recommendations for Further Research**

This study provides insight into how student characteristics of RN to BSN students differ from those of online students in general, as relating to their academic success at the onset of online study. Results of this research can be used to assist educators in developing effective orientation programming for online nursing students,
determining if programming should be modified in any way for this particular student group, and perhaps examine other factors beyond the realm of this study that may be impacting student success. Additional research in this area will contribute to the body of knowledge and will add understanding of the characteristics of RN to BSN online students with the goal of improving RN to BSN student success.

In order to maximize student success, it is essential for institutions to offer well-designed online courses, maintain consistent communications, and provide adequate and relevant student support for non-traditional students. Not only would student satisfaction with the program impact their continued persistence, institutional revenue generation also needs to be examined through this lens as well. Although the accelerated five-week online format is perceived by students to be an attractive educational option, more study is needed to provide additional insight on whether this or other factors may be detrimental to student success, not only in the academic area of nursing, but in online academic programs in general. The following recommendations represent a guide to encourage additional dialogue and future research.

- Further future research could examine student persistence and attrition as it relates to tuition revenue generation or loss. More in-depth investigation of financial implications for the institution could justify the cost of any additional investments and expenditures in the program aimed at improving student persistence.
- Additional research and self-study of all available student resources and programming could pinpoint problematic areas or deficiencies that are linked to
student attrition in an effort to modify existing resources and implement new ones.

- Future study could be qualitative in nature to provide a deeper understanding of RN to BSN student characteristics and educational needs, including why the compressed course format is viewed by students to be an attractive option. In-depth conversation with students may be able to provide more specific details on why students are successful or not in the online, accelerated format, and why this format is an attractive academic option.

- Future directed study on the accelerated, online courses could be completed to compare online nursing courses in both the full-semester and compressed formats. This type of study could examine differences in course design, learning objectives, and student success rates in both online formats to determine if the actual effectiveness of this educational delivery lives up to perception.

- Future study could reach out to those students who fail or drop out of the course in an effort to learn more specific details of the factors that ultimately resulted in their academic nonsuccess. Likewise, additional data on students who are successful in their first online academic endeavor towards the BSN can be insightful as well.

- Future research could repeat the current study with RN to BSN students in various stages of nursing baccalaureate program completion to gather data on whether student characteristics evolve as a result of progression through the online program, and whether changes in student characteristics affect academic success.
Future research could repeat the current study, and incorporate qualitative study as well. This combination may provide a more complete picture of RN to BSN students, present a better view of their characteristics, and more depth of understanding of their academic success or failure.

Future research could repeat the current study over a multitude of academic terms, and could include thousands more enrolled students. As a result, patterns may emerge, trends may become apparent, and programmatic changes may be evaluated and evidenced in data and research results.

Conclusion

The results of this study indicated that the factors affecting RN to BSN student success at Ohio University are different from those affecting online students in general due to the mixed statistical findings when compared to previous similar studies. The operational variables chosen for compatibility from Bean and Metzner’s 1985 model of non-traditional student attrition, results indicate there are other factors beyond the scope of this research that impact the academic success of online RN to BSN students at the onset of their program.

Significant relationships were identified between course outcomes and course grade, and whether students persisted in the program in subsequent academic terms. However, there was no significant relationship between any of the independent variables examined and student success, failure, or course drop out, including computer skills, independent learning, need for online learning, academic skills, locus of control, background confidence, enrollment encouragement, and academic success. Additional
analysis of student demographic data, including age, marital status, gender, computer availability, educational background, hours worked weekly, semester hours of enrollment, and length of time since previous college enrollment.
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Appendix A: Research Instrument

Please read each question and choose the selection that best describes how you feel.
SD—Strongly Disagree; D—Disagree; N—Neither Agree nor Disagree; A—Agree; SA—Strongly Agree

<table>
<thead>
<tr>
<th>Computer Skills</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am capable of learning new technologies.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. I am capable of sending and receiving e-mail.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. I am capable of attaching files to an e-mail message.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. I am a competent Internet browser.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. I am capable of using standard word processing software.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. I am capable of managing files on a computer.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. I can download software when necessary.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. I can install new software when necessary.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. I can copy and paste text using a computer.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. I am capable of using discussion boards online.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. I am capable of using chat rooms online.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Learning</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. I am capable of prioritizing my responsibilities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. I am a good time manager.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. I am a procrastinator.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. I am capable of making time for my coursework.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16. I am able to balance many tasks at one time.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17. I am goal-oriented.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18. I am self-disciplined when it comes to my studies.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19. I am self-motivated.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20. I take responsibility for my learning.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>21. I am capable of critical thinking.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dependent Learning</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. I often leave tasks unfinished.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>23. I require help to understand written instructions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>24. I wait until the last minute to work on assignments.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>25. I have trouble comprehending what I read.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>26. I need faculty to remind me of assignment due dates.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>27. I need incentives/rewards to motivate me to complete a task.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Need</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>28. Because of my schedule, I need online courses</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td></td>
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<td>---</td>
<td>---</td>
</tr>
<tr>
<td>29.</td>
<td>It is difficult for me to go to campus to complete course requirements.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>30.</td>
<td>I need online courses because of my geographical distance from universities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>31.</td>
<td>I need online courses because of my work schedule.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>32.</td>
<td>I need the freedom of completing coursework at the time and place of my choosing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>33.</td>
<td>I can learn by working independently.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>34.</td>
<td>I am self-directed in my learning.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>35.</td>
<td>I am capable of solving problems alone.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>36.</td>
<td>I need face to face interaction to learn.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>37.</td>
<td>I need faculty feedback on my completed assignments.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>38.</td>
<td>I am a good reader.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>39.</td>
<td>I need classroom discussion to learn.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>40.</td>
<td>I am capable of asking for help when I have a problem.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>41.</td>
<td>I am comfortable learning new skills.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>42.</td>
<td>I read carefully.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>43.</td>
<td>I am a good writer.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>44.</td>
<td>I am capable of following written instructions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>45.</td>
<td>I am capable of conveying my ideas into writing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>46.</td>
<td>The grade I get in a course depends more on how hard the instructor grades than how carefully I study.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>47.</td>
<td>Good luck is more important for college academic success than hard work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>48.</td>
<td>Getting a good grade in a college course depends more on being “naturally smart” than on how hard I work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>49.</td>
<td>I don’t read new articles when they look too difficult for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>50.</td>
<td>I am not very interested in this class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>51.</td>
<td>My formal educational background has given me an adequate preparation for this course.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>52.</td>
<td>My work experience, and other experiences outside of formal schooling, has prepared me for this course.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>53.</td>
<td>My decision to enroll in this online RN to BSN program was influenced by my family concerns.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>---</td>
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</tr>
<tr>
<td>54.</td>
<td>My employer encouraged me to enroll in this online RN to BSN program.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>55.</td>
<td>I chose to enroll in this online RN to BSN program for my own sense of personal accomplishment.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>56.</td>
<td>What is your gender?</td>
<td></td>
<td></td>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>57.</td>
<td>What is your marital status?</td>
<td></td>
<td></td>
<td></td>
<td>Single, never married</td>
</tr>
<tr>
<td>58.</td>
<td>What is your age in years?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>59.</td>
<td>How many hours per week do you work at your job?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60.</td>
<td>Do you have access to a computer at home that you can use for course assignments?</td>
<td></td>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>61.</td>
<td>What is your education background?</td>
<td></td>
<td></td>
<td>Community college, associate degree in nursing graduate</td>
<td>Hospital diploma school graduate</td>
</tr>
<tr>
<td>62.</td>
<td>How many total credit hours are you currently taking this semester?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>63.</td>
<td>How many web-based courses have you enrolled in prior to this term?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>64.</td>
<td>How long in years has it been since you successfully completed a college course? Enter 0 if less than 1 year.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65.</td>
<td>Are you receiving financial aid to pay for your BSN education?</td>
<td></td>
<td></td>
<td>Yes, student loans/grants</td>
<td>Yes, employer reimbursement</td>
</tr>
</tbody>
</table>