PERSISTENCE OF STUDENTS IN RNBS COMPLETION ONLINE PROGRAMS

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ABSTRACT

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PERSISTENCE OF STUDENTS IN RNBS

COMPLETION ONLINE PROGRAMS

The nursing shortage has reached unprecedented levels in the United States. In a response to meet current educational needs and demands to recruit, retain, and expand enrollment of students in baccalaureate programs in nursing, the growth of online education has been dramatic. As growth continues, graduation rates and program retention are a concern. The purpose of this study is to examine the relationship between student motivation, academic context, cost-benefit appraisal, and intent to persist in RNBS completion online programs.

The conceptual model used in this study was Student Online Academic Persistence a researcher developed model which is primarily based on the work of Tinto, Bean & Metzner, and Rosenbaum.

Research questions:

1. Among students enrolled in RNBS completion online programs, do motivation and context predict cost-benefit appraisal?
2. Among students enrolled in RNBS completion online programs, what is the relationship between cost-benefit appraisal and intent to persist in the program?

Data were collected via a Web-based self-report questionnaire and subjected to descriptive and inferential analyses which included the use of linear regression and correlations. From a population of 3606 students from three schools of nursing who were

enrolled in an RNBS completion online program, 704 usable surveys were returned, with a response rate of 19%. Technology self-efficacy correlated positively with goal orientation, goal commitment, satisfaction with institution and faculty, cost-benefit appraisal and intent to persist. Goal commitment to the program and satisfaction with institution were found to be important in the persistence of students. A continual decision making process involving cost-benefit appraisal was also found to impact student intention to persist in the program of study. Recommendations for faculty include assuring student technology self-efficacy and developing an online transition course designed to normalize the experience of adults engaging in online education. Future research which further tests the Student Academic Online Persistence model and explores the lived experience of the online student is suggested.

Diane M. Billings, EdD, RN, FAAN, Chair

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

Introduction

The nursing shortage has reached unprecedented levels in the United States (Staiger, Auerbach, & Buerhaus, 2000). According to projections from the Bureau of Labor Statistics, there will be more than one million vacant positions for registered nurses by 2010 due to growth in demand for nursing care and net replacements due to retirement (Hecker, 2001). This shortage is worsened as the shortage of students in nursing programs continues to be a major challenge (Wells, 2003).

There is a need to recruit, retain, and expand enrollment of students in baccalaureate programs in nursing (AACN, 2003) to meet the demand and to achieve recommended levels. The National Advisory Council on Nurse Education and Practice (NACNEP), policy advisors to Congress and the U.S. Secretary for Health and Human Services on nursing issues, has urged that at least two-thirds of the nurse workforce hold baccalaureate or higher degrees in nursing by 2010. Presently, only 47.2 % of nurses hold degrees at the baccalaureate level and above (AACN, 2007a). NACNEP projects that only 36% of the total registered nurse population in 2010 and 37% in 2020 will have a baccalaureate degree as their highest level of preparation. The NLN Public Policy Agenda (NLN, 2006) calls for initiatives to help build and maintain an excellent nursing workforce through the recruitment of students into the nursing profession, in producing a diverse nursing workforce, by providing faculty members to educate nursing students, and through the creation of educational opportunities to keep nurses in the profession.

Due to the increasing complexity and demands of today's health care system, the preparation of nurses at the baccalaureate and higher degree levels is the greatest need

(AACN, 2007a). To meet this need, schools of nursing are developing RNBS completion programs in both term-based and accelerated models in onsite and online modalities (AACN, 2007a). The number of nurses pursuing baccalaureate degrees increased from 2000-2004 by 12.9% (American Association of Colleges of Nursing, 2007b). More than 620 RN to BSN programs are available nationwide, including more than 340 programs that are offered at least partially online. Despite the increase in enrollment, there is a growing realization that the supply of appropriately prepared nurses is inadequate to meet the needs of a diverse population, and that this shortfall will grow more serious over the next 20 years (AACN, 2001; U.S. Department of Health and Human Services, 2006).

To help meet the current educational needs and demands, the growth of online learning has been dramatic over recent years. According to the National Center for Education Statistics in 2000-2001, college-level, credit-granting distance education courses at either the undergraduate or graduate/first-professional level were offered by 55% of all 2-year and 4-year institutions. Among the 56% of institutions that offered distance education courses, 34% had degree or certificate programs offered totally through distance education (Waits, Lewis, & Greene, 2003). Enrollment in courses delivered entirely online increased by nearly 250% in the three years from 2002 to 2005 (Eduventures, 2005).

As more students are seeking out distance options in education, postsecondary institutions are increasingly offering more flexible schedules, such as weekend-only classes, accelerated programs, and online instruction. This flexibility is sometimes extended as institutions offer multiple entry, exit, and reentry points, including more frequent start times throughout the year (Chao, DeRocco, & Flynn, 2007). According to

the National Center for Education Statistics (NCES) of the U.S. Department of Education (USDE), in the 2000-2001 academic year, 56 percent (2,320) of all 2-year and 4-year Title IV-eligible, degree-granting institutions offered distance education and 12% of all institutions indicated that they planned to start offering distance education courses in the next three years (USDE, 2003).

Students often enter online education due to the convenience of this modality (Billings, Connors, & Skiba, 2001; Wellman, 2009) but some students fail or drop-out of distance education, due to unrealistic expectations of the course or program (Nash, 2005; Meyer, Hoover, & Maposa, 2006). Students who do not succeed are more likely to report they made the assumption that course work would be easier in the distance learning format (Moody, 2004; Nash, 2005). Changing patterns of college attendance include an increase in individuals returning to school for second degrees and student's returning to school as adults. Adults age 25 and older account for 47% total college enrollment (Education Commission of the States, 2003) and most of these older undergraduates work while attending school (Horn, Peter, & Rooney, 2002). Students enter the classroom with a history of past education and experience, along with many years of interaction within their families, cultural, social and political environments. These students vary in their academic preparation; some are better poised for success than others. This margin can make the difference between those who persist to realize their educational goals and those who do not (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006).

Adult learners pursue postsecondary education for a range of reasons, such as wanting to be better educated and better informed (49%), enhancing personal happiness and satisfaction (47%), obtaining a higher degree (43%), making more money (33%), and

meeting job requirements (33%; Bradburn & Hurst, 2001). The U.S. Department of Education (2003) found that of adult students who describe themselves as “employees who study”, 85% reported that gaining skills to advance in their current job or future career was an important consideration in their postsecondary education, 89% reported that personal enrichment was an important factor, and 36% enrolled to obtain additional education required by their job.

Of adult students age 24 and older who attend college, 82% typically work and consider employment their main priority (U.S. Department of Education, 2003). Two thirds of these adult students view themselves as employees who study, seeing themselves as employees first and students second. Among employees who study, about a third had enrolled because their job required them to seek additional education. “Employees who study” are more likely to have multiple risk factors, tend to be older, work more, attend school less, and have family responsibilities, compared to their peers whose primary activity was being a student. In 1999-2000, working adults who identified themselves as “employees who study” were at substantial risk of not completing their postsecondary program. Interestingly, this risk was increased when they were both employed full time and studied only part time (U.S. Department of Education, 2003).

Registered Nurses returning to school to complete their BSN are typically mature (age 40 and older), working adults, with a variety of competing roles and responsibilities (Strevy, 2007). This dilemma of competing demands of work, school and family (DeRemer, 2002) requires a continual juggling of these demands, which can result in feelings of stress and apprehension. Placed in a life situation where there is continual evaluation of the emotional, fiscal and financial costs and benefits of continuing their

educational pursuit, the student may determine that the costs associated with continuing as a student outweigh the benefits. Understanding student behaviors associated with academic persistence is helpful in learning why some students are successful in academia, while others are not successful (Derrick, 2002).

While the literature is replete with research addressing student attrition among the traditional college student and an array of theories and models are proposed (Astin, 1986; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2007; Lotkowski, Robbins, & Noeth, 2004; Pascarella & Terenzini, 1991; Seymore & Hewitt, 1997; Tinto, 1975, 1996; Upcraft, Gardner, & Barefoot, 2005), less research has been undertaken in persistence of the non-traditional student (Berge, Muilenburg, & Haneghan, 2002; Kember, et al.., 2005; Muilenburg & Berge, 2005; Sit, Chung, Chow, & Wong, 2005). Through the study of students enrolled in RNBS completion online programs, a mid-range theory is proposed which will address persistence of this non-traditional student population and thus provide further information to inform educational policy and practice.

Models of Student Attrition and Retention

The study of student attrition and student retention in higher education spans over 35 years as efforts are made to describe and work toward predictive models. The earliest model which utilized a theoretical framework was Spady's Theoretically Based Model of the Undergraduate Dropout Process (Spady, 1971). This predictive model of student dropout was based on a synthesis and extension of Heider's Balance Theory (1946) and Durkheim's Suicide Theory (Berrios & Mohanna, 1990). Heider's theory is based on the premise that there is a tendency for an individual to attempt to cognitively balance and thus avoid tension. Further models which followed proposed that student attrition in

higher education was primarily due to lack of socialization of the student within the educational setting (Boshier, 1973; Pascarella & Terenzini, 1980; Tinto, 1975).

Spady's theoretical framework was later used in the development of the Longitudinal Model of Student Socialization (Tinto, 1975). This model is the most widely used in academic retention research (Pascarella & Terenzini, 1980), and has served to inform recommendations for and subsequent policy development related to college retention (Lotkowski, Robbins, & Noeth, 2004; Tinto, 1996). Tinto (1975) asserts that student performance in college and integration into the social and academic systems of an institution are influenced by background characteristics (e.g., sex, race, family social status). This integration into the social and academic systems then leads to commitment to the institution and to goals associated with graduation and career.

As nontraditional student programs in higher education began to expand and proliferate, later models focused on nontraditional student attrition (Berge & Huang, 2004; Kember, 1989; Metzner & Bean, 1987). These models assert that environmental factors have a greater impact on student attrition in this demographic. Jeffreys (2007) model of nontraditional nursing student retention builds on previous models (Metzner & Bean, 1987; Tinto, 1975), proposing that retention is the result of ongoing decisions based on the interactions of student characteristics including affective factors, academic, environmental and professional integration factors, and outside surrounding factors.

Problematic in the study of student persistence, consistent conceptual and operational definitions for success, persistence and enrollment patterns have been noticeably absent in most of the literature. Without adequate concept analysis leading to effective definitions, measurement of these variables will remain inconsistent. In an effort to

address this concern, initial concept analysis of persistence resulted in the following definition (Strevy, 2005):

> Academic persistence is conceptually defined as the extent to which the student overcomes challenges, making the decision to continue to work toward academic goals. This decision is influenced by social and environmental variables, whereby there is a continual weighing of the emotional, fiscal, and social costs and benefits.

The idea of a continual decision-making process originated with Spady (1971) who first addressed decision-making in the context of academic persistence by extending the concepts of Balance theory (Heider, 1958) and Durkheim's theory of suicide (Durkheim, 1951). The premise was that the "decision to leave a particular social system" was the result of a "complex social process that includes family and previous educational background, academic potential, normative congruence, friendship support, intellectual development, grade performance, social integration, satisfaction, and institutional commitment" (Spady, 1971).

Tinto later added the concept of cost-benefit analysis to individual decision-making, specifically targeting decisions regarding investments made in activities other than those with an academic focus. This concept of persistence as continual decision-making, weighing the costs and benefits of continuing education, warrants further study.

Theoretical Framework

Strevy (2007) developed a conceptual framework, Student Online Academic Persistence, based on the work of Tinto (1975), Bean and Metzner (1987), and Rosenbaum (1990). These models/frameworks were selected due to the theoretical basis, empirical support, and potential relevance to students of online programs. The framework

consists of three domains; student motivation, educational context, and decision-making (Figure 1).

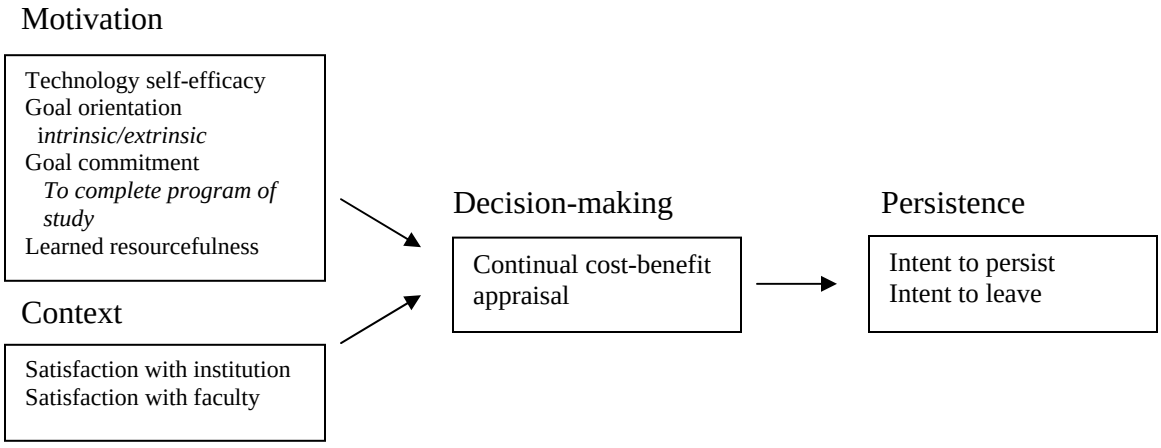

Figure 1: Conceptual Framework: Student Online Academic Persistence

Purpose of Study

The issue of student persistence is multidimensional, with a number of motivational and contextual variables. While there are numerous studies related to academic persistence of students in higher education, limited studies have focused on the adult student with competing role and time demands. Additionally, investigations have included a number of variables in models, but have not focused on cost-benefit appraisal. Therefore, the purpose of this study is to examine the relationship between student motivation, educational context, cost-benefit appraisal, and intent to persist in RNBS completion online programs.

Significance of the Study

This study that investigates the relationship between student motivation, educational context, student cost-benefit appraisal, and intent to persist is significant because of the potential for impact on the field of nursing education. Such a study can make valuable contributions specific to theoretical constructs of learner motivation and characteristics.

Studying a large sample of students of RNBS completion online programs from multiple institutions can provide useful information about the relationship in student levels of learned resourcefulness (LR) and their intent to persist. This information can help further develop theoretical frameworks in nursing education that can inform nursing education and nursing education administration regarding policies and procedures for best assisting this unique population of students.

This research study can contribute to RNBS completion online education and teaching practice by informing educators about how student characteristics such as LR and student cost-benefit appraisal may be related to student intent to persist. Rosenbaum (1988) proposes that LR may be a teachable skill. Consequently, this study can help educators reflect on those LR factors that may assist learners in persistence. Research in this area can result in the development of learner assessments that can be used early in the RNBS program to identify individual strengths and weaknesses concerning student LR. Provided with such information, school of nursing administration can formulate best practices in determining policy related to blending of traditional undergraduate students with RN students. Moreover, understanding the individual student's continual cost-benefit appraisal may help in the counseling of learners regarding the personal decision-making and how to address the challenges that present in the lives of adults with competing roles and responsibilities.

Specific to RNs returning to education, this study helps redirect the emphasis in student retention research from comparative studies of traditional, campus-centered research to learner-centered studies that can generate practical applications for academic success of adults in the online environment. This midrange theory focus is consistent with

current directions indicated in the literature, where a specific model for non-traditional students is developed and operationalized based on the characteristics of the population (Cleveland-Innes, 1994). Such research can help increase knowledge about the influence of predisposing learner characteristics on academic persistence that oblige learners to control and monitor their learning.

Perhaps most significant is this research study's potential for informing policy decisions related to current program practices, policies and student mix. With the present and predicted long-term shortage of professional prepared nurses and the increasing rate of application and enrollments in nursing education programs, it makes sense for colleges and universities to develop and promote policies which will support those students who do return for BSN education. While student attrition from online courses has been reported to be higher than that for traditional classroom courses (Carr, 2000; Diaz, 2002; Parker, 1999; Phipps & Merisotis, 1999), these high attrition rates may reflect students' choices to drop-out from an online program once they determine that learning in an online environment differs from traditional campus-based courses. Some students may not be prepared to assume the additional role and responsibilities associated with returning to school as adults in an online environment. This information would be useful for those who develop policy regarding the placement of students in online learning environments.

Statement of Problem

Due to the nursing shortage (Staiger, Auerbach, & Buerhaus, 2000) there is a need to recruit, retain, and expand enrollment of students in baccalaureate programs in nursing (AACN, 2003). The preparation of nurses at the baccalaureate and higher degree levels to

meet the increasing complexity and demands of today's health care system is the greatest need (AACN, 2007a). To meet this need, schools of nursing are developing RNBS completion online programs (AACN, 2007a).

While online education responds to higher education's role of flexibility to adjust to a rapidly changing world (Friedman, 2005), as growth continues, graduation rates and program retention is an issue for the adult student. Recent estimates are that about 60% of adult students leave college before graduation (Wlodkowski, Mauldin, & Gahn, 2001) and individual institution studies suggest online distance education course-completion and program-retention rates are low (Carr, 2000; Phipps & Merisotis, 1999). In order to address the retention of students in RNBS completion online programs an understanding of persistence of this population is important.

Research Questions

The purpose of this study is to examine the relationship between student motivation, educational context, cost-benefit appraisal, and intent to persist in RNBS completion online programs. Therefore, two research questions will be addressed in this study.

Research Questions:

1. Among students enrolled in RNBS completion online programs, do motivation and context predict cost-benefit appraisal?
2. Among students enrolled in RNBS completion online programs, what is the relationship between cost-benefit appraisal and intent to persist in the program?

Assumptions and Limitations

The first assumption is that the research subjects will be representative of the students of RNBS completion online programs. The second assumption is the research

subjects will respond accurately to the questionnaire. The third assumption is an RN returning to school to pursue a BSN will do so with the initial intent to complete the program of study.

The study population is drawn from a convenience sample of students of RNBS completion online programs, thus limiting generalizability of the results. This study is limited to the survey of students from only a few RNBS completion online programs and may not represent all four year institutions.

Definition of Terms

Several terms are associated with this study. The following terms are defined to convey the meaning and operational definition.

Persistence: Persistence in online learning is the extent to which the student overcomes challenges, making the decision to continue to work toward goals. This decision is influenced by social and environmental variables, whereby there is a continual weighing of the emotional, fiscal, and social costs and benefits (Strevy, 2007).

Adult students: Typically "employees who study" tend to be financially independent, work part time or full time, have dependents, and juggle many responsibilities with school (Chao, DeRocco, & Flynn, 2007).

RNBS completion online programs: Educational programs, which provide a bridge for diploma and ADN-prepared nurses to build on initial nursing preparation, and culminate in BSN preparation. Education is 100% Web-based or Internet-based (AACN, 2007).

Online learning: Knowledge or skill acquired by instruction or study via Web-based or Internet-based technologies. (Institute for Higher Education Policy, 2000; Merriam-Webster, 2007).

Technology self-efficacy: The belief in one's capabilities to organize and execute technology actions which includes information retrieval, information provision, communication, and Internet technology (Bandura, 1986; Eachus & Cassidy, 2006).

Goal orientation: Student motivation for working toward goals ie: intrinsic motivation whereby there is a focus on learning and mastery, or extrinsic motivation whereby there is a focus on grades and approval from others (Pintrich, Smith, Garcia, & McKeachie, 1993).

Goal Commitment: The level of dedication to completing the program of study (Tinto, 1975).

Learned resourcefulness: An acquired set of behaviors and skills, mostly cognitive, by which a person self-regulates internal responses that interfere with the smooth execution of a desired behavior (Rosenbaum, 1990).

Cost-benefit appraisal: The continual process of weighing the expected emotional, fiscal, and social costs against the expected benefits in order to choose the best option (Jeffreys, 2007; Kember, 1989; Strevy, 2007; Tinto, 1975).

Organization of the Study

Chapter One provides an introduction and background to the study. Purposes of this chapter are to establish the importance of educational motivation and academic context in affecting student intent to persist in RNBS completion online programs. This chapter provides the theoretical framework for the study, explains the purpose and the

significance of the study, and outlines research questions. Chapter One also identifies the assumptions, limitations, and definition of terms associated with the study.

Chapter Two is a review of the literature related to the study's theoretical model beginning with concept analysis of persistence. Included is a review of student motivation variables of domain specific self-efficacy, goal orientation and commitment and learned resourcefulness, along with a review of educational context variables of satisfaction with institution and faculty. Chapter Three presents the methodology used to conduct the study and describes the development of the Learned Resourcefulness and Student Online Academic Persistence questionnaire. Chapter Four reports the results beginning with sample demographics, moving to instrument reliability/validity, culminating in results addressing the research questions. Chapter Five provides discussion of the findings and conclusions, implications, limitations and recommendations.

CHAPTER TWO

Literature Review

This literature review encompasses both the theoretical and empirical bases for the proposed research study. The review includes four major categories of literature related to the following: (a) initial concept analysis of persistence, (b) motivation in relation to learning, (c) educational context and, (d) decision-making focusing on continual cost-benefit appraisal. Based on this review, the chapter concludes with suggestions for addressing the gaps in research related to persistence of the student in RNBS completion online programs.

Concept Analysis - Persistence

Conceptual and operational definitions for persistence and enrollment patterns have been noticeably absent in most of the literature. Without adequate concept analysis leading to effective definitions, measurement of these variables will remain inconsistent. An integrative diversity approach is taken in this exploration of persistence, whereby the following assumptions are made; 1) person and environment are complex and results in the integration of diverse processes, and 2) the whole is greater than the sum of the parts (Schwartz & Russek, 1997). The literature selected for this initial analysis of persistence represents several fields of study and informs through multiple ways of knowing. Literature excluded from this particular analysis is discussed, along with rationale for this exclusion.

The databases explored for this concept include CINAHL, Psych Info, MedLine, Health Business, InfoTrac One File, ERIC, and Digital Dissertations. Literature on the concept of persistence is found primarily within the disciplines of psychology, education

and medicine. The literature includes human behavior studies related to persistence of desirable and pathological behaviors and medical literature addressing the persistence of pathological, virulent organisms. Six sources are selected for this analysis with a brief discussion of rationale for the selection of each.

In Berge and Huang (2004), the history of student persistence in higher education is reviewed, along with a proposed model for persistence in e-learning. This paper was selected based on the value of past knowledge informing future practice (Green, 2000). The exploration of persistence within this particular population was also of interest.

A study which examined the influence of minority group culture on persistence in higher education (Jenkins, Harburg, WeissBerg, & Donnelly 2004) is selected for the diverse population explored (Obiakor, 2001). The data for this study were collected in two waves, from 1985 to 1988, which demonstrates persistence from a longitudinal perspective. The assumption is that persistence can best be studied by examining behavior over time (Zeegers, 2001).

Two studies are selected for their review of persistence from outside the fields of nursing and e-learning. Job persistence is explored in a study by Wanberg, Glomb, Song, and Sorenson (2005). This study approached persistence as a "purposive, volitional, self-managed, and dynamic pattern of activity" (p. 411). Mau (2003) viewed persistence in science and engineering career aspirations among a diverse population of 8th graders to determine factors present in this population

The relationship of personality and persistence in higher education was explored by Lufi, Parish-Plass, and Cohen (2003). Tools such as a persistence scale and personal factor indices were utilized in this study. Specific to distance education, Parker (2003)

examined persistence, focusing on student locus of control. An assumption made is that personal attributes can be intervening variables which affect the persistence of an individual (Ryan, 2004).

Studies not included in this review are dissertations such as Houle (2004) and literature regarding pathological forms of persistence. Dissertations are a vast source of knowledge and will be explored at a later date. While pathological persistence may inform, a preference is to focus on the positive aspects of persistence for this initial concept analysis work.

Exploring persistence through a variety of sources and disciplines allows this concept to be approached from a diverse, integrative perspective. Through this perspective a variety of approaches to the study of the concept of persistence is made which will result in a better understanding of this concept.

Attributes of persistence

Concept analysis is a methodology by which a concept is examined and boundaries are established to assist in future work toward defining and refining the explanation of a concept. This definition can then be used as tentative criteria to examine the phenomenon with the eventual goal of developing planned interventions. For the concept analysis of persistence, Walker and Avant's (1988) steps in theory construction are used. These steps include the identification of attributes, antecedents and consequences of the concept.

Attributes are qualities or properties of the concept which are ever present. Attributes are essential, not accidental. These characteristics appear repeatedly in the literature (Walker & Avant, 1988). Attributes of persistence found in this literature set include two main categories; the decision to continue participation in the learning event, and a

continual cost/benefit analysis of social, organizational, economical and psychological factors. Some of the descriptors used in these attributes include perseverance, effort, focus, adjustment, engagement and achieving.

Antecedents are predictors that influence, and are typically found to precede the concept (Walker & Avant, 1988). These antecedents set the stage for the concept to occur. Many antecedents to persistence were identified in this literature set. For purposes of clarity, the antecedents were placed into four categories; environmental, behavioral, cognitive, and affective. The environmental antecedents include: support from significant others, family influences, positive interactions with teachers, teachers' experience and expectations, socio-economic status, social adjustment commitment to institution, and congruency and integration between student and social system of institution (Berge & Huang, 2004; Lufi, Parish-Plass, & Cohen, 2003; Mau, 2003; Parker, 2003; Wanberg, Glomb, Song, & Sorenson, 2005).

The behavioral antecedents include: high GPA, academic achievement, maximizing potential, past persistence patterns, aspirations, intent, commitment, self management, effort, overcoming barriers, and taking responsibility. Cognitive antecedents include: internal locus of control, academic self confidence, expectations, adaptive responses, remaining positive, and networking. Affective antecedents include: perceived opportunity, value of education, enjoyment of learning, emotional stability, desire, ability to continue behavior while concurrently experiencing uncertainty and discouragement, and high levels of coping and adjustment (Berge & Huang, 2004; Lufi, Parish-Plass, & Cohen, 2003; Mau, 2003; Parker, 2003; Wanberg, Glomb, Song, & Sorenson, 2005).

Consequences follow the occurrence of the concept (Walker & Avant, 1988), and are circumstances which result from the concept. Consequences identified in this literature set include; academic success, achieving objectives, course or program completion, surviving and prospering in the socio-cultural context.

Contextual influences

Several different contexts are represented in the selected literature search including persistence in higher education, in distance education, during unemployment, and in career aspirations. Conditions under which persistence exists are multifaceted and include sociological, organizational, economical and psychological perspectives (Berge & Huang, 2004). Some of these conditions include positive learning experiences, integration into academia, social support, student resources, and expectations. Other conditions include internal locus of control (Parker, 2003), academic proficiency (Lufi, Parish-Plass, & Cohen, 2003; Mau, 2003), self-efficacy (Mau, 2003), cultural influences (Jenkins, 2004), and intensity and intentions (Wanberg, Glomb, Song, & Sorenson, 2005).

Conditions in which persistence waxes and wanes are also reviewed in these articles. In Wanberg, Glomb, Song, and Sorenson (2005) persistence in job search intensity is viewed as a dynamic process. When certain personal tendencies were present, the proposition was that job-search intensity could change. Personal characteristics which inhibited persistence in job search intensity included a tendency to become discouraged, a change in goals, uncertainty about next steps, and a lack of support from significant others. Reviewing literature on the Theory of Planned Behavior, implications involving the negative perceptions of the job search resulted in a lack of persistence.

Frankolo (2001) as reported in Berge and Huang (2004) explored the reasons for corporate e-learning attrition. These reasons included lack of time, lack of management oversight, lack/problem of motivation, lack of support, individual learning preference, poorly designed course and substandard/inexperienced instructor. Unrealistic expectations and anxiety were identified by Lufi, Parish-Plass, and Cohen (2003) as contexts in which persistence can cease in higher education. In a study of the influence of minority group culture models, Jenkins (2004) found that Black students whose fathers were born in the United States were much less persistent (36%) than Black students whose fathers were born outside the of the United States (60%). The thought is that first- and second-generation students are still committed to the belief that hard work within the educational structure will pay off. Mau (2003) reported Hispanic students were less likely than White students to retain career aspirations in science and engineering, after holding other factors constant. A perception that efforts are impeded by adverse environmental factors, such as inadequate support systems or an intimidating environment, tended to negatively impact persistence. Parker (2003) identified students who reported internal locus of control were more likely to complete the online course than students who reported external locus of control.

Physiological vs. Psychological

Several articles in the selected literature set included a psychological perspective of persistence. Other articles included cultural, socio-economical, and environmental perspectives of persistence. Wanberg, Glomb, Song, and Sorenson (2005) viewed individual behavior of job-search persistence focusing on intensity and intentions of the participants. Lufi, Parish-Plass, and Cohen (2003) studied personality variables with

regard to persistence in higher education, and Parker (2003) explored locus of control in predicting academic persistence in distance education. Mau (2003) examined the psychological/behavioral aspects (self-concept, academic achievement) and also viewed parental involvement and socioeconomic status when studying student persistence in science and engineering career aspirations. Jenkins (2004) focused on cultural differences which influence persistence in college and Berge and Huang (2004) explored psychological, socio-economical, and environmental aspects of student retention in higher education.

Growth vs. Stability Characteristics

Persistence is a growth concept as more variables are explored in the attempt to adequately predict persistence. While some variables appear repeatedly in the literature; continued behavior, decision-making to continue, and continual cost/benefit analysis, occasional outliers such as GPA (is sometimes, but not always positively correlated), and locus of control are present. Factors other than personal characteristics are also gaining attention (such as environment, socio-economic factors). Thus persistence appears to be a concept in which growth occurs.

Situational vs. Dispositional

Persistence seems to be both a state and a trait. As in the example of a persistent state of vegetation, some behaviors continue to occur over time. In other instances, the trait of persistence seems to be influenced by a variety of factors which either support or inhibit this trait.

Other Assumptions

Other assumptions include the idea that persistence is a desired state or trait and that persistence leads to success. Neither of these assumptions is always the case. One can persist, but still fail to achieve personal goals, whether those goals are to complete a course, understand the material and concepts presented, and/or achieve satisfaction.

Adequacy of Definitions

Adequacy of the definitions of persistence in the selected literature varied from an adequate definition in one article to incomplete/implied definitions in two of the articles. For purposes of this evaluation of adequacy, the rules of definitions as described in Hinds (1984) were used. The definition of job-search persistence in Wanberg, Glomb, Song, and Sorenson (2005) meets all of Hinds criteria for an adequate definition. This definition includes the essential attribute; 'intensity continues', is not circular, is stated in positive terms, does not use obscure or figurative language, reflects a continuum; 'extent to which', and contains reference to the context of job search. The definitions in three of the articles (Berge & Huang, 2004; Jenkins, 2004; Lufi, Parish-Plass, & Cohen, 2003) meet Hinds criteria with one exception; a continuum is not expressed in any of these definitions. In the Mau (2003) and Parker (2003) articles on persistence in career aspirations and persistence in distance education, respectively, a continuum is not reflected and the definitions are not delineated, but are implied within the text.

Synthesis of Findings

The literature remains incomplete in efforts to analyze the concept of persistence. Persistence seems to be a complex, multifaceted concept. Jenkins (2004) concludes that influences involving something other than ability seem to account for persistence in

higher education. Lufi, Parish-Plass, and Cohen (2003) report that the relationship between persistence and grades is not simple, and Berge and Huang (2004) suggest a holistic perspective be taken with regard to e-learners, including the psychological/behavioral attributes of the individual, socio-economic factors and environmental factors which include the influence of the institution of higher learning on the individual's decision to persist. The consequences in all articles reviewed included student/academic success and/or continued behavior over time.

Empirical data resulting from the selected literature set included minority group culture models influence persistence in college (Jenkins, 2004), and locus of control influences persistence in distance educations students (Parker, 2003). Mau (2003) found that men were more likely to persist in science and engineering career aspirations than women, and that academic proficiency and math self-efficacy were strong predictors of persistence in these students. Results of the study by Wanberg, Glomb, Song, and Sorenson (2005) included job-search intentions, self-efficacy and intensity predicted reemployment of previously unemployed adults.

Persistence Defined- Strevy definition

A clear, comprehensive definition of persistence in online learning is needed as a basis for model development and subsequent research related to this concept. The Strevy definition is as follows:

> Persistence in online learning is the extent to which the student overcomes challenges, making the decision to continue to work toward goals. This decision is influenced by social and environmental variables, whereby there is a continual weighing of the emotional, fiscal, and social costs and benefits.

This definition meets Hinds (1984) criteria for adequacy of definition. This definition contains essential attributes; ‘making the decision to continue to work toward goals’, is not circular, is stated in positive terms, is not expressed in obscure or figurative language, reflects a continuum; ‘the extent to which’; and contains reference to the context of online learning.

Major Relationships across Literature Set

Twelve key relational statements are examined from this data set. Of these twelve statements, 10 are associational and two include mediating variables diagrammed as in Baron and Kenny (1986).

Associational

Student’s goals and commitments, academic and social institutional experiences and integration, when positive, are associated with retention. When these variables are negative, they are associated with drop-out (Berge & Huang, 2004). Persisters in higher education are associated with a higher GPA. Non-persisters in higher education are associated with a lower GPA (Lufi, Parish-Plass, & Cohen, 2003). Internal locus of control is positively associated with persistence in an online course, while external locus of control is negatively association (Parker, 2003).

Some relationships held only for specific populations. These populations included unemployed adults (Wanberg, Glomb, Song, & Sorenson, 2005), Black college students (Jenkins, Harburg, WeissBerg, & Donnelly, 2004), secondary school students (Mau, 2003) and online students (Parker, 2003). Student locus of control scores move toward internality over the course of a semester in students enrolled in online courses while

changes of locus of control scores by students enrolled in traditional sections of courses were not significant (Parker, 2003).

Other relationships held during specific phases in the experience. The relationship between student goals and commitments, academic and social institutional experiences and integration, voluntary decision to persist utilizing a cost/benefit analysis of social, organizational, economical and psychological factors (Berge & Huang, 2004) is observed throughout the educational experience. The relationship between GPA and persistence occurs at the end of each course (Lufi, Parish-Plass, & Cohen, 2003).

Mediating Variables

In the chosen literature set there are two articles which include mediating variables. The first mediating variable is found in student persistence. An individual student is involved in a continual cost/benefit analysis of social, organizational, economical and psychological factors. This cost/benefit analysis mediates the decision to persist or drop (Berge & Huang, 2004). The second mediating variable is noted in this literature set is job-search persistence. Job search intentions mediate the relationship between subjective norms and job-search self-efficacy in the prediction of job search intensity (Wanberg, Glomb, Song, & Sorenson, 2005).

Empirical/Theoretical Support

Within the selected literature set, five of the articles were empirical in nature and one article was a theoretical discussion. The empirical studies include an examination of persistence at the end of the college program (Jenkins, Harburg, WeissBerg, & Donnelly, 2004; Lufi, Parish-Plass, & Cohen, 2003) and at the end of a college course (Parker, 2003). Other empirical studies include a long-term project involving persistence in

science and engineering career aspirations (Mau, 2003) and a repeated measures study which consisted of data collected in 10 waves. This repeated measures study involved job-search intensity among unemployed adults (Wanberg, Glomb, Song, & Sorenson, 2005). An article discussing a model of persistence (Berge & Huang, 2004) which proposes this model for sustainable online student retention is developed after review of several other models and various empirical studies including a variety of variables. A concept analysis is not included in this literature, and there is no evidence of empirical testing of this model (Berge & Huang, 2004). No testing of the model has been undertaken by the author to date (Personal Communication, Zane Berge, June 17th, 2005).

Toward Theory Development

In moving toward theory development, further clarification of the concept of persistence is needed. Initial concept analysis of this data set reveals that the study of this concept is in the early stages, as evidenced by a number of associational relationships among key statements, but little identification of mediating and moderating variables. The literature set needs to be expanded to include a comprehensive view of the current state of clarification for this concept. In addition to studying the concept of persistence, an additional concept analysis of decision-making will also help to move toward theory development, progressing to the identification of the process of cost/benefit analysis and how this might impact persistence.

In conclusion, the concept analysis of persistence is in the early stages. As this concept becomes better understood, theory development and subsequent testing can occur which will help in understanding persistence specifically in the adult student. This testing can lead to interventions which will enhance and support student success.

Motivation

Motivation, as it relates to learning, is complex and multidimensional. Encompassing a wide variety of variables, motivation in learning can include the interactions between the teacher and student, commitment, and the perceptions, rationale and resourcefulness of the student. Motivation can be viewed as a function of individuals' thoughts (Bandura, 2001) and as an instinct, need, drive, or incentive as examined by Freud (1915) and Maslow (1954). Motivation has been described as manifesting as a pattern which begins with energy, moves to volition, direction, involvement and completion (Wldokowski, 1986), and includes the intensity and persistence of behavior (Geen, 1995; Wendt, 1955).

Adopting a social cognitive perspective on the nature of motivation (Bandura, 1986), much of the current theory and research focuses on individual beliefs, values, and goals as the primary influences of behavior (Eccles & Wigfield, 2002). These primary influences of behavior relate to an individual's choices about which tasks and activities to undertake, the intensity of effort, and subsequent performance (Eccles, Wigfield, & Schiefele, 1998). The central constructs of interest include a) self-efficacy, b) goals, c) intrinsic motivation, and d) the value of achievement (Eccles, Wigfield, & Schiefele, 1998; Pintrich, 2003). In viewing the constructs of interest, two assumptions of social cognitive models of motivation include; 1) motivation is a dynamic, multifaceted phenomenon and, 2) motivation is not a stable trait, rather motivation is situated, contextual, and domain-specific (Duncan & McKeachie, 2005; Linnebrink & Pintrich, 2002).

A focus on achievement motivation, which refers specifically to motivation relevant to performance on tasks in which standards of excellence are operative (Wigfield, et al..,

2006) is of interest. Also of interest is the notion of why individuals engage in a variety of achievement-related behaviors ie: why do some individuals persist even when faced with challenges (Wigfield & Eccles, 2001).

Constructs of motivation can be classified into three categories (Pintrich & DeGroot, 1990; Wigfield & Eccles, 2001). The first category is described as the ability to accomplish a task and includes the construct of self-efficacy. The second category is described as reasons or purposes for engaging in a task and includes the constructs of goal orientation and goal commitment. The third category refers to techniques and strategies for accomplishing a task and includes the construct of learned resourcefulness.

Perceptions of Ability to Accomplish a Task: Can I Do This?

Self-efficacy is the personal belief that desired effects can be produced as a result of actions undertaken (Bandura, 1992). These beliefs held by the individual have an impact on development and adaptation. Self-efficacy is domain dependent. An individual may exhibit high levels of self-efficacy in one domain and simultaneously exhibit low levels of self-efficacy in another domain. For that reason, it is recommended that scales which help to determine an individual's self-efficacy be specific to the domain under consideration (Bandura, 1986).

Student self-efficacy and related concepts have been found to be significant predictors of academic success. Gore, Leuwerke, and Turley (2006) identified that academic performance and persistence were related to student's college self-efficacy beliefs, only when self-efficacy was measured at the end of the first semester. Freshmen arrive on campus with relatively high college self-efficacy beliefs. Entering first semester freshmen may have unrealistic beliefs about their ability to engage in college-related

activities; their efficacy beliefs become more realistic as they acquire experience. Students' confidence in their abilities to engage in various college-related activities might be related to their outcome expectations and intentions to engage in those behaviors.

Technology Self-Efficacy

Student efficacy beliefs, with regard to technology, may be related to academic success of the student who participates in online learning. Derived from social cognitive theory (Bandura, 1986), self-efficacy refers to a person's "judgement of their capabilities to organize and execute courses of action required to attain designated types of performances." Technology self-efficacy is defined as the belief in one's capabilities to organize and execute technology actions which include information retrieval, information provision, communication, and Internet technology (Bandura, 1986; Eachus & Cassidy, 2006).

Over the past two decades, a number of computer self-efficacy questionnaires have been developed (Karsten & Roth, 1998; Marakas, Yi, & Johnson, 1998; Murphy, Coover, & Owen, 1989). Eachus and Cassidy (2002) developed the Computer Self-Efficacy Scale (CUSE) to evaluate individual's confidence in using the computer. This scale was later extended into the Web Users Self-Efficacy Scale (WUSE) to include Web-based efficacy and to provide for a broader utility (Eachus & Cassidy, 2006). This questionnaire is comprised of 40 items measured on a 5-point Likert scale, generated from four domains of Internet self-efficacy, which included; a) Information Retrieval, b) Information Provision, c) Communication, and d) Internet Technology. Factor analysis of the WUSE did not produce a convincing four factor solution, so current recommendation is that the construct be treated as unidimensional.

Specific to technology, positive self-efficacy has been related to expectations of success, willingness to choose computer-based activities and perseverance when difficulties were encountered (Holcomb, Brown, Kulikowhich, & Zheng, 2003). Self-efficacy has been shown to have a positive relationship to outcome expectations and use (Compeau, Higgins, & Huff, 1999; Compeau & Higgins, 1995; Oliver & Shapiro, 1993), and a negative relationship to anxiety (Compeau, Higgins, & Huff, 1999). Efficient computer and Internet literacy was found to be a key factor in success of online learners in an 8-week accelerated format (Mandernach, Donnelli, & Dailey-Herbert, 2006).

Other studies have not found technology self-efficacy to be related to student success. DeTure (2004) provides evidence that online technology self-efficacy did not predict student success, as defined by GPA. In this study, the more field independent students tended to have higher online technology self-efficacy. In another study of business and accounting students there were no gender differences, and no significant college level differences in technology self-efficacy, self-regulation or distance education self-efficacy (Holcomb, King, & Brown, 2004).

With the ever increasing growth of distance technology in nursing education (AACN, 1999), over 630 RNBS completion programs with more than 360 programs that have online components were reported in 2008 (AACN, 2008). Students often report entering online education for the convenience and flexibility (Ali, Hodson-Carlton & Ryan, 2004; Bentley, Cook, Davis, Murphy, & Berding, 2003; Billings, Connors, & Skiba, 2001; Billings & Halstead, 2009; Jairath & Stair, 2004; Theile, 2003) but with this growth in technology, not all students have experience in formal technology training (Maag, 2006; Vuorela & Nummenmaa, 2004). Technology is being incorporated in

nursing education (Simpson, 2003) but the lack of computer skills are among the reasons nurses withdraw from online learning (Atack, 2002).

Students experience a wide range of emotions while using online learning, especially those students with low computer self-efficacy (Vuorela & Nummenmaa, 2004). Pre-course feeling of fear (Conrad, 2002b) and intra-course frustration with technical problems (Ali, Hodson-Carlton & Ryan, 2004) and social isolation (Ali, Hodson-Carlton, & Ryan, 2004; Theile, 2003) have been reported.

There is evidence that technology self-efficacy improves over time (Bentley, Cook, Davis, Murphy, & Berding, 2003; Billings, Connors, & Skiba, 2001; Vuorela, 2004), and online students become more independent and self disciplined by the end of the semester (Theile, 2003). One study was found which did not support these findings (Holcomb, King, & Brown, 2004). Learners who are highly motivated, self-disciplined and "embrace the use of innovation and technology" tend to acclimate better to the online learning environment (Billings, Connors, & Skiba, 2001).

Reasons or Purposes for Engaging in a Task: Do I Want to do This, and Why?

Motivation influences choice, persistence, and performance (Wigfield & Eccles, 2000). Motivation theorists attempt to explain a person's choice of achievement tasks, persistence on those tasks, vigor in carrying them out, and performance on those tasks (Wigfield & Eccles, 2000). Students demonstrate one of two basic orientations toward their studies which is either a learning orientation, where the student is focused on working to learn, or a grade orientation, where the student is focused on working for the grade (Janzow & Eison, 1990). Referred to as achievement goal orientation (Ames & Archer, 1987; Dweck & Leggett, 1988), this general motivation theory assumes that the

type of goal toward which the student is working has a tremendous impact on that pursuit of the student toward that goal. The goal orientation of an individual has been described as typically intrinsic motivation or extrinsic motivation.

Goal Orientation

Intrinsic motivational intention is the goal orientation where there is a focus on learning and mastery (Duncan & McKeachie, 2005), and is defined by three components: 1) preference for hard or challenging tasks, 2) learning that is driven by curiosity or interest, and 3) striving to competence and mastery (Gottfried, Fleming, & Gottfried, 2001). The preference for challenging tasks is considered the most central idea of intrinsic motivation. Intrinsic motivation is associated with a deeper approach defined as the ability to relate ideas and use evidence in the construct of arguments, whereas extrinsic motivation is associated with more of a surface approach (Ramsden & Entwistle, 1981).

Extrinsic motivation is the goal orientation where focus is on grades and approval from others (Duncan & McKeachie, 2005), and refers to motivation to engage in an activity as a means to an end (Pintrich & Schunk, 2002). While goal orientation has been measured and treated as either/or, intrinsic/extrinsic, growing discussion suggests that the distinction between intrinsic and extrinsic motivation should be treated as a continuum as they often both operate in different situations (Wigfield, et al., 2006).

Using a social-cognitive view of motivation and learning strategies which assumes that motivation and learning strategies of the student are dynamic and contextually bound (Duncan & McKeachie, 2005), the model of College Student Motivation and Self-Regulated Learning was developed. Subsequent research resulted in the development of

the Motivated Strategies for Learning Questionnaire (MSLQ) which is an 81-item, self-reported instrument designed to assess motivational orientation and use of learning strategies by college students (Pintrich, Smith, Garcia, & McKeachie, 1991). Consisting of 15 subscales designed to be used together or to be used in a singular fashion (Duncan & McKeachie, 2005), goal orientation (intrinsic/extrinsic) is measured via one of the subscales of the MSLQ. The eight items of this subscale are scored on a 7-point scale from 1 (not at all true of me) to 7 (very true of me).

One of the more frequent uses of the MSLQ is in the evaluation of effects of courses on students. The MSLQ, or subscales of the MSLQ, has been used in research in a variety of contexts including Internet based, online, and computer based instruction (Eom & Reiser, 2000; Hancock, Bray, & Nason, 2002; Hargis, 2002; Miltiadou & Savenye, 2003; Niemi, Nevgi, & Virtanen, 2003), and utilized in multiple populations including African Americans undergraduates (Campbell, 2001; Green, 2001), female undergraduate engineering majors (Vogt, 2003), nursing students (Seibert, 2002), and gifted high school students (Duncan & McKeachie, 2005; Hong & Aqui, 2004; Neber & Heller, 2002).

There is evidence that high levels of intrinsic motivation facilitates a positive emotional experience and wellbeing (Ryan & Deci, 2000), self esteem (Ryan, Connell, & Deci, 1985), high academic achievement (Cordova & Lepper, 1996; Pintrich, 2000a, 2000b), self-regulation and persistence (Cordova & Lepper, 1996; Pelletier, Fortier, Pintrich & Schrauben, 1992; Schiefele & Csikszentmihalyi, 1994; Vallerand, & Briere, 2001). Students who use more of the deep-processing and attempt to control their cognition and behavior through metacognition and self-regulation strategies are likely to do better in course work compared with students who have less adaptive motivational

beliefs (Duncan & McKeachie, 2005; Pintrich & Garcia, 1991; Rosenbaum, 1990). It has been suggested that the development of an intrinsic motivational orientation should be fostered in the classroom (Brophy, 1999; Dewey, 1913; Lepper & Chiabay, 1985). Further evidence is provided that intrinsic framing enhances deep processing, test performance, and persistence (Vansteenkiste, Lens, & Deci, 2006).

Goal Commitment

Goal commitment, defined as the level of dedication to completing the program of study (Tinto, 1975), includes the amount of importance ascribed to obtaining a degree (Bean & Metzner, 1985) and has been found to be positively related to persistence in college (Braxton & Brier, 1989; Pascarella & Terenzini, 1980, 1983; Tinto, 1975).

Tinto (1975) suggests that when controlling for a student's ability to succeed, the student's commitment to the goal of college completion is the most influential in determining college persistence. A student will have changing commitments to the goal of college completion, which is related to the student's integration into academia and the social aspects of college life. This type of integration may not be as important for the adult student, particularly studying online, where life of the student evolves around the environment outside of academia, centering on life circumstances, family life and work-related issues.

Goal commitment of online students, who are often employed fulltime with family commitments, will be influenced by the attitude of family, employer and co-workers (Kember, 1989). While some employers and co-workers may be highly supportive of the student, other employers may even be hostile to the student's efforts and family and coworkers may not value the decision to return to school.

The adult student's changing commitment to the goal of college completion is likely related to personal, family and work life outside of the collegiate setting. Among graduate nursing online students, the most common explanation provided by students for withdrawal from program was personal unexpected life events such as health problems of the student or family member (Perry, Boman, Care, Edwards, & Park, 2008), family crisis/responsibilities (Jeffreys, 2007b), and work commitments which required an increase in time requirements or an increase in workload (Jeffreys, 2007b; Perry, Boman, Care, Edwards, & Park, 2008). RNs returning for BSN degrees who are younger and/or attend school on a part-time basis were less committed and more likely to depart early (Dowell, 2000). Career aspirations can also change making continued education irrelevant (Perry, Boman, Care, Edwards, & Park, 2008). Commitment was one of the five primary factors which predicted ASN student success in a Nursing Fundamentals course along with reasoning, learning style, analytic, and anxiety (Hopkins, 2008).

RNBS students may be encouraged to complete their degree by employers who are interested in increasing the percentage of BSN- prepared nurses in their facilities. Clinical ladder programs, financial support, and other workplace incentives may contribute to the level of extrinsic motivation of the student and support the student in goal commitment.

Techniques and Strategies for Accomplishing a Task:

What do I Need to Do to Succeed?

The use or lack of techniques and strategies students use to accomplish their tasks can affect their success. Some of the techniques and strategies students use to accomplish a task include; 1) cognitive strategies such as rehearsal, elaboration, organization, critical thinking; 2) metacognitive strategies such as planning, monitoring, and self regulation,

and; 3) resource management, such as the management of time, effort, help-seeking, and study environment (Pintrich, Smith, Garcia, & McKeachie, 1993).

Learned Resourcefulness

Learned resourcefulness is an acquired set of behaviors and skills, mostly cognitive, by which a person self-regulates internal responses that interfere with the smooth execution of a desired behavior (Rosenbaum, 1983). This term evolved from early work by Seligman (1975) where the concept of learned helplessness was described. Later, Meichenbaum (1977) described cognitive-behavioral interventions designed to enhance a repertoire of skills called learned resourcefulness, or what Bandura (1977) has called self-efficacy. This set of skills and behaviors are acquired throughout life, which enable the individual to cope independently with stressful situations (Rosenbaum, 1990). Learned resourcefulness theory suggests that individuals high in resourcefulness can minimize the negative effect of stress on their performance, therefore, they can do better than less resourceful individuals under stressful conditions (Rosenbaum, 1990).

Students high in resourcefulness skills are most likely to persist, try hard, and achieve their goals despite the difficulties they encounter (Kennett, 1994). These resourceful individuals are most likely to respond assertively to frustration, be spurred into action by difficulties and the experience of failure, have more task-oriented thoughts, attribute success to their own effort and abilities, and produce more positive self-evaluative statements (Rosenbaum & Ben-Ari, 1985).

Resourcefulness, in the form of positive self-talk and delay in gratification, has been identified as a moderator of success. Lotkowski, Robbins, and Noeth (2004) report academic self-confidence and academic goals are positively related to retention.

Achievement motivation and general self-concept demonstrated a weak relationship. Learned resourcefulness was found helpful in predicting GPA, and moderates academic success. Akgun and Ciarrochi (2003) demonstrated there were no significant relationships between stress, resourcefulness, and gender, no direct correlation between GPA and resourcefulness, and that learned resourcefulness, academic stress, and gender act as independent variables in predicting GPA. Higher academic stress was associated with lower grades, qualified by a significant interaction with resourcefulness. Academic success was negatively associated with academic performance. This negative association was moderated by learned resourcefulness.

Designed to measure learned resourcefulness, the Self-Control Schedule (SCS; Rosenbaum, 1980) is a self-reporting, 36 item questionnaire using a six point Likert-type scale. The three dimensions of resourcefulness measured by the SCS include self-control, self-direction, and self-efficacy. These dimensions are presumed to be interactive and to have reciprocal effects on one another (Zauszniewski, 1995). Higher scores reflect increased levels of learned resourcefulness. The SCS, which has documented evidence of reliability and validity (Redden, Tucker, & Young, 1983; Richards, 1985; Rosenbaum, 1980; 1988), has been examined in relationship to coping or the adoption of and adherence to health behaviors in clients with diabetes, hypertension, epilepsy, migraine headaches, and chronic pain (Zauszniewski, 1995) and in relation to co-operative learning in the collegiate setting (Kennett & Keefer, 2006; Kennett & Stedwill, 1996). There is evidence for internal consistency reliability of the SCS among RNBS completion online students, resulting in a Cronbach alpha of .86 (Strevy, 2007).

While adults use both traditional self-regulation learning strategies and adapted strategies for planning, organizing, self-reflection and help-seeking which are specific to the online classroom (Whipp & Chiarelli, 2004) sometimes students intentions and actual behaviors conflict. Students may intend to prioritize and choose learning over non-learning activities, though they often do not choose to engage in activities related to goal directedness, self-regulation and volition (Ponton, Derrick, & Carr, 2005).

Adult students find the transition into further education stressful. Practical difficulties of returning to school, in addition to family and work commitments (Steele, Lauder, Caerchione, & Anastasi, 2005), program demands related to pace of the program and the amount of information to be mastered (Hegge & Larson, 2008), and the stress of financial concerns (Hegge & Larson, 2008; Ofori & Charlton, 2002) can be overwhelming to the returning student.

Mature students report the use of help seeking (Ofori & Charlton, 2002; Whipp, 2004) monitoring, and self-reflection to adapt to Web-based learning (Whipp, 2004), develop support networks (Hegge & Larson, 2008; Steele, Lauder, Caerchione, & Anastasi, 2005), prioritize and organize (Steele, Lauder, Caerchione, & Anastasi, 2005), and develop positive expectations and attitudes for the future (Hegge & Larson, 2008; Steele, Lauder, Caerchione, & Anastasi, 2005). Students also plan for and accept stressors, suppressing competitive activities (Steele, Lauder, Caerchione, & Anastasi, 2005). Successful part-time online students have been found to adopt three mechanisms of; sacrifice, support, and negotiation of arrangements, report that family is the most important domain, and adaptation in work responsibilities is minimal. Time spent on

education-related activities was made available by sacrificing social lives (Kember, 2005).

The motivation and learning of the student in the online learning environment is of particular interest as the expansion of this educational modality is occurring throughout the U.S. and abroad (Fusco & Ketcham, 2002). While motivational constructs have been studied in traditional educational environments, fewer studies have explored the significance of the constructs in the online educational environment (Miltiadou & Savenye, 2003).

Context

Tinto suggests (1975) that persistence can not be simplified by individual characteristics, but is also the outcome of interaction between the individual and the institution and faculty. The experiences of the student, both within and outside of the institution influence attitudes about education, and ultimately the decision to continue education (Bean & Metzner, 1985). These attitudes lead to intentions, which in turn lead to behavior (Fishbein & Ajzen, 1975). Attitudes toward educational experiences can affect the intent to continue.

Satisfaction with Institution

The idea of social fit, or role fit between the student and the academic institution can be a factor in a student's decision to stay or leave (Rootman, 1972). Voluntary withdrawal may be the result of the student not 'fitting in' with the normative climate of the institution. This lack of normative congruence (Spady, 1971) can affect the student's level of satisfaction. RN to BSN students report not fitting in with traditional students and having the need for support in home, work and academic settings (Lillibridge & Fox,

2005). Student perceptions appear to have a cumulative effect that lead students to question whether they should continue their education program (Last & Fulbrook, 2003). Factors that may result in student nurses leaving the institution include feelings of not being valued, unmet expectations, and stress.

While the primary reason nursing students choose online programs are convenience and access (Ali, 2004), the reality of returning to school may be underestimated. Adults returning to school experience adjustment and critical transition points which have been described as three stages; honeymoon, conflict, and reintegration (Utley-Smith, Phillips, & Turner, 2007).

Satisfaction with the institution was found to be a predictor of greater program progression (Bentley, Cook, Davis, Murphy, & Berding, 2003; Dowell, 2000; Strevy, 2007) and intent to stay (Metzner & Bean, 1987). Students who completed six or more courses in a program also report high levels of belongingness, educational quality, and satisfaction with the institution (Strevy, 2007). While the best predictors of drop-out were found to include hours enrolled, Metzner and Bean (1987) demonstrated additional predictors included utility, satisfaction, age and opportunity for transfer. DeRemer (2002) found that experiences within school were the primary causes that lead to an adult student's decision to drop-out of school. Academic advising was found to be the single most powerful predictor of satisfaction with the campus environment for students at four-year schools (National Survey of Student Engagement, 2005).

The classroom environment can also impact student satisfaction. Boshier (1973) found a significant drop-out among students in small classes consisting of less than nine students. These students reported feeling less satisfied with "friendliness" of lecturer and

with other students. There was less self/ideal congruence. Schulte (2002) reported that both cohort and non cohort students perceived the ethical climate as important to very important in the retention of students within an academic program. Cohort student perceptions of the ethical climate were significantly more positive than the non-cohort student perceptions for a student-to-faculty subscale and a student-to-student subscale. There was no significant difference between cohort and non-cohort student perceptions for the faculty to student subscale and the retention scale.

If an effort to explore the deep experience of online learning, an interpretive study was conducted among a cohort of adult learners enrolled in the first course of an undergraduate online program of adult education specialization (Conrad, 2002). Described was the development of an online community that was functional, time-driven, and carefully modulated where the students came together for a common purpose.

Adult students may have different belongingness needs than traditional students. While efforts primarily focus on the socialization of 1st year traditional students by offering a variety of campus activities and First Year Experience courses (Tinto, 1996), a "one size fits all" program may be less helpful to highly non-traditional students (Cavote & Kopera-Frye, 2007). A better understanding of the adult student of an RNBS completion program online and their intent to persist will help to inform educational practices of the institution and socialization needs of this population.

Satisfaction with Faculty

Researchers have stressed the importance of human relationships in the classroom. Core Competences specific to nurse educators developed by The National League for Nursing (NLN) include enthusiasm for facilitating learning, an interest in and respect for

students, and personal attributes (Halstead, 2007; NLN, 2005a). NLN calls for faculty to move toward student-centered education where learning environments are to be created which are characterized by collaboration, understanding, mutual trust, respect, equality, and acceptance of difference (NLN, 2005b).

There is evidence that positive teacher-student relationships and a sense of belonging are related to student satisfaction. Students who report greater perceived faculty support were more likely to persist throughout the nursing program (Shelton, 2007). Student perceptions of caring faculty include attributes such as feedback, timeliness, personal connection, clarity, empathy, multiple contact opportunities and commitment to learning (Sitzman & Leners, 2006). Teachers who are trusting, caring and respectful of students provide an educational climate where students engage and persist in learning tasks, and develop a sense of belonging and emotional comfort at school (Eccles, Wigfield, & Schiefele, 1998; Pascarella & Terenzini, 1980; Roeser & Eccles, 2000). Helpful attributes which faculty demonstrate were described as being with, reviewing, and approaching (Poorman, Webb, & Mastorovich, 2002).

Undergraduate nursing students report effective nursing instructors have positive attributes of showing concern for students, being flexible, helpful, fair, enthusiastic, and respectful (Berg & Lindseth, 2004). Faculty advisement and helpfulness have been found to be moderately supportive of non-traditional undergraduate students (Jeffreys, 2007), and especially important during the first semester, (Jeffreys, 2004) and for minority students (Bessent, 1997; Gardner, 2005; Stewart, 2005). Student perceptions of effective clinical instructors (Tang, Chou, & Chiang, 2005) resulted in four categories of qualities deemed important which were professional competence, interpersonal relationship,

personality characteristics and teaching ability which included providing feedback to students and treating students with respect.

While nursing students reported initial excitement about enrollment in their nursing program and positive relationships with faculty and classmates, students also report experiences of lack of support from faculty and nursing staff (Wells, 2007). Students provided descriptions which hinder to include attributes of uncaring, owning, hovering, and favoring (Poorman, Webb, & Mastorovich, 2002). There may also be a difference between full-time and part-time faculty. Students ranked part-time faculty as significantly less effective than full-time faculty in clinical education with regard to teaching ability, professional competence, evaluation practices, interpersonal relationships and personality traits (Allison-Jones & Hirt, 2004).

Nursing and health science students report that faculty expertise in the use of technology is a major factor influencing student satisfaction (Bloom & Hough, 2003). Faculty who did not know how to teach online, did not provide timely feedback, were not readily accessible, and did not demonstrate clear expectations, were considered a barrier to online learning (Muilenburg & Berge, 2005). Organization of course materials, clarity of instructor's writing, timeliness in providing feedback, and interest in whether students learned was significantly related to teacher effectiveness according to an exploratory study of student evaluation of teaching in Web-based courses among students enrolled in 259 online classes (Loveland, 2007).

Undergraduate nursing students report effective nursing instructors have a good level of knowledge and the ability to translate knowledge, and provide positive feedback (Berg & Lindseth, 2004). Immediacy behaviors and prior student and instructor experience

were significantly associated with student learning and satisfaction among students enrolled in Web-based MBA courses (Arbaugh, 2001). Immediacy behaviors were defined as instructor attempts to reduce the social distance between themselves and their students. Additional challenges related to online learning include learner apprehension regarding the modality and faculty level of understanding of the online environment. Learners report fear and anxiety when beginning first online course, judging instructors on clarity and completeness with which course details are presented (Conrad, 2002; Loveland, 2007), timeliness of response, and interest in whether students learn (Loveland, 2007). Faculty competence in course design of online RNBS courses (Bentley, 2003), and understanding of the role of the online educator as more of a guide or coach rather than the conveyer of information (Christianson, 2002), is important. Among the predictive factors determining student success in online classroom identified by faculty included time, initiative (commitment), computer self-efficacy, competence, personal issues (work, health, family), and instructional issues such as instructor feedback, supporting materials and support services (Mandernach, Donnelli, & Dailey-Herbert, 2006).

While student motivation in learning can impact commitment to goals and completion of a course of study, the context within which a student learns is also important. Student experiences and interactions with the institution and faculty can affect student satisfaction and intent to continue in the selected program of study.

Decision-making

The process of making decisions is complex. Decision-making and closely related concepts of choice and rational thought have been studied by a variety of disciplines

including the neuroscience of rational decision-making (De Martino, Kumaran, Seymour, & Dolan, 2006) and the role of emotion in decision-making (Bechara, 2003), the psychological perspective of impulsivity and habitual approach (Fischoff, Goitein, & Shapira, 1982), decision-making under risk (Kahneman & Tversky, 1984, 1981; Kivetz, 2003), and choice under uncertainty, risk, and ambiguity (Einhorn, 1985; Ellsberg, 1961).

The social influences on choice and persistence is the focus of the Expectancy-Value Model of Eccles (Eccles-Parsons, et al.., 1983). Eccles identifies "cost" as a critical component of value and conceptualized cost as the negative aspects of engaging in the task, further defined by the lost opportunities that result from making one choice rather than another (Wigfield & Eccles, 2000). Though not well studied at this point, Battle and Wigfield (2003) found that perceived psychological costs of attending graduate school were a negative predictor of college student's intention to enroll in graduate school.

Decision-making in the context of academic persistence was first addressed by Spady (1971) by extending the concepts of Balance theory (Heider, 1958) and Durkheim's theory of suicide (Durkheim, 1951). The premise was that the "decision to leave a particular social system" was the result of a "complex social process that includes family and previous educational background, academic potential, normative congruence, friendship support, intellectual development, grade performance, social integration, satisfaction, and institutional commitment" (Spady, 1971). This concept of decision-making in relation to academic persistence was later expanded by Tinto (1975) focusing on the costs and benefits associated with this type of decision-making.

Cost-benefit Appraisal

Cost-benefit appraisal, with regard to academic persistence, has been included in theoretical discussions of attrition and retention (Glogowska, Young, & Lockyer, 2007; Jeffreys, 2007; Kember, 1989; Tinto, 1975), but has not been operationalized. Borrowing from the financial theorists, Tinto (1975) expanded this concept by describing this complex decision-making process as cost-benefit appraisal, specifically targeting decisions regarding investments made in activities other than those with an academic focus. He theorized that individuals will direct their energies toward activities that are perceived to maximize the benefits over the costs in a given time period. Viewing this cost-benefit appraisal as level of commitment to the institution, Tinto proposed that a student will tend to withdraw when there is a perception that an alternative form of investment of time, energies and resources will results in greater benefits, relative to costs, over time than staying in college. Some of the student's perceived benefits could be academic attainment and personal satisfaction as opposed to costs such as financial burden, time issues, dissatisfiers and academic failures. He also suggests that students of varying characteristics have different perceptions of very similar situations. This cost-benefit appraisal was described as a continual weighing of the expected emotional, fiscal, and social costs against the expected benefits in order to choose the best option (Tinto, 1975).

Students with high levels of commitment might only reassess the cost-benefits of continuing education when a major change in circumstance occurs, such as job transfer or illness, while students who are in danger will frequently reassess. Kember (1989), in his proposed Longitudinal-Process Model of Drop-Out from Distance Education, suggests

that students determine if the costs associated with studying and continuing in their programs of education are worthwhile related to the perceived benefits. Described as a recycling loop, students will entertain a decision to drop-out a number of times over the span of a given course of study. While the reason students often cite for withdrawing are related to insufficient time to study, the suggestion is made that the student actually decides the benefits to spending time on study are costing too much in relationship to the advantages of allocating time to other activities (work, family, social activities).

Some challenges that students experience are easier to remedy, while other challenges are perceived as completely insurmountable. Sudden crisis in the student's life could prove to be the 'tipping' point in the decision to leave. In a qualitative study comprised of adult students enrolled in undergraduate degree completion programs in business, three precipitating events: school experiences, financial concerns and unexpected crises, were identified to ultimately lead to an adult student's decision to drop-out of school. Decisions to stay or leave may be influenced by environmental factors such as support, family situation, and employment responsibilities (Jeffreys, 2007). Variables were identified that were supportive or restrictive of influencing retention. Generally supportive variables identified included support (family and friends both in and out of classroom), whereby greatly restrictive variables identified included work, financial and family crisis and ongoing responsibilities (Jeffreys, 2007).

Individuals may find themselves in a set of circumstances bearable for some students, but intolerable for others. In a study of undergraduates, Glogowska, Young, and Lockyer (2007) explored nursing student's reasons for thinking of leaving. Results indicated that the decision to leave nursing education is the culmination of complex

interacting factors. Different students react differently to similar pressures. Students reported the importance of support networks and 'fit' between student and institutions in determining whether students withdrew or remained. The process was described as an accumulation of factors which interacted to increase pressure on the student. During semi-structured interviews six push factors and four pull factors were described. The push factors, which were defined as factors which drive students away, included challenges, demands, strain, support, negative, illness. The pull factors, defined as factors which assist in student retention included determination/stubbornness, commitment, informal and formal support.

Adult student returning to school have a number of demands and stressors which can impact the students' decision to stay or leave. This decision-making process is likely the result of a number of complex factors (Wells, 2007). Undergraduate nursing students reported factors which were prominent in decision-making about continuing their program of study included challenges of academic work, outside demands, financial issues, lack of support, illness/injury, and negative early experiences. Factors which assisted in the decision to stay include determination, commitment to chosen profession, and formal and informal support (Glogowska, Young, & Lockyer, 2007).

Among graduate nursing online students the decision to withdraw was not easy. Nursing student departure could be a result of cumulative effect of multiple stressors (Wells, 2007), a layering of situations that eventually leads to withdrawal (Perry, 2008). Students describe putting the decision off for sometime after much soul searching and deliberation (Perry, 2008). RNBS students identify support systems, financial issues,

external influences, juggling time, internal reaction, and future opportunity affect success or non-success (Dowell, 2000).

The transition back into nursing education can be difficult. Undergraduate nursing students transferring from community colleges to a baccalaureate nursing program reported transitional stress related to new expectations. Students reporting being, "'on the verge of dropping out and giving up" early in the transition, but after several weeks reported, "the struggles and challenges encountered made them stronger and better prepared for their professional careers" (Cameron, 2005; p. 31). In focused interviews students described factors that assisted or hindered education fell into two categories: relearning how to learn and barriers and catapults (Hylton, 2005). Students describe the return to school as resulting in feelings of moving out of a comfort zone and being challenged in finding their own voice. Though self-described as being highly committed, high levels of anxiety were also reported (Hylton, 2005).

In the lived experience of second-career BSN students, one of the themes identified was "Trying Transitions". Students described the transition into fulltime study as difficult reporting specific points when they recall thinking through the difficulty, beginning with negative thoughts of not being able to continue on, followed by positive self talk to 'push through' (Kohn & Truglio-Londrigan, 2007). Other students described role adaptation in returning to school, specifically related to maternal role expectations, proved to be challenging (Lin, 2005).

Perhaps fluctuating levels of support also impact decision-making. RN to BSN students reported not fitting in with traditional students and having the need for support, which included home, work and academia (Lillibridge & Fox, 2005). Jeffreys (2007b)

reported a number of supportive and restrictive variables which influenced retention among undergraduate nursing students of commuter colleges finding family emotional support, and the support of friends both in and out of classroom to be greatly supportive in influencing retention. Online students used coping mechanisms to complete the requirements of part-time study which included sacrifice, support and negotiation of arrangements at work, home, in social life and with self (Kember, 2005).

Faced with challenges, students may begin to question whether earning their degree is really what they want to do. In a national study of undergraduate science majors completed over a 3-year period, Seymour and Hewitt (1997) describe student's decision to leave the study of science in terms of a profit-to-grief ratio. Students reported at a 30% rate, that their decision to change majors was related to either poor material rewards or the rejection of science careers or lifestyles. These students report that had their educational experiences been more fulfilling, they could have tolerated the overload, extra effort and stress associated with this major. RNs returning for BSN degree who made an early departure did not see the future value of a BSN (Dowell, 2000).

Choice is not necessarily a result of conscious, rational, decision-making processes (Eccles, 1987), and can be based on fallacious reasoning (Fischoff, Goitein, & Shapira, 1982). Impulsive or habitual decisions can be made which are not always predictable. The framing of the problem may affect the decision, resulting in quite opposite choices selected depending on how the problem is presented, or how the outcomes of an action are presented (Kahneman & Tversky, 1984; Tversky & Kahneman, 1981).

This continual weighing of the expected emotional, fiscal, and social costs against the expected benefits may cumulative into the choice to withdraw due to personal reasons

related to life or work commitments, or programs reasons related to learning style, or fit with career (Perry, Boman, Care, Edwards, & Park, 2008).

Summary

This chapter reviewed initial concept analysis of persistence, and literature related to motivation, context and the cost-benefit appraisal of decision-making. The purpose was to demonstrate the need to expand research on the role of learner characteristics and persistence in asynchronous online learning environments. In particular, this expansion includes the roles of several motivational constructs, educational context, and their relationship to decision-making and intent to persist among students in RNBS completion online programs.

The literature revealed conceptual and operational definitions for persistence have been noticeably absent in most of the literature. Without adequate concept analysis leading to effective definitions, measurement of these variables will remain inconsistent. Initial concept analysis reveals that the study of this concept is in the early stages, as evidenced by a number of associational relationships among key statements, but little identification of mediating and moderating variables. A definition, based on this initial concept analysis is offered.

Additionally, it is proposed that by exploring the relationship of motivation, context and continual cost-benefit appraisal in the study of academic persistence, investigation may yield a more compelling explanation of persistence of adult students returning to the collegiate setting for further education.

Chapter Three describes the methodology used to explore the relationship between motivation, context, the cost-benefit appraisal of decision-making, and intent to persist in students of RNBS completion online programs.

CHAPTER THREE

Methodology

The purpose of this study was to examine the relationship between student motivation, educational context, cost-benefit appraisal, and intent to persist in RNBS completion online programs. Instruments were chosen to measure the variables specified in the Student Online Academic Persistence (SOAP) model. This chapter begins with a description of the design and sample, continuing with discussion regarding instrument development, and ending with a description of data collection and data analyses. The two research questions addressed in this study are:

Research Questions

1. Among students enrolled in RNBS completion online programs, do motivation and context predict cost-benefit appraisal?
2. Among students enrolled in RNBS completion online programs, what is the relationship between cost-benefit appraisal and intent to persist in the program?

Design and Sample

A non-experimental descriptive design was used. Students on the program roster for RNBS completion online programs were recruited from a convenience population of 3606 students from three schools of nursing. Students were in various phases of completion of their prospective programs. To maximize response rate, the Tailored Design Method (Dillman, 2007) was used resulting in a sample of 712 responses (19% response rate). The determination of format and design, item development, and recruitment of subjects to maximize participant response rate are guided by recommendations from Dillman (2007).

Instrument Development

Pilot Instrument

The Learned Resourcefulness and Student Online Academic Persistence (SOAP) questionnaire is designed to describe factors related to academic persistence, as a multidimensional construct, in students of RNBS completion online programs. The questionnaire is based on a literature review of student academic persistence which resulted in the development of the conceptual framework Student Online Academic Persistence (Strevy, 2007). The Web-based survey was developed utilizing SurveyShare (SurveyShare, 2008).

The initial questionnaire consisted of a total of 126 items. The items were a composite of three domains: psychological variables, academic variable and cost-benefit appraisal resulting in 14 subscales. Two of the scales were previously developed and have been subjected to validity/reliability study. The Self-Control Schedule was designed to measure learned resourcefulness (Rosenbaum, 1980) and selected items from the Web Users Self-efficacy scale (Eachus & Cassidy, 2006) were used to develop the technology self-efficacy scale. In addition, four narrative-response questions were included though these data were not included in analysis for this study.

Why did you enroll in this program?

Why did you choose the online option?

What keeps you continuing with the program?

If you have taken a break or permanently withdrawn from the program, why did you do so?

In the developmental stage of content validity three steps were utilized; domain identification, item generation and instrument formation (Lynn, 1987). An item pool blueprint was developed and a panel of experts was selected to review the blueprint and validate the items are appropriate indicators of each construct (Schultz & Whitney, 2005). The large pool of potential items that were included in the early development of the instrument could be later reduced, based on content reviews (Netemeyer, Bearden, & Sharma, 2003).

The expert panel included six reviewers who were doctorally prepared nurses and educators. The research backgrounds of these reviewers included combinations of expertise in online learning, instrument development, and student retention. Content experts were asked to determine the validity of each item as well as the validity of the entire instrument. Item validity was accomplished by asking the experts to judge the representativeness of individual items, the clarity of items, and suggested revisions for items not consistent with the conceptual definition or not representative of the concept (Grant & Davis, 1997). Comprehensiveness was determined by indicating whether or not the items were sufficient to represent the total content domain. An additional question related to the appropriateness of the items for RNs who have returned to school to obtain their BS degree in nursing via an online modality was included as well as evaluation related to the comprehensiveness of the entire instrument. Criteria developed by Lynn (1986), for establishing content validity, was the basis for scoring. All items rated as 3 (needs minor revision) or 4 (representative) were retained. Minor revisions to the survey were made based on the scoring results resulting in the deletion of two of the items and the re-wording of two other items.

Psychometric Testing of Pilot Instrument

A non-experimental descriptive design was used to test the psychometric properties of the questionnaire (Strevy, 2007). Students who were currently enrolled or had been enrolled in an RNBS completion online program within the past two years were recruited from a convenience sample of 1066 online RNBS completion programs from three schools of nursing. To maximize response rate, the Tailored Design Method (Dillman, 2007) was used. The determination of format and design, item development, and recruitment of subjects to maximize participant response rate were guided by recommendations from Dillman (2007).

A total of 443 surveys were completed for a response rate of 41.5% from students from three schools of nursing. The three schools consisted of private and public institutions with enrollment which varied from 22-742 students. The students were in various phases of completion/non-completion of their prospective programs. Programs utilized either a semester-based schedule or an accelerated schedule.

To determine if the items are related to one another and to the construct they are designed to measure, reliability and validity analyses were completed. Correlational analysis demonstrates the correlation between each item and the corrected item-scale total. To analyze covariance (communality) of each of the 14 scales (sub concepts), an initial factor analysis was performed utilizing Iterated Principle Factor Analysis (Tabachnick & Fidell, 2001). Convergence criteria were satisfied. One factor was identified for each of the 14 scales, using eigenvalues greater than 1.0 (Kaiser, 1960).

There was evidence of internal consistency reliability in the majority the scales. Internal consistency reliability of each of the academic persistence domains was tested with inter-item correlations, Cronbach's coefficient correlations and item-total correlations. Inter-item correlations were computed to determine how well the items relate to each other and therefore, to the overall domain. Items with average inter-item correlations <.30 were closely examined; a low correlation indicates that items are not sufficiently related and may not contribute to the measurement of the variable (DeVellis, 2003). If deleting the item does not compromise the validity of the scale nor decrease Cronbach's coefficient, it could be deleted. Items with average inter-item correlations >.70 were closely examined for redundancy. Further discussion regarding this pilot study can be found in a previous paper (Strevy, 2007).

Learned Resourcefulness and Student Online Academic Persistence

Revised Instrument

Designed as a single self-report questionnaire (Appendix A), a total of 96 items (Appendix B) comprise this revised instrument. The items are designed to measure student motivation, educational context, continual cost-benefit appraisal and intent to persist and include six of the original 14 scales. The six original scales from the pilot study included in the revised instrument were technology self-efficacy, goal commitment to complete the program of study, learned resourcefulness, satisfaction with institution and faculty, and cost-benefit appraisal. These six scales were chosen due to reliability and strength of correlation demonstrated in the pilot study. Two additional scales, internal and external motivation, contribute to the motivation variable for a total of eight scales (Appendix C). Survey questions were taken from the following three instruments as a

means of collecting data relative to the variable of student motivation. The Web-based survey was created in SurveyShare (SurveyShare, n.d.) and was made accessible to study participants via a secure link.

Technology Self-Efficacy

The Web Users Self-Efficacy Scale (WUSE; Eachus & Cassidy, 2006), consisting of 40 items measured on a 6-point Likert scale was designed to measure four domains of internet self-efficacy which include information retrieval, information provision, communication, and internet technology. Initial testing of this scale occurred in the United Kingdom. The sample included students at a large university, achieving a wide age range, adequate gender representation and a good cross section of experience. An alpha coefficient of 0.96 was reported.

Of the 40 items of the Web Users Self-efficacy Scale, nine items were selected for use in a study of students in RNBS completion online programs. The scale was shortened to decrease the test burden on the participant and to eliminate redundancy (Strevy, 2007). Internal reliability of these nine items resulted in a .90 alpha coefficient (Strevy, 2007). Permission for use of selected items of the WUSE was obtained from Dr. Eachus (Eachus & Cassidy, 2006).

Motivated Strategies for Learning Questionnaire (MSLQ)

The Motivated Strategies for Learning Questionnaire (MSLQ) is an 81-item, self-reported instrument designed to assess motivational orientation and use of learning strategies by college students (Pintrich, Smith, Garcia, & McKeachie, 1991). The MSLQ has been subjected to confirmatory factor analyses, translated into multiple languages, and has proven to be a reliable and useful instrument that can be adapted for a number of

different purposes for researchers, instructors, and students (Duncan & McKeachie, 2005). Scale reliabilities are robust, and confirmatory factor analyses demonstrate good factor structure. The MSLQ also shows reasonable predictive validity to actual course performance of students (Pintrich, Smith, Garcia, & McKeachie, 1993). The 15 scales of the MSLQ were designed to be used together or to be used in a singular fashion, meeting the needs of the researcher (Duncan & McKeachie, 2005). Items are scored on a 7-point scale from 1 (not at all true of me) to 7 (very true of me).

Two of the subscales were selected for use in the revised version of the questionnaire for the present study. These two subscales are the motivation scales; Intrinsic Goal Orientation and Extrinsic Goal Orientation, each comprised of four items. Previous reliabilities on these scales have resulted in coefficient alphas of .74 and .62, respectively. These alphas are acceptable for purposes of research.

For purposes of the present study, one item on the Extrinsic Goal Orientation subscale was worded negatively and reverse scored to avoid the tendency for selection of positive responses to a number of positively worded items. The original question was, “Getting a good grade in this program is the most satisfying thing for me right now.” This question was rephrased to “Getting a good grade in this program is not the most satisfying thing for me right now”, and then reverse scored.

While the subscales are designed to measure goal orientation in individual courses as motivation is dynamic and contextually sensitive, the wording was generalized changing item wording from ‘this class’ and ‘this course’ to ‘this program’ in an attempt to capture the student’s general goal orientation related to the RNBS online completion program.

Permission was obtained for the use of items from the MSLQ (Pintrich, Smith, Garcia, & McKeachie, 1991).

Learned Resourcefulness

Learned resourcefulness is an acquired set of behaviors and skills, mostly cognitive, by which a person self-regulates internal responses that interfere with the smooth execution of a desired behavior (Rosenbaum, 1983). The three dimensions of resourcefulness include self-control, self-direction, and self-efficacy. These dimensions are presumed to be interactive and to have reciprocal effects on one another (Zauszniewski, 1995). Designed to measure learned resourcefulness, the Self-Control Schedule (SCS Rosenbaum, 1980) is a self-reporting, 36-item questionnaire utilizing a 6-point Likert-type scale. The tool has shown satisfactory reliability and validity (Redden, Tucker, & Young, 1983; Rosenbaum, 1980).

In reviewing the literature for other scales measuring learned resourcefulness, a number of scales were found which measure subscales of the SCS. The SCS is found to have low but statistically significant correlations (Rosenbaum, 1980) with the following scales: Rotter's Internal-External Locus of Control Scale (Rotter, 1966), the Irrational Beliefs Test (Jones, 1968), the self-control measure of Cattell's 16 Personality Factors (Cattell, Eber, & Tatsuoka, 1970), Fitz's Self-Esteem Scale (Michelson, 1985) and Bachman and O'Malley Self-Esteem Scale (MacLachlan, 1985).

SCS has been examined in relationship to coping or the adoption of and adherence to health behaviors in clients with diabetes, hypertension, epilepsy, migraine headaches, and chronic pain (Zauszniewski, 1995) and in relation to co-operative learning in the collegiate setting (Kennett & Keefer, 2006; Kennett & Stedwill, 1996). Internal reliability

of the SCS in a study of students in RNBS completion online programs resulted in a .86 alpha coefficient (Strevy, 2007). Permission was obtained from Dr. Rosenbaum for the use of the Self-Control Schedule utilized to measure learned resourcefulness (Rosenbaum, 1980).

Data Collection

After approval of the study from the Institutional Review Board at IUPUI and each participating school, students of RNBS completion online programs were recruited to participate in the study. Participants were eligible for the study if they were currently enrolled in the program, and are able to read and write English. There was minimal risk in participation.

To recruit students, the program director of each school was contacted. Once approval was provided, the director was sent a letter of explanation (Appendix D) regarding the procedure for student recruitment. Participants were contacted a total of four times via email. Data collection began in June, 2008 and ended in July, 2008. The first contact consisted of a pre notice letter (Appendix E). The second contact was a letter with an imbedded link to the questionnaire (Appendix F), which resulted in a response rate of 6%. The third contact was made one week later (Appendix G), which resulted in a response rate of 14.6%. The fourth contact was made one week after the third contact (Appendix H), resulting in a total sample size of 712 for a total response rate of 19%. Analyses of data occurred in July, 2008.

To ensure participant anonymity the survey was completed online with no traceable information via SurveyShare. There was minimal risk. Due to the manner of collection of data, the subject was protected by the anonymity of the Internet. The questionnaire was

housed entirely on the study's Websites. As a result, personal contact between the subject and researcher did not take place in reference to completion of the questionnaire. Additionally, data were collected from a Web-based form that does not collect any traceable or personally identifiable information such as IP address, email, name, or computer name.

Data Analysis

SPSS 15.0 (Field, 2005) was used to analyze data. Items were coded (Appendix I), then downloaded from the SurveyShare responses, saved in an Excel spreadsheet, and then imported into SPSS. Reverse coding was utilized for selected items. The Web survey, Learned Resourcefulness and Student Online Academic Persistence, is located in Appendix A.

Based on a selected power of .80 and alpha of .05, a minimum response rate of 400 was calculated (Lipsey, 1990). The sample size of 712 was sufficiently large enough to eliminate subject variance and provide adequate power (Nunnally, 1978). Prior to analysis, data were examined for accuracy of data entry and missing values. Analysis included a check for normality and outliers that could indicate violation of statistical assumptions. Since there were no serious violations of the statistical assumptions, transformation of variables or statistical corrections was not necessary.

To determine if the items are related to one another and to the construct they are designed to measure, reliability and validity analyses were completed. Correlational analysis was utilized to demonstrate the correlation between each item and the corrected item-scale total.

Data analyses consisted of descriptive and inferential statistics. This analysis was conducted to describe the relationship between the student motivation variables, educational context variables and cost benefit analysis. Data analysis to describe the relationship among the variables in each research question is provided below.

Research Questions

1. Among students enrolled in RNBS completion online programs, do motivation and context predict cost-benefit appraisal?

The method of choice used to determine if motivation and context predicts cost-benefit appraisal is multiple regression. This method is an extension of bivariate regression (Tabachnick & Fidell, 2001). A standard regression was used where all variables under examination were entered into regression equation at once. Regression techniques can be applied to data where the independent variables are correlated with one another and with the dependent variable, with either continuous or dichotomous variables (Tabachnick & Fidell, 2001). Further regression was used to describe the relationship between motivation and intent to persist.

2. Among students enrolled in RNBS completion online programs, what is the relationship between cost-benefit appraisal and intent to persist in the program?

Simple correlation was conducted to describe the relationship between cost-benefit appraisal and the student's intent to persist.

Summary

Academic persistence is a complex phenomenon most likely affected by a number of independent variables. In this study, the variables of primary interest are student motivation (technology self-efficacy, goal orientation, goal commitment, and learned

resourcefulness), educational context (satisfaction with institution and faculty), and continual cost-benefit appraisal of decision-making. The literature suggests that motivation and context, specifically the variables selected, are positively correlated with success in learning. Continual cost-benefit appraisal is supported by retention models to impact student retention (Jeffreys, 2007; Tinto, 1975), and was expected to have an impact on the dependent variable: intent to persist. This study contributes to the literature by explaining the relationship between student motivation, educational context, continual cost-benefit appraisal, and the intent to persist.

CHAPTER FOUR

Results

The purpose of this study was to examine the relationship between student motivation, educational context, cost-benefit appraisal, and intent to persist in RNBS completion online programs. This chapter begins with a description of the study sample, moves to reliability analyses, and is followed with a statistical analysis of research questions.

Sample Demographics

A population of 3606 RNBS students from three private schools of nursing were invited to participate in the Learned Resourcefulness and Student Online Academic Persistence survey with a total response of 712. Of the 712 surveys completed, 704 surveys were usable, resulting in a response rate of 19%. Students were in various phases of completion/non-completion of their prospective programs. Programs utilized either a semester-based or an accelerated schedule.

Respondents were primarily female (93%), Caucasian (85%), age 40 or older (59%), married (70%), reported 10 or more years employment in nursing (55%), and currently working 35 hours or more/week (83%). See Table 1. Of those responding, 97% were currently employed in nursing, 55% were receiving financial aid from their employer, 52% reported one or less dependent and spent 11 hours or more per week in dependent care (55%). See Table 2.

Table 1

Demographics of Students in RNBS Completion Online Programs

Demographic	Frequency (n=704)	Percentage
Age		
20-29 years	80	11
30-39 years	207	29
40-49 years	271	39
over 49 years	143	20
Gender		
Female	655	93
Male	49	7
Race/Ethnicity		
White	599	85
Black/African American	71	10
Asian/Pacific Islander	13	2
Hispanic/Latino	16	2
American Indian/Alaska Native	5	1
Marital status		
Divorced/Single	134	19
Married	495	70
Never Married	68	10
Widow/Widower	7	1
Years working as RN		
Less than 5 years	220	31
6-9 years	100	14
10-15 years	138	20
More than 15 years	243	35
Hours per week employed in nursing		
None	30	4
1-20 hours	19	3
21-34 hours	67	10
More than 34 hours	584	83

Table 2

Demographics of Students in RNBS Completion Online Programs (Financial Assistance/Home Responsibilities)

Demographic	Frequency (n=704)	Percentage
Currently employed in nursing		
Yes	680	97
No	24	3
Financial Assistance from Employer		
Yes	386	55
No	318	24
Dependents		
None	200	29
1	164	23
2 or more	340	48
Hours per week spent in care of dependents		
Less than 5	242	35
6-10	76	11
11-15	57	8
More than 15	329	47

The descriptive statistics of the sample of diploma and Associate degree nurses returning to complete a Baccalaureate degree in nursing in this study are compared with national statistics of the Registered Nurse population (U.S. Department of Health and Human Services, 2004). See Table 3. Compared to the national pool, the sample from this study was similar in gender, ethnicity, marital status, and number of nurses in full time employment. The primary difference between the two samples related to the age at which RNs returned for a Baccalaureate degree. In this study, RNs returning for a Baccalaureate degree tended to be younger (under 40; 40%) than the general nursing population (under 40; 26.4%) See Table 3.

Table 3

Demographics of Students in RNBS Completion Online Programs (2008) Compared with Registered Nurses Population (U.S. Department of Health and Human Services, 2004)

Demographic	Sample %RNBS (2008)	%U.S. RN Population (2004)
Age		
under 40 years	40	26.4
41 and older	59	66.2
Gender		
Female	93	93.8
Male	7	6.1
Race/Ethnicity		
White	85	81.8
Black/African American	10	4.2
Asian/Pacific Islander	1.8	2.9
Hispanic/Latino	2.3	1.7
American Indian/Alaska Native	.7	.3
Marital status		
Divorced/Single	19	18.1*
Married	70	70.5
Never Married	10	9.2
Widow/Widower	7	1
*(includes widowed)		
Hours per week employed in nursing		
More than 34 hours	83	72.2**
**(Employed FT)		

In addition to demographic data, academic data were collected. Respondents reported successful completion of five or fewer courses of the program (57%), with no history of withdrawal from a course in the program (69%), and no courses failed in the program (93%). Respondents indicated the extent to which they intend to complete the program as

"very great" (92%), and the extent to which they intend to leave as "not at all" (79%) or "to a small extent" (13%). See Table 4.

Table 4

Academic Data of Students in RNBS Completion Online Programs

Demographic	Frequency (n=704)	Percentage
Years since completed ADN/Diploma in Nursing		
Less than 5 years	219	31
6-15 years	229	33
16-25 years	179	25
More than 25 years	72	10
Current GPA (scale 4.0)		
Less than 3.0	102	14
3.1-4.0	529	75
Completed		
Less than 2 courses	195	28
3-5 courses	206	29
6-8 courses	112	16
8 or more courses	191	27
Courses started then withdrew prior to completion		
Never	485	69
1 or more times	219	31
Failed Course(s)		
None	653	93
1 or more courses	52	7
Extent intend to complete		
Very Great Extent	647	92
To Some Extent	42	6
A Small Extent	9	1
Not at All	6	1

Extent intend to leave		
Very Great Extent	22	3
To Some Extent	33	5
A Small Extent	94	13
Not at All	555	79

Instrument Reliability/Validity

Internal reliability of the nine subscales was measured via Cronbach alpha. Eight of the nine scales demonstrated evidence of internal consistency with Cronbach alpha near .70 or greater (Table 5). The subscale of intent to persist resulted in a reliability coefficient of 0.68 which is considered acceptable for a two item scale (Polit, 2008). Inter-item correlations were computed to determine associations among/within each subscale. Items with average inter-item correlations <.30 were closely examined; a low correlation indicates that items are not sufficiently related and may not contribute to the measurement of the variable (DeVellis, 2003).

Four of the scales were previously developed and have been subjected to validity/reliability study. The Self-Control Schedule was designed to measure learned resourcefulness (Rosenbaum, 1980) and resulted in an alpha coefficient of .83 in the current study. Nine items from the Web Users Self-efficacy scale (WUSE; Eachus & Cassidy, 2006) were used to develop the technology self-efficacy scale used in the present study. This scale was shortened in an effort to decrease test burden and to decrease redundancy. Reliability of this nine-item scale resulted in an alpha coefficient of .88. In the original 40 item instrument, alpha coefficients of 0.96 were reported (Eachus & Cassidy, 2006).

Internal reliability testing for goal motivation resulted in a Cronbach alpha of 0.79 for intrinsic goal orientation and a Cronbach alpha 0.49 for extrinsic goal orientation. Previous reliabilities of these scales have resulted in coefficient alphas of 0.74 for intrinsic goal motivation and 0.62 for extrinsic motivation (Duncan & McKeachie, 2005), which are considered acceptable reliability for psychological constructs. The low reliability demonstrated in the current study of the extrinsic goal orientation follows the pattern of lower reliability also observed by Duncan and McKeachie (2005), and may also have been due to a change in the wording of one of the items. In an attempt to avoid the tendency for selection of positive responses, the item was negatively worded and reverse scored. The original question was, "Getting a good grade in this program is the most satisfying thing for me right now." This question was rephrased to "Getting a good grade in this program is not the most satisfying thing for me right now." This change may have produced the very low inter-item correlations for this particular item (<.07).

Table 5

Reliability of Learned Resourcefulness and Student Online Academic Persistence Scales

Scale	#Items in Scale	Cronbach Alpha
Technology self-efficacy	9	.88
Goal orientation- intrinsic	4	.79
Goal orientation- extrinsic	4	.49
Goal commitment to complete program of study	6	.73
Learned resourcefulness	36	.83
Satisfaction w/institution	7	.79
Satisfaction w/faculty	5	.86
Cost-benefit appraisal	4	.84
Intent to persist	2	.68

Correlations between scales supported validity in seven of the nine scales (Table 6). Goal commitment positively correlated with all variables, with the exception of learned resourcefulness, correlating at near 0.3 or greater with technology self-efficacy, satisfaction with the institution and faculty, cost/benefit appraisal and intent to persist. Cost/benefit appraisal positively correlated at near .30 or higher with technology self-efficacy, goal commitment, satisfaction with the institution and faculty, and intent to persist. Additionally, technology self-efficacy positively correlated with satisfaction with faculty and cost/benefit appraisal.

Extrinsic goal orientation and learned resourcefulness did not correlate well with the other scales. Lack of correlation between extrinsic goal orientation and the cost-benefit appraisal is likely due to the item error described earlier. Learned resourcefulness measured in this study was a general measure, not specific to nursing or online education. It is possible that this measure was not sensitive to this particular population.

Table 6

Correlations Between Student Online Academic Persistence (SOAP) Scales

	tse	goi	goe	goal	scs	sins	sfac	cba	pers
Technology self-efficacy (tse)	---								
Goal Orientation- Intrinsic (goi)	.131**								
Goal Orientation- Extrinsic (goe)	.077*	.059							
Goal commitment to complete program of study (goal)	.259**	.182**	.080*						
Learned Resourcefulness (scs)	-.074	.198**	.180**	-.010					
Satisfaction w/institution (sins)	.239**	.195**	.015	.439**	.098**				
Satisfaction w/faculty (sfac)	.258**	.168**	.-.059	.307**	.020	.609**			
Cost-benefit appraisal (cba)	.288**	.205**	.006	.647**	-.016	.495**	.394**		
Intent to persist (pers)	.183**	.166**	.010	.468**	.028	.304**	.251**	.482**	---

Level of Significance *p<.05. **p<.01

Examining correlations between the scales and age, GPA and hours worked per week, while some significant correlations were noted, those correlations were weak (< 0.30) indicating they may contribute only minimally to the explanation. Age negatively correlated with technology self-efficacy (r=-.125; p<.01), goal commitment to complete program of study (r=-.150; p<.01), and intent to persist (r=-.114; p<.01). GPA correlated positively with satisfaction to the institution (r=.113; p<.01). Hours worked per week correlated positively with intent to persist (r=.075; p<.05; Table 7).

Table 7

Correlations Between Demographics and Student Online Academic Persistence (SOAP) Scales

	Age	GPA	Hours Work/Week
Technology self-efficacy	-.125**	.059	.023
Goal Orientation- Intrinsic	.036	.008	-.036
Goal Orientation- Extrinsic	-.064	.052	.010
Goal commitment to complete program of study	-.150**	.075	-.011
Learned Resourcefulness	.052	-.049	-.066
Satisfaction w/institution	.009	.113**	-.015
Satisfaction w/faculty	-.026	.054	-.024
Cost-benefit appraisal	-.049	.049	.005
Intent to persist	-.114**	.042	.075*

Level of Significance *p<.05. **p<.01

Research Questions

1. Among students enrolled in RNBS completion online programs, do motivation and context predict cost-benefit appraisal?

A standard regression was used whereby the variables related to motivation and context were entered into the regression equation simultaneously, with continual cost-benefit appraisal as the dependent variable resulting in $R^2 = .495$ ($p < .001$; Table 8; Table 9; Table 10).

When the variables measuring motivation and context are combined, five of the variables contributed significantly to the prediction of cost-benefit appraisal (technology self-efficacy, satisfaction with institution and faculty, goal commitment to complete program and intrinsic goal orientation), while two of the variables did not contribute significantly to the prediction (extrinsic goal orientation and learned resourcefulness). Variables related to motivation and context, with the exception of extrinsic goal orientation and learned resourcefulness, account for approximately 50% of the variance for the dependent measure of cost-benefit appraisal.

Table 8

ANOVA: Regression of Motivation/Context Variables on Cost-Benefit Appraisal

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	154.660	7	22.094	96.607	.000(a)
	Residual	157.576	689	.229		
	Total	312.236	696			

a Predictors: (Constant), Learned resourcefulness-total score, Goal commitment to complete program, Goal orientation- extrinsic, Goal orientation- intrinsic, Technology self-efficacy, Satisfaction with faculty, Satisfaction with institution

b Dependent Variable: Continual cost/benefit appraisal

Table 9

Model Summary: Regression of Motivation/Context Variables on Cost-Benefit Appraisal

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.704(a)	.495	.490	.47823

a Predictors: (Constant), Learned resourcefulness-total score, Goal commitment to complete program, Goal orientation- extrinsic, Goal orientation- intrinsic, Technology self-efficacy, Satisfaction with faculty, Satisfaction with institution
b Dependent Variable: Continual cost/benefit appraisal

Table 10

Regression of Motivation/Context Variables with Cost-Benefit Appraisal

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	-1.060	.185		-5.716	.000
	Technology self-efficacy	.118	.041	.084	2.895	.004
	Satisfaction with institution	.290	.055	.191	5.247	.000
	Satisfaction with faculty	.123	.047	.092	2.648	.008
	Goal commitment to complete program	.745	.045	.507	16.479	.000
	Goal orientation- intrinsic	.035	.017	.059	2.071	.039
	Goal orientation- extrinsic	-.020	.016	-.035	-1.248	.213
	Learned resourcefulness-total score	-.001	.001	-.034	-1.190	.234

a Dependent Variable: Continual cost/benefit appraisal

2. Among students enrolled in RNBS completion online programs, what is the relationship between cost-benefit appraisal and intent to persist in the program?

Simple correlation was conducted to describe the relationship between cost-benefit appraisal and the student's intent to persist. Correlational analysis demonstrated a significant correlation between cost-benefit appraisal and intent to persist ($r=.482$, $p<.01$; Table 6).

Testing for Mediation

To examine possible mediation effects of cost-benefit analysis (Figure 1), Baron and Kenny's approach was utilized (Baron & Kenny, 1986; Kenny, 2008; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). This approach proposes that cost-benefit appraisal precedes intent to persist. Further assumptions include cost-benefit appraisal is affected by changes in motivation/context, and changes in cost-benefit appraisal are associated with changes in intent to persist. As a result, motivation/context would have an indirect effect on intent to persist through the cost-benefit appraisal.

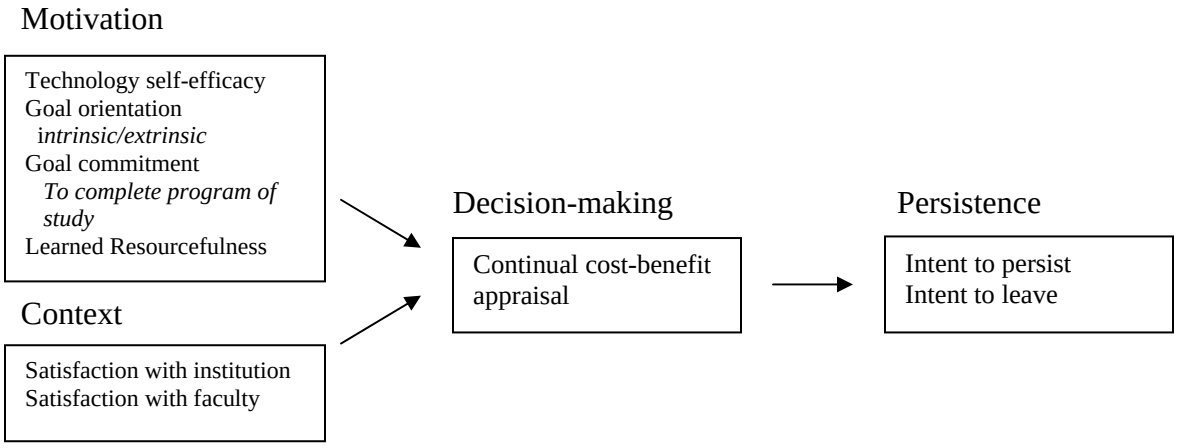

Figure 1: Conceptual Framework: Student Online Academic Persistence

The four steps used to test for mediation (Baron & Kenny, 1986; Kenny, 2008):

1. Step One determines if motivation/context are related to intent to persist which resulted in $R^2 = .242$ ($p < .001$; Table 11; Table 12; Table 13).
2. Step Two determines if motivation/context are related to cost-benefit appraisal which resulted in $R^2 = .495$ ($p < .001$). Refer to SPSS output associated with Research Question #1 (Table 8; Table 9; Table 10).

3. Step Three determines if cost-benefit appraisal is related to intent to persist while motivation/context are held constant which resulted in R^2= .236; R^2= .278 (p<.001; Table 14; Table 15; Table 16; Kenny, 2008).
4. Step Four was to determine if data were consistent with mediation. Goal commitment to complete the program was found to be partially mediated by cost-benefit appraisal; 1) Goal commitment results in a significant independent relationship with intent to persist (Step One) and cost-benefit appraisal (Step Two), 2) Cost-benefit appraisal demonstrated significant independent relationship with intent to persist (Step Three), 3) The effect (regression weight) for goal commitment on intent to persist is reduced when cost-benefit appraisal is included in the model (Step Three), 4) Evidence of partial mediation was found since effect is still significant. The Modified Sobel test for mediation produces z= 5.939 (p < .001) supporting the presence of partial mediation.

In the first step of the test for mediation, when the variables measuring motivation and context are combined only one variable, goal commitment to complete the program, contributes significantly to the prediction of intent to persist (Table 11; Table 12; Table 13).

Table 11

ANOVA: Regression of Motivation/Context Variables and Intent to Persist

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.315	7	6.188	31.506	.000(a)
	Residual	135.519	690	.196		
	Total	178.834	697			

a Predictors: (Constant), Learned resourcefulness-total score, Goal commitment to complete program, Goal orientation- extrinsic, Goal orientation- intrinsic, Technology self-efficacy, Satisfaction with faculty, Satisfaction with institution

b Dependent Variable: Intent to persist

Table 12

Model Summary: Regression of Motivation/Context Variables and Intent to Persist

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.492(a)	.242	.235	.44318

a Predictors: (Constant), Learned resourcefulness-total score, Goal commitment to complete program, Goal orientation- extrinsic, Goal orientation- intrinsic, Technology self-efficacy, Satisfaction with faculty, Satisfaction with institution
b Dependent Variable: Intent to persist

Table 13

Regression of Motivation/Context Variables and Intent to Persist

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	1.783	.171		10.425	.000
	Technology self-efficacy	.046	.038	.043	1.215	.225
	Satisfaction with institution	.078	.051	.068	1.527	.127
	Satisfaction with faculty	.065	.043	.064	1.497	.135
	Goal commitment to complete program	.442	.042	.399	10.565	.000
	Goal orientation- intrinsic	.028	.016	.063	1.797	.073
	Goal orientation- extrinsic	-.012	.015	-.029	-.847	.397
	Learned resourcefulness-total score	.000	.001	.016	.472	.637

a Dependent Variable: Intent to persist

In the second step of the test for mediation, when the variables measuring motivation and context are combined, five of the variables contribute significantly to the prediction of cost-benefit appraisal (technology self-efficacy, satisfaction with institution and faculty, goal commitment to complete program and intrinsic goal orientation), while two of the variables do not contribute significantly to the prediction (extrinsic goal orientation and learned resourcefulness; Table 8; Table 9; Table 10).

In the third step of the test for mediation, a significant increase in prediction of intent to persist was demonstrated when cost-benefit appraisal was added to the equation, after first controlling for motivation and context (Table 14; Table 15; Table 16).

Table 14

ANOVA: Regression of Cost-Benefit Appraisal with Intent to Persist Holding Motivation/Context Variables Constant

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40.395	7	5.771	30.426	.000[a]
	Residual	130.679	689	.190		
	Total	171.074	696			
2	Regression	47.563	8	5.945	33.118	.000[b]
	Residual	123.511	688	.180		
	Total	171.074	696			

a. Predictors: (Constant), Learned resourcefulness , Goal commitment to complete program, Goal orientation- extrinsic, Goal orientation- intrinsic, Technology self-efficacy, Satisfaction with faculty, Satisfaction with institution

b. Predictors: (Constant), Learned resourcefulness , Goal commitment to complete program, Goal orientation- extrinsic, Goal orientation- intrinsic, Technology self-efficacy, Satisfaction with faculty, Satisfaction with institution, Continual cost/benefit appraisal

c. Dependent Variable: Intent to persist

Table 15

Model Summary: Regression of Cost-Benefit Appraisal with Intent to Persist Holding Motivation/Context Variables Constant

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.486[a]	.236	.228	.43550
2	.527[b]	.278	.270	.42370

a. Predictors: (Constant), Learned resourcefulness , Goal commitment to complete program, Goal orientation- extrinsic, Goal orientation- intrinsic, Technology self-efficacy, Satisfaction with faculty, Satisfaction with institution

b. Predictors: (Constant), Learned resourcefulness , Goal commitment to complete program, Goal orientation- extrinsic, Goal orientation- intrinsic, Technology self-efficacy, Satisfaction with faculty, Satisfaction with institution, Continual cost/benefit appraisal

Table 16

Regression of Cost-Benefit Appraisal with Intent to Persist Holding Motivation/Context Variables Constant

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.862	.169		11.030	.000
	Technology self-efficacy	.050	.037	.048	1.345	.179
	Satisfaction with institution	.065	.050	.058	1.297	.195
	Satisfaction with faculty	.058	.042	.058	1.364	.173
	Goal commitment to complete program	.434	.041	.399	10.544	.000
	Goal orientation- intrinsic	.029	.015	.067	1.926	.054
	Goal orientation- extrinsic	-.014	.014	-.034	-.997	.319
	Learned resourcefulness	.010	.028	.013	.370	.712
2	(Constant)	2.088	.168		12.422	.000
	Technology self-efficacy	.025	.036	.024	.680	.497
	Satisfaction with institution	.003	.050	.003	.070	.944
	Satisfaction with faculty	.032	.042	.032	.761	.447
	Goal commitment to complete program	.275	.047	.253	5.819	.000
	Goal orientation- intrinsic	.022	.015	.050	1.479	.140
	Goal orientation- extrinsic	-.010	.014	-.024	-.722	.470
	Learned resourcefulness	.018	.027	.022	.655	.512

	Continual cost/benefit appraisal	.213	.034	.288	6.319	.000

a. Dependent Variable: Intent to persist

Summary

The purpose of this research was to examine student motivation and educational context as predictors of cost-benefit appraisal, and to examine the relationship between cost-benefit appraisal and intent to persist among students in RNBS completion online programs. Relationships among concepts from the conceptual framework of Student Online Academic Persistence (SOAP) were investigated. In addition to reporting data analyses related to the research questions under study, further regression was completed to test for mediation. Partial mediation of goal commitment by cost-benefit appraisal was supported.

CHAPTER FIVE

The purpose of this chapter is to discuss the findings, conclusions, limitations and implications of this study which was designed to examine the relationship between student motivation, educational context, cost-benefit appraisal, and intent to persist in RNBS completion online programs. Organization of the findings and conclusions begins with a discussion regarding demographics, followed by a discussion of the research questions. Next, variables related to motivation, context, decision-making and intent to persist are reviewed, with conclusions discussed. Limitations of the study and implications follow. This chapter concludes with recommendations for teaching practice and future research.

Student Academic Persistence

Past research has attempted to theorize, describe and predict the complex issues related to academic persistence for the purpose of improving outcomes for students of higher education. Models focusing on traditional, undergraduate students (Longitudinal Model of Student Socialization; Tinto, 1975) and undergraduate, commuter students (Model of Nontraditional Undergraduate Student Attrition; Bean & Metzner, 1987) help in building the knowledge related to academic persistence. These theories and subsequent research have assisted educators in the creation of academic policies and processes to assist students enrolled in institutions of higher learning. Services such as academic advising, first year experience programs, student activities, and support processes assist students who are transitioning into the college setting to enable these students to integrate and be better equipped and supported in their pursuit of academic success.

Review of these studies indicated there is not one model that applies to all students of all ages for all modes of learning. A model that fits for the traditional-aged college student living on campus and pursuing education on a full-time basis may be different than a model for RN students whose primarily focus is employment and have active, full lives outside of the academic setting and are enrolled online courses.

The central focus of the current study was to explore the relationships identified in the conceptual framework, Student Online Academic Persistence (Strevy, 2007), which guided this study. Of interest are the attributes of student motivation; technology self-efficacy (Eachus & Cassidy, 2006), goal commitment (Strevy, 2007), goal orientation (Pintrich, Smith, Garcia, & McKeachie, 1991), learned resourcefulness (Rosenbaum, 1980), and educational context (Ali, 2004; Bean & Metzner, 1985; Lillibridge & Fox , 2005; National Survey of Student Engagement, 2005; Tinto, 1975) as these variables related to the decision-making process of continual cost-benefit appraisal (Glogowska, Young, & Lockyer, 2007; Jeffreys, 2007; Kember, 1989; Tinto, 1975) and intent to persist in education (Strevy, 2007). Review Figure 1:

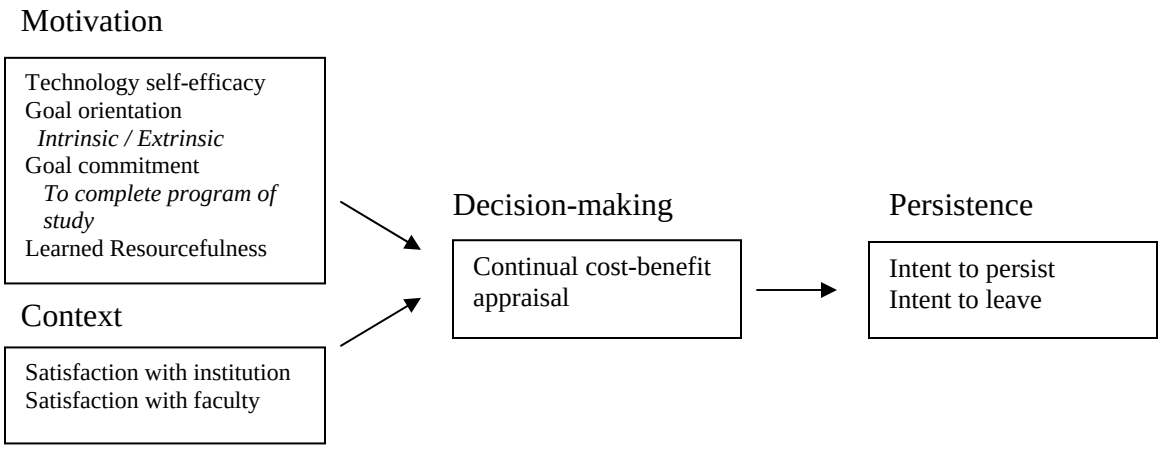

Figure 1: Conceptual Framework: Student Online Academic Persistence

Findings and Conclusions

This descriptive study resulted in a sample of 704 students enrolled in RNBS completion online programs from three private schools of nursing in the United States. Descriptive statistics of the sample were similar to statistics of the RN Population of the U.S. (U.S. Department of Health and Human Services, 2004), with the exception that students enrolled in RNBS completion online programs tended to be younger than the general RN population. One possible explanation for this difference could be that younger nurses may place greater value and perceive greater long term gain related to personal benefits and professional opportunities of returning to school to obtain a BSN.

Relative to work status, students who worked 38 hours or more per week reported intent to persist in the program to a greater extent than students who worked less. This finding was supported by past research where students who worked full time (Metzner & Bean, 1987; U.S. Department of Education, 2003) and students with high levels of work commitment (Kemp, 2002) were more likely to complete their education. A number of factors could be responsible for this finding. Students who are working full time may receive incentives in the workplace to continue education. Career ladder programs, financial incentives, and a desire for personal growth likely provide support for the nurse employed full time who returns to higher education. Nurses who work less may be less invested in work and further education.

Research Question #1

Among students enrolled in RNBS completion online programs, do motivation and context predict cost-benefit appraisal? Logistic regression of the variables associated with motivation and context accounted for approximately 50% of the variance for the

dependent measure of cost-benefit appraisal. Goal commitment to complete program and satisfaction with institution were the most significant variables. These results are supported by previous research where satisfaction with institution was predictive of continuation with studies (Metzner & Bean, 1987) and academic goals have found to be a significant indicator of program completion (Lotkowski, Robbins, & Noeth, 2004). In one study, commitment to education was not found significant (Powell, Conway, & Ross, 1990). These findings provide support for the Student Online Academic Persistence model (Strevy, 2007) as five of the seven variables contribute significantly to the prediction of cost-benefit appraisal (technology self-efficacy, satisfaction with institution and faculty, goal commitment to complete program and intrinsic goal orientation).

Two variables, extrinsic goal orientation and learned resourcefulness did not contribute significantly to the prediction of cost-benefit appraisal. Perhaps an extrinsic focus on grades and approval from others (Duncan & McKeachie, 2005) are not primary motivators to adult RN students returning for a BSN. Adults are likely motivated primarily by intrinsic factors.

Learned resourcefulness was measured by the Self-Control Schedule (SCS; Rosenbaum, 1989) which includes the dimensions of self-control, self-direction, and self-efficacy. The SCS measures general aspects of learned resourcefulness and has primarily been used in studies examining coping with health behaviors (Zauszniewski, 1995). Perhaps the SCS was not sensitive enough to the attributes of self-control, self-direction, and self-efficacy of the adult nursing student to be able to result in significance. The current population may not be able to relate to some of the items of the SCS: “If I smoked two packs of cigarettes a day, I would need some outside help to stop smoking”, “If I

carried the pills with me, I would take a tranquilizer whenever I felt tense or nervous". In feedback from RN participants who participated in a pre-launch testing of the instrument, two participants indicated they had never smoked and could not identify with the question related to stop smoking. Furthermore with the advance in pharmaceutical science over the past few years the word 'tranquilizer' is not as commonly used as in the past.

Research Question #2

Among students enrolled in RNBS completion online programs, what is the relationship between cost-benefit appraisal and intent to persist in the program? In this study students reporting higher levels of cost-benefit appraisal also reported higher levels of intent to persist ($r=.482$, $p<.01$; Table 6). Students who have high levels of intent to persist are not as likely to question or weigh their decisions and have a more positive perception as they report the benefits of continuing in their education outweigh the sacrifices. This finding is supported by theoretical assumptions of a relationship between cost-benefit appraisal and retention (Glogowska, Young, & Lockyer, 2007; Jeffreys, 2007; Kember, 1989; Tinto, 1975).

Motivation

Components of motivation measured in this study included technology self-efficacy, goal orientation, goal commitment to complete program of study, and learned resourcefulness. Consistent with past research, in this study younger RNBS completion online students reported higher levels of technology self-efficacy and goal commitment to complete program of study. Age negatively correlated with technology self-efficacy ($r=-.125$; $p<.01$), goal commitment to complete program of study ($r=-.150$; $p<.01$) and

intent to persist (r=-.114; p<.01). In past research, positive technology self-efficacy has been shown to have a positive relationship with expectations for success (Compeau, Higgins, & Huff, 1999; Compeau & Higgins, 1995; Holcomb, Brown, Kulikowhich, & Zheng, 2003; Mandernach, Donnelli, & Dailey-Herbert, 2006; Oliver & Shapiro, 1993). Students with confidence in online learning technologies perceived significantly fewer barriers for social interaction, administrative/instructor issues, learner motivation, and time and support for studies than students who were unsure of their skills or were not using online learning technologies (Muilenburg & Berge, 2005). There is evidence that self-efficacy improves over time. Through experience in online learning, students learn to take responsibility for their own learning (Sit, Chung, Chow, & Wong, 2005).

In the present study, students with an intrinsic goal orientation were more likely to have greater technology self-efficacy (r=.131; p<.01), have a higher level of commitment to complete the program of study (r=.182; p<.01), appraise the costs and benefits of continuing in the program (r=.205; p<.01), and intend to persist in educational pursuits (r=.166; p<.01). These results corroborate research that students with higher levels of intrinsic goal orientation are more likely to intend to persist (Parker, 2003), report higher academic achievement (Cordova & Lepper, 1996; Duncan & McKeachie, 2005; Pintrich, 2000a, 2000b), self-regulation and persistence (Cordova & Lepper, 1996; Schiefele & Csikszentmihalyi, 1994; Pelletier, Fortier, Vallerand, & Briere, 2001; Pintrich & Schrauben, 1992). Students who report an intrinsic goal orientation are driven by internal motives and may actually have a preference for hard or challenging tasks (Duncan & McKeachie, 2005). These students are also likely to have greater self-efficacy, work

toward goals and successfully negotiate the costs and benefits of continuing educational pursuits.

In this study, students reporting higher levels of learned resourcefulness were found to be more likely to have higher levels of intrinsic ($r=.198$; $p<.01$), and extrinsic motivation ($r=.180$; $p<.01$). Previous research supports these findings: academic self-confidence and academic goals were positively related to retention (Lotkowski, Robbins, & Noeth, 2004), negative associations between academic success and academic performance were found to be moderated by learned resourcefulness (Akgun & Ciarrochi, 2003). Higher resourcefulness was also associated with assertive response to frustration, greater task-oriented thoughts, self attribution for success, and greater positive self-evaluative statements (Rosenbaum & Ben-Ari, 1985). In another study, course completion correlated with specific behaviors: asking searching questions, the ability to master oneself and one's environment, generate constructive activities, work through difficulties, and the confidence to make most of bad situations (Kemp, 2002).

Context

Examination of context was limited to satisfaction with institution and satisfaction with faculty. Consistent with other research, students in this study reported satisfaction with institution and with faculty were more likely to have a high level of technology self-efficacy ($r=.239$; $r=.258$; $p<.01$), a high level of goal commitment ($r=.439$; $r=.307$; $p<.01$), appraise the costs and benefits of continuing in the program ($r=.495$; $r=.398$; $p<.01$) and intend to persist ($r=.364$; $r=.251$; $p<.01$). In past research, high commitment to the institution (Lotkowski, Robbins, & Noeth, 2004; Pascarella & Terenzini, 1980), satisfaction with faculty (Boshier, 1973; Pascarella & Terenzini, 1980) and satisfaction

with other students has been associated with persistence (Boshier, 1973). Satisfaction with the institution was found to be a predictor of greater program progression (Strevy, 2007), high levels of belongingness, educational quality (Strevy, 2007) and intent to stay (Metzner & Bean, 1987).

Faculty can influence satisfaction through management of the classroom and teaching/learning behaviors. Classroom experiences were strong predictors of institutional commitment (Strauss & Volkwein, 2004), and can also be primary causes that lead to an adult student's decision to drop-out of school (DeRemer, 2002). Faculty expertise in the use of technology influence student satisfaction (Bloom & Hough, 2003). Immediacy behaviors and prior student and instructor experience were significantly associated with student learning and satisfaction (Arbaugh, 2001). Academic advising was found to be the single most powerful predictor of satisfaction with the campus environment for students at four-year schools (National Survey of Student Engagement, 2005).

Cost-benefit Appraisal

The decision-making process specific to cost-benefit appraisal was measured by asking students the degree to which the pros and cons of continuing education were weighed, to what degree continuing in the program was 'worth it', questioning whether to continue or withdraw, and the degree to which the benefits of continuing outweigh the sacrifices. The higher the level of cost-benefit appraisal reported, the greater degree the student reported the benefits of continuing outweigh the sacrifices, the less the pros and cons of continuing educational pursuits were weighed, the less the student questioned

whether continuing in the program was ‘worth it’, and the less the student questioned whether to continue or withdraw from the program.

Interesting findings in this study were that relationships of cost-benefit appraisal and demographics such as age, GPA and hours worked per week were not significant. The researcher expected that students with a lower GPA might question the benefits of continuing education, thus resulting in a significant difference related to cost-benefit appraisal. Perhaps more important than age, GPA and hours worked/week is the individual’s past experiences and present life goals. Previous research has found that past experience and family background can shape an individual’s ability to accommodate to a new environment (Spady, 1971), influence attitudes about education, and ultimately affect the decision to continue education (Bean & Metzner, 1985). Students with a high level of intent to persist choose a more positive perception of the expected emotional, fiscal, and social costs relative to the expected benefits (Tinto, 1975), resulting in a continued commitment to the goal of completing the program of study.

Mediation Effects of Cost-benefit Appraisal

In the Student Online Academic Persistence (SOAP) conceptual framework, decision-making of cost-benefit appraisal was theorized to mediate motivation/context and intent to persist. This assertion was partially supported as goal commitment to complete the program was found to contribute significantly to the prediction of intent to persist and was partially mediated by cost-benefit appraisal.

Past research has found that commitment to goals may not be a stable trait in some individuals as different students react differently to similar pressures (Glogowska, Young, & Lockyer, 2007), and decisions to stay or leave may be influenced by multiple

role demands related to educational pursuits, home and work life (Jeffreys, 2007) where work and family crisis and ongoing responsibilities (Jeffreys, 2007) are in flux and continually changing. Students with high levels of commitment might only reassess the cost-benefits of continuing education when a major change in circumstance occurs, such as job transfer or illness, while students who are in danger will frequently reassess (Kember, 1989).

Intent to Persist

Intention has been found to be a significant predictor of program completion (Metzner & Bean, 1987). Persistence in the current study was measured by proxy in asking the extent to which the student intended to complete the program of study and the extent to which the student intended to leave the program.

In this study, younger RNBS completion online students reported higher levels of intent to persist ($r=-.114$; $p<.01$). While this result is consistent with findings from previous studies where younger traditional freshmen students and community college students were found to be more likely to stay (Glynn, Sauer, & Miller, 2006; U.S. Department of Education, 2003), this result is inconsistent with other research where older adult students enrolled in a continuing education program, part-time commuter students, and RNBS completion students were more likely to complete their educational goals (Boshier, 1973; Dowell, 2000; Metzner & Bean, 1987), and age was not a significant predictor involving students enrolled in online programs and in ADN programs (Hopkins, 2008; Powell, Conway, & Ross, 1990). In the present study, younger students had more dependents than older students($r=-084$; $p<.05$), but there was no significant difference between GPA and hours worked/week between younger and older

nurses. Perhaps even though younger nurses may have more time demands, their long term monetary and professional goals may be greater than those of older nurses.

Not surprising, goal commitment to complete the program of study was the single most important predictor of the student's continual cost-benefit appraisal ($r=.647$; $p<.01$) and intent to persist ($r=.468$; $p<.01$) in the present study. The importance of goal commitment to persistence was supported by previous research (Braxton, & Brier, 1989; Hopkins, 2008; Lotkowski, Robbins, & Noeth, 2004; Pascarella & Terenzini, 1980, 1983; Tinto, 1975).

Of interest, when asked the extent to which the student intended to complete the program, nearly all of the students (92%) indicated a "very high" intent to persist with an additional 6% indicating "some extent" of intention to complete the program of study. But when the question was posed from a negative aspect, inquiring the extent to which the student intended to leave the program, 79% responded "not at all" and 13% responded "a small extent". Thus, when framed in a negative manner, 13% of the respondents were now less confident that they would not leave the program. The framing of the question can result in differing choices depending on how the outcomes are presented (Kahneman & Tversky, 1984; Tversky & Kahneman, 1981). Providing opportunities for students to discuss concerns might be an avenue to assist the student in becoming more confident in his/her intent to persist in education.

Limitations

Methodological considerations which may restrict generalizability of results are reviewed. Primary limitations of this study included study design, sampling technique, and instrument sensitivity.

The selection of participants for this study, convenience sampling of students enrolled in RNBS completion online programs, did not allow for randomization. While the sample was representative of the Registered Nurse population in the United States, respondents were primarily of white, female students from three private universities, thus limiting generalizability specific to gender, ethnicity and setting. Self-selection and self-reporting was used, so the accuracy of data was dependent on the accuracy of the report of the individual. Respondents were from three private universities, which may not be representative of all public and private university settings. Respondents may not be representative of the total population of students of RNBS completion online programs as students who had left the university either voluntarily or involuntarily were not captured.

Logical regression was used to examine relationships, but does not address causation (Polit & Beck, 2008). Results from this study suggest relationships, but it cannot be assumed from the findings that one variable causes another. Limitations related to subscales used in this study were identified for two of the scales; extrinsic goal orientation and Self-Control Schedule which measured learned resourcefulness. The extrinsic goal orientation scale did not demonstrate evidence of internal reliability. This result may have been due to a wording change in one item which was made in an attempt to avoid the tendency for positive selection. Learned resourcefulness did not demonstrate significant correlation with other scales in the study. The instrument was designed to measure general learned resourcefulness and included questions which may not be applicable to RN students of 2008. In the pre-testing of the instrument, two respondents provided written comment that the response to the questions based on smoking behavior proved problematic due to a lack of experience with this behavior.

Implications

The findings of this study have practical significance for faculty and university administrators. Students who are RNs returning to higher education in pursuit of a BSN bring a wealth of background and experience to the classroom. These adults who study often consider employment their main priority (U.S. Department of Education, 2003) and choose the online modality due to convenience and flexibility (Ali, Hodson-Carlton & Ryan, 2004; Billings, Connors, & Skiba, 2001; Billings & Halstead, 2009) as many time and role demands are juggled. In addition to concerns and challenges related to learning and education, adult students have the additional challenges related to work, home and family life. While the adult student is typically very committed to meeting educational goals, life's challenges may become overwhelming at times resulting in decisions to delay or alter goal commitments related to education.

The population in the present study consisted primarily of female (93%), Caucasian (85%), age 40 or older (59%), married (70%), reported 10 or more years employment in nursing (55%), and currently working 35 hours or more/week (83%). In addition, 55% reported spending 11 hours or more per week in dependent care (55%). Blending adult students who have had years of clinical/practice experience as a professional nurse with traditional, pre-licensure students may not be the best approach in meeting the needs of this unique population. The employed RN who is also a student may be better served by programs which are designed specifically for practicing nurses with curricula focused on building on past experience. This approach is challenging when pre-licensure students are also in the classroom and do not have the same experiences from which to draw or the same opportunities for immediate application as do practicing nurses. In addition,

practicing RNs may find challenges making connections between theory and practice. By developing curricula that are specific to the experienced, practicing RN which can include immediate application to the practice-setting, the connection between theory and practice can be more readily apparent.

Goal commitment to the program and satisfaction with institution were found to be important in the persistence of students. A continual decision-making process involving cost-benefit appraisal was also found to impact student intention to persist in the program of study. In addition, goal commitment to complete the program was found to be partially mediated by cost-benefit appraisal. Therefore, changes in cost-benefit impact a student's commitment to the goal of completing their program of study. A number of variables and life experiences could result in a student questioning whether to remain in the program, or decide that the current costs of continuing education outweigh the current benefits, finding it necessary to delay or discontinue the pursuit of higher education.

Faculty can help to normalize this decision-making process by assisting the adult student in becoming aware that the student is not alone in this process. Approaches to plan for this normalization are suggested which include student-to-student support, and self-referral counseling specific to decision-making and cost-benefit appraisal.

To normalize the adult experience, students could also be supported in efforts to connect with other student peers to discuss concerns and garner advice. Students who move through the program often are involved in many of the same courses with a group of students, or move through the program as a cohort. Building on the support of peers by creating a safe, virtual space outside of the classroom where students can interact

informally and share their feelings and concerns could be another avenue that could normalization the issues with which adult students struggle.

In addition to peer to peer support, formalizing and marketing a self-referral process whereby students could access counseling specifically at the points in education when they question the costs of persisting, could provide the support needed during self-identified critical periods of education. This referral process could be marketed to students as “decision-making counseling”, with the goal to assist them in making informed decisions. Part of the counseling efforts could be focused on assisting the individual to reframe the challenges experienced and to review commitment to educational goals (Sieveking & Perfetto, 2000).

Meeting the counseling needs of the online student will involve creative use of support services and technology. Ideas for connecting the student regularly with these services and overcoming isolation barriers which may be related to online learning could lead to the development of strategies that are specifically designed to address the needs of these students. A decision-making link to counseling services which focuses on assisting students as they are challenged to make decisions related to stopping out or dropping out with an additional decision-making hotline for counseling could be beneficial.

The adult student is complex and decision-making is often not a linear process. Students may not always be fully aware of the reasons for an anticipated withdrawal. While it may not be necessary to know all of the reasons a student is considering withdrawal in order to initiate a prevention program (Sieveking & Perfetto, 2000), by listening to student concerns, maintaining a neutral stance on reasons students choose to leave an institution, then providing individual counseling and/or referrals within the

university network, the student can make the best, informed decision possible. Additional benefits to the institution can also be realized as university-wide issues are identified, then processes can be improved which can lead to structural change in the institution.

Implications related to pedagogy are also identified. While satisfaction with faculty did positively correlate with intent to persist, the correlation was not as strong as expected (.251) and was not found to be mediated by cost-benefit appraisal. It is important to monitor student satisfaction and respond to student suggestions (Billings & Halstead, 2009).

Recommendations for Teaching Practice

Recommendations for teaching practice include a establishing a specific online orientation and/or a formalized "transition course" to assist practicing RNs returning to higher education and a review of the practice of blending pre-licensure students with adult RN students. Through the development and subsequent offering of an online "transition course", content and discussion which go beyond the standard orientation to course management technology could be provided. This course could be the counterpart to the First Year Experience courses commonly offered to traditional residential students (Tinto, 1996; Tobolowsky, 2008). While the focus of the First Year Experience course is targeted to integrate the residential student into the collegiate setting, the online "transition course" could focus on the issues specific to the RNBS student in an online course. The suggested content for a "transition course" would be student-centered, including planned discussions to address the psychological/emotional aspects of returning to/and moving through higher education, and evidence-based content which addresses the common challenges experienced by the adult online student.

Beginning the online “transition course” with ‘getting-to-know-you’ discussions in a planned manner could result in normalizing the experience of returning to school for these students who already lead full, engaged lives. Following this initial ‘easing-in phase’, providing evidence and facilitating discussions related to challenges experienced by adult online students could follow. Next, including information and discussion related to transitional periods which can be expected during the program such as honeymoon, conflict, and reintegration phases (Utley-Smith, Phillips, & Turner, 2007), and continual cost-benefit appraisal in decision-making related to education, can provide both knowledge and awareness which can normalize feelings and lead to informed decision-making regarding goal commitment.

In addition to preparing the adult student for the emotional experiences related to returning to school, exploring the practice of blending undergraduate, pre-licensure students with practicing RNs in RNBS programs is recommended. Programs designed specifically to meet the educational needs of the experienced adult RN student which build on past life and work experience may better serve these students. A curriculum which is relevant and practical to the working RN acknowledges what the adult student brings to the educational experience and supports the adult student in autonomous learning (Knowles, 1980). This curriculum could be designed to allow for immediate application of knowledge in the work setting so the adult student could maximize the learning. This application could support the connection between theory and practice for the student.

Recommendations include a review of personal teaching styles relative to online adult education. Self assessment of heavy use of lecture and passive methods may

indicate that the faculty member could benefit from learning more about the role of faculty as facilitator of learning. Through exploration of student-centered teaching and learning practices that allow the faculty to come along-side the student in his/her pursuit of learning, faculty can then support the student by scaffolding current knowledge to help move the student toward a higher level of understanding and exploration.

Recommendations for Future Research

Recommendations for future research and additional analyses, conceptual analyses, and further qualitative/quantitative study include a descriptive study reviewing the responses to open-ended questions posed which related to educational experience could provide additional depth of understanding the motivation behind persistence and attrition behaviors. The questions of interest include; 1) Why did you enroll in this program, 2) Why did you choose the online option, 3) What keeps you continuing with the program, and 4) If you have taken a break or permanently withdrawn from the program, why did you do so?

To further explore the SOAP model, structural equation modeling is suggested. Structural equation modeling can assess the adequacy and specific aspects of the model through the combination of exploratory factor analyses and multiple regression analyses (Tabachnick & Fidell, 2001). Changes to the model and subsequent instrument refinement could help inform persistence of the adult student pursuing online education.

Further recommendations include concept analyses of cost-benefit appraisal of decision-making and the intent to persist which could lead to subsequent interventional studies which address attrition and improve retention. Studies of larger, more diverse samples with additional schools of nursing are recommended which include both private

and public institutions. Including BSN students from programs where traditional, pre-licensure students and adult RN students are blended within the same classes would be of interest to explore satisfaction with curriculum, institution and faculty among pre-licensure students and experienced practitioners.

Qualitative studies involving the lived experience of students who had persisted and/or students who had left the program, either voluntarily or involuntarily could provide a rich perspective. Observational studies could provide the opportunity to observe/record thoughts, feelings and behaviors of students and could be helpful in describing the lived experience of the educational journey.

Quantitative, longitudinal studies which followed students from entrance to program completion would be useful, though barriers related to student tracking would make this challenging. Though many schools use a formula for measuring and calculating attrition, typically formulas include the number of students entering a program in a given year (cohort) and the number of students graduating. This type of measurement does not allow for tracking of individual students as they move in and out of cohorts or transfer to other programs (Kennedy, McIsaac, & Bailey, 2007).

Appendix A

Learned Resourcefulness and Student Online Academic Persistence

Section I: Educational Experiences
This section asks questions about your educational experiences in the RNBS completion online program. Please tell us whether you strongly disagree, disagree, agree or strongly agree.

SD= strongly disagree D= disagree A= agree SA= strongly agree

1. I do not have all the computer skills I need to be successful in my school work.
   SD D A SA
2. I can usually deal with most difficulties I encounter when using computers.
   SD D A SA
3. I am very unsure of my abilities to use computers.
   SD D A SA
4. I enjoy working with computers.
   SD D A SA
5. Computers make me much more productive.
   SD D A SA
6. I am confident in my abilities to use computers.
   SD D A SA
7. I find it difficult to get computers to do what I want them to.
   SD D A SA
8. I find working with computers very frustrating.
   SD D A SA
9. I consider myself a skilled computer user.
   SD D A SA
10. I am satisfied with the Financial Aid department.
    SD D NA A SA
11. I receive books/materials in a timely manner.
    SD D A SA
12. Online Support is not helpful with technology issues.
    SD D A SA
13. The administrators of this program are not helpful.
    SD D A SA
14. I would recommend this school to others.
    SD D A SA
15. I have recommended this school to others.
    SD D A SA
16. I would not attend this school again.
    SD D A SA
17. I am satisfied with the faculty in my program of study.
    SD D A SA

18. Faculty are not timely in providing assignment feedback.
SD D A SA
19. Faculty are not timely in response to questions.
SD D A SA
20. Faculty provide helpful, constructive feedback.
SD D A SA
21. Faculty have a passion for teaching and interaction with students
SD D A SA
22. As I continue with course work, I continually weigh the pros and cons of staying in the program.
SD D A SA
23. As I continue taking courses, I continually ask myself if it is 'worth it' to continue.
SD D A SA
24. As I continue taking courses, I find myself questioning whether I should continue or whether I should withdraw from my program of study.
SD D A SA
25. The benefits of continuing with my education outweigh the sacrifices made
SD D A SA
26. I am committed to completing my degree in this school at this time.
SD D A SA
27. I plan to complete my degree in this school at this time.
SD D A SA
28. I plan to complete my degree in this school but there may be times when I need to take a break from classes.
SD D A SA
29. If something comes up unexpectedly in my personal or family life, I may not be able to ever complete my degree.
SD D A SA
30. If something comes up unexpectedly in my personal or family life, I may not be able to complete my degree as soon as expected.
SD D A SA
31. This degree will help me to meet my goals
SD D A SA

For questions 32-39, please tell me whether the statement is not at all true of you to very true of you.

1= not at all true of me 2 3 4 5 6 7= very true of me

32. In this program, I prefer course material that really challenges me so I can learn new things.
33. In this program, I prefer course material that arouses my curiosity, even if it is difficult to learn.

34. The most satisfying thing for me in this program is trying to understand the content as thoroughly as possible
35. When I have the opportunity in this program, I choose course assignments that I can learn from even if they don't guarantee a good grade.
36. Getting a good grade in this program is not the most satisfying thing for me right now. R
37. The most important thing for me right now is improving my overall grade point average, so my main concern in this class is getting a good grade.
38. If I can, I want to get better grades in this program than most of the other students.
39. I want to do well in this program because it is important to show my ability to my family, friends, employer, or others.

40. To what extent do you intend to complete this program?
Very Great Extent
To Some Extent
A Small Extent
Not at All

41. To what extent do you intend to leave this program prior to completion?
Very Great Extent
To Some Extent
A Small Extent
Not at All

Section II: Narrative Questions
Please answer the following questions. Provide as much detail as you care to provide.

42. Why did you enroll in this program?
43. Why did you choose the online option?
44. What keeps you continuing with the program?
45. If you have taken a break or permanently withdrawn from the program, why did you do so?

Section III: Demographics
Please indicate the most appropriate response to the following:

46. How many years since you completed your ADN/Diploma in Nursing:
Fill in blank

47. Are you currently employed in nursing?
Yes
No

48. Are you currently receiving financial assistance from your employer for your education (tuition reimbursement)?
Yes
No

49. Please specify how many hours per week you are current employed in nursing:
Fill in blank

50. How many years have you been working as a Registered Nurse?
Fill in blank

51. What is your age?
Fill in blank

52. Gender
Female
Male

53. How many dependents do you have primary responsibility for?
Fill in blank

54. In an average week, approximately how many hours do you spend in the care of dependents?
Less than 5 hours/week
6-10 hours/week
11-15 hours/week
More than 15 hours/week

55. Race/Ethnicity
White
Black/African American
Hispanic/Latino
Asian/Pacific Islander
American Indian/Alaska Native

56. Marital Status
Married
Divorced/single
Widow/widower
Never married

57. Current GPA (on a 4.0 scale)
Fill in blank

58. As of today, please indicate how many of the required courses of the RNBS program you have successfully completed:
I am enrolled, but have not yet completed the first course
1-2 courses
3-5 courses
6-8 courses
8 or more courses
All of the courses required

59. Please indicate how many times you have started courses and then withdrawn before completion.
Never
1 time
2 times
3 or more times

60. Please indicate how many courses you have enrolled in, but not received a passing grade.
None
1 course
2 courses
3 or more courses

Self-Control Schedule

This portion of the questionnaire is designed to find out how different people view their thinking and their behavior. A statement may range from very characteristic of you to very uncharacteristic of you.

There are no right or wrong answers. I simply want to know how you feel each statement applies to you. Please answer every item, and choose only one answer for each item. Use the following code to indicate whether a statement describes your thinking or behavior:

-3 very uncharacteristic of me, extremely undescriptive
-2 rather uncharacteristic of me, quite undescriptive
-1 somewhat uncharacteristic of me, slightly undescriptive
+1 somewhat characteristic of me, slightly descriptive
+2 rather characteristic of me, quite descriptive
+3 very characteristic of me, extremely descriptive

1. When I do a boring job, I think about the less-boring parts of the job and about the reward I will receive when I finish.	-3	-2	-1	+1	+2	+3
2. When I have to do something that makes me anxious, I try to visualize how I will overcome my anxiety while doing it.	-3	-2	-1	+1	+2	+3
3. By changing my way of thinking, I am often able to change my feelings about almost anything.	-3	-2	-1	+1	+2	+3

4. I often find it difficult to overcome my feelings of nervousness and tension without outside help. -3 -2 -1 +1 +2 +3
5. When I am feeling depressed, I try to think about pleasant events. -3 -2 -1 +1 +2 +3
6. I cannot help thinking about mistakes I made. -3 -2 -1 +1 +2 +3
7. When I am faced with a difficult problem, I try to approach it in a systematic way. -3 -2 -1 +1 +2 +3
8. I usually do what I am supposed to do more quickly when someone is pressuring me. -3 -2 -1 +1 +2 +3
9. When I am faced with a difficult decision, I prefer to postpone it even if I have all the facts -3 -2 -1 +1 +2 +3
10. When I have difficulty concentrating on my reading, I look for ways to increase my concentration. -3 -2 -1 +1 +2 +3
11. When I plan to work, I remove everything that is not relevant to my work. -3 -2 -1 +1 +2 +3
12. When I try to get rid of a bad habit, I first try to find out all the reasons why I have the habit. -3 -2 -1 +1 +2 +3
13. When an unpleasant thought is bothering me, I try to think of something pleasant. -3 -2 -1 +1 +2 +3
14. If I smoked two packs of cigarettes a day, I would need some outside help to stop smoking. -3 -2 -1 +1 +2 +3
15. When I feel down, I try to act cheerful so that my mood will change. -3 -2 -1 +1 +2 +3
16. If I carried the pills with me, I would take a tranquilizer whenever I felt tense or nervous. -3 -2 -1 +1 +2 +3
17. When I am depressed, I try to keep myself busy with things I like to do. -3 -2 -1 +1 +2 +3
18. I tend to postpone unpleasant tasks even if I could perform them immediately. -3 -2 -1 +1 +2 +3
19. I need outside help to get rid of some of my bad habits. -3 -2 -1 +1 +2 +3
20. When I find it difficult to settle down and do a task I look for ways to help me settle down. -3 -2 -1 +1 +2 +3
21. Although it makes me feel bad, I cannot help thinking about all sorts of possible catastrophies. -3 -2 -1 +1 +2 +3
22. I prefer to finish a job that I have to do before I start doing things I really like. -3 -2 -1 +1 +2 +3
23. When I feel physical pain, I try not to think about it. -3 -2 -1 +1 +2 +3
24. My self esteem increases when I am able to overcome a bad habit. -3 -2 -1 +1 +2 +3
25. To overcome bad feelings that accompany failure, I often tell myself that it is not catastrophic and I can do something about it. -3 -2 -1 +1 +2 +3
26. When I feel that I am too impulsive, I tell myself to stop and think before I do anything. -3 -2 -1 +1 +2 +3

27. Even when I am terribly angry at someone, I consider my actions very carefully.	-3	-2	-1	+1	+2	+3
28. Facing the need to make a decision, I usually find out all the alternatives instead of deciding quickly and spontaneously.	-3	-2	-1	+1	+2	+3
29. Usually, I do the things I really like to do even if there are more urgent things to do.	-3	-2	-1	+1	+2	+3
30. When I realize I am going to be unavoidably late for an important meeting, I tell myself to keep calm.	-3	-2	-1	+1	+2	+3
31. When I feel pain in my body, I try to divert my thoughts from it.	-3	-2	-1	+1	+2	+3
32. When I am faced with a number of things to do, I usually plan my work.	-3	-2	-1	+1	+2	+3
33. When I am short of money, I decide to record all my expenses in order to budget more carefully in the future.	-3	-2	-1	+1	+2	+3
34. If I find it difficult to concentrate on a task, I divide it into smaller segments.	-3	-2	-1	+1	+2	+3
35. Quite often, I cannot overcome unpleasant thoughts that bother me.	-3	-2	-1	+1	+2	+3
36. When I am hungry and have no opportunity to eat, I try to divert my thoughts from my stomach or try to imagine that I am satisfied.	-3	-2	-1	+1	+2	+3

Thank you for taking the time to complete this survey!!

Scoring Instructions- Self-Control Schedule (Rosenbmaum, 1980)

1. Reverse scoring of the following eleven items: 4, 6, 8, 9, 14, 1, 18, 19, 21, 29, 35. For example: if a subject circled item 4, -3 the reverse score would be +3. Similarly -1 would be +1, -2 will be +2.
2. Sum up all the scores of the individual items. The total score of the scale could range from -108 (36 x -3) to +108 (36 x +3). For normal populations the scored is usually +25 with a standard deviation of 20.

Appendix B

Description of Instruments: Learned Resourcefulness and Student Online Academic Persistence

Instrument	Construct	No. Items
Student Online Academic Persistence	Measures variables related to student motivation and academic context on a 4-point or a 7-point response scale. (41 scaled items and 4 narrative response questions). Includes: Technology Self-efficacy Scale Intrinsic Motivation Extrinsic Motivation	28 9 4 4
Demographic Data	Gender, age, ethnicity, marital status, hours of employment, GPA.	15
Self-Control Schedule (SCS)	Measures learned resourcefulness defined as the concepts of self talk, self-efficacy, problem-solving, delay gratification on a 6- point response scale. Scores range from -180 to +180.	36
Total		96

Appendix C

Domains and Relative Concepts of the Learned Resourcefulness and Student Online Academic Persistence Questionnaire

Motivation	Context	Decision-making	Intent to Persist
❑ Technology Self-efficacy (1,2,3,4,5,6,7, 8,9) ❑ Goal Orientation-Intrinsic Motivation (32,33,34,35) ❑ Goal Orientation-Extrinsic Motivation (36,37,38,39) ❑ Goal Commitment (26,27,28,29,30, 31) ❑ Self-Control Schedule (SCS) (61-96)	❑ Satisfaction with institution (10,11,12,13,14, 15,16) ❑ Satisfaction with faculty (17,18,19,20,21)	❑ Continual Cost-benefit Appraisal (22,23,24,25)	❑ Intent to Persist (40, 41)

Appendix D

Explanatory letter to program directors of schools invited to participate in study

Subject line: Student Survey- Learned Resourcefulness and Student Online Persistence

Dear Program Director,

Thank you for agreeing to allow students in your RNBS completion online program to participate in this study. For optimal response, I would like to use a planned series of four contacts of potential participants.

Per this method I will ask that you send an initial contact, which is a pre-notice letter to all prospective participants. One week later please send the letter of invitation to participate in this study, which includes a link to the questionnaire.

To increase the response rate, I would ask that you then follow up with two reminders, each 1 week apart.

If you have questions or comments about the study, you can respond to this email or contact me, Sonia Strevy, at 1-800-621-8667, ext. 2537 or Dr. Diane M. Billings at 317-852-7124.

Appendix E

Cover letter (included in first email contact with subjects)

Subject line: Student Survey- Learned Resourcefulness and Student Online Persistence

A few days from now you will receive an email requesting that you complete an online questionnaire for an important research project being conducted by Sonia R. Strevy, a doctoral student at Indiana University Purdue University Indianapolis (IUPUI).

This study concerns the experience of students in RNBS completion online programs.

I am writing in advance because we have found many people like to know ahead of time that they will be contacted. The study is an important one that will help schools of nursing to understand the needs of students enrolled in RNBS completion online programs.

Thank you for your time and consideration. It is only with the generous help of students like you that our research can be successful.

(Please sign your name)

Appendix F

Cover letter (included in second email contact with subjects)

Subject line: Student Survey- Learned Resourcefulness and Student Online Persistence

Dear Student,

Sonia R. Strevy, a doctoral student, is asking your help in a study of students of RNBS completion online programs, which is conducted as part of her doctoral work. This study is part of an effort to learn the needs of the online student and how those needs might be better met by the university and faculty. Institutional Review Board (IRB) approval for this study has been granted by IUPUI.

We are contacting all currently enrolled students who are attending one of three RNBS completion online programs. As a benefit for the school's support of this project, the aggregated results from this survey will be shared with the school of nursing. By understanding student needs, the university and faculty can do a better job of providing services and assisting the students in our program.

To ensure participant anonymity the survey will be completed online with no traceable information via SurveyShare. Due to the manner of collection of data, the subject is protected by the anonymity of the Internet. The questionnaire is housed entirely on SurveyShare's secure Website. As a result, personal contact between the subject and researcher will not take place in reference to completion of the questionnaire. Additionally, data will be collected from a Web-based form that will NOT collect any traceable or personally identifiable information (IP address, email, name, computer name, etc.). Email addresses cannot be associated with a specific set of responses because the data is stored separately in the database.

This survey will take approximately 15-20 minutes of your time. There is minimal risk. Completion of this survey is voluntary. You may refuse to participate or withdraw at anytime without penalty. Nonparticipation or withdrawal will not be known to the investigator or to anyone at this university and therefore not impact your academic standing at this university. Possible benefits include assisting with/and the improvement of online learning educational experiences. If you have questions or comments about the study, contact Sonia at 1-800-621-8667, ext. 2537 or Dr. Diane M. Billings at 317-852-7124.

Thank you, in advance, for completing this questionnaire within the next few days. Being the survey by clicking on the link below:

(Web survey link)
Sincerely,
(Please sign your name)

Appendix G

Follow up email in 7 days (third contact):

Subject line: Student Survey- Learned Resourcefulness and Student Online Persistence

Dear Student,

About 1 week ago you were sent an email regarding a survey that asked about your experiences in online education. Many students have already responded to this request. If you have already completed and submitted this online survey, thanks so much!!

This survey will take approximately 15-20 minutes of your time. For those of you who have not yet completed the survey, I would ask that you please take a few minutes to do so at this time. It is only by hearing from nearly everyone in the program that we can be sure that the results are truly representative of students in the RNBS completion online program.

You can begin the survey by clicking on the link below:

(Web survey link)

(Please sign your name)

P.S. If you have any questions, please feel free to contact Sonia R. Strevy at Indiana Wesleyan University, 1-800-621-8667, ext. 2537 or Diane M. Billings, Chancellor's Professor Emeritus, Indiana University School of Nursing at 317-852-7124.

Appendix H

Follow up email in 14 days (fourth contact):

Subject line: Student Survey- Learned Resourcefulness and Student Online Persistence

Dear Student,

About 1 week ago you were sent a reminder regarding a survey that asked about your experiences in online education. Many students have already responded to this request. If you have already completed and submitted this online survey, thanks so much!!

This survey will take approximately 15-20 minutes of your time. For those of you who have not yet completed the survey, I would ask that you please take a few minutes to do so at this time. It is only by hearing from nearly everyone in the program that we can be sure that the results are truly representative of students in the RNBS completion online program.

You can begin the survey by clicking on the link below:

(Web survey link)

(Please sign your name)

P.S. If you have any questions, please feel free to contact Sonia R. Strevy at Indiana Wesleyan University, 1-800-621-8667, ext. 2537 or Diane M. Billings, Chancellor's Professor Emeritus, Indiana University School of Nursing at 317-852-7124.

Appendix I

Coding Sheet
Learned Resourcefulness and Student Online Academic Persistence Questionnaire

	Item #	**Code**
*r= reverse scoring		
Demographic Data Sheet	46	firstdeg
	47	emp
	48	fa
	49	hrs
	50	yrs
	51	age
	52	gen
	53	dep
	54	dcare
	55	ethn
	56	ms
	57	gpa
	58	succ
	59	wd
	60	fail
Motivation Variables		
Technology self-efficacy	1-9	tse *1, 2, *3, 4, 5, 6,*7,*8, 9
Goal commitment to complete program	26-31	goal 1, 2,*3,*4,*5, 6
Goal orientation- Intrinsic Motivation	32-35	goi 1, 2, 3, 4
Goal orientation- Extrinsic Motivation	36-39	goe *1, 2, 3 , 4
Self-Control Schedule (SCS)	61-96	scs 1-36 *r= 1, 4, 6, 8, 9, 14, 18, 19, 21, 29, 35
Context Variables		
Satisfaction with institution	10-16	sins 1, 2,*3,*4, 5, 6,*7
Satisfaction with faculty	17-21	sfac 1,*2, *3, 4, 5
Decision-making		
Continual cost-benefit appraisal	22-25	cba *1,*2,*3, 4
Narrative Questions	34-37	narrative
Intent		
Intent to persist	40, 41	pers 1, *2

Appendix J

SPSS Output of Reliability and Inter-Item Correlation

Technology Self-efficacy

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.885	.889	9

Inter-Item Correlation Matrix

	tse1	tse2	Tse3	tse4	tse5	tse6	tse7	tse8	tse9
tse1	1.000	.228	.488	.282	.258	.456	.431	.376	.425
tse2	.228	1.000	.370	.371	.371	.478	.309	.377	.449
tse3	.488	.370	1.000	.435	.343	.633	.543	.527	.558
tse4	.282	.371	.435	1.000	.557	.595	.444	.520	.553
tse5	.258	.371	.343	.557	1.000	.552	.364	.437	.470
tse6	.456	.478	.633	.595	.552	1.000	.621	.575	.729
tse7	.431	.309	.543	.444	.364	.621	1.000	.685	.581
tse8	.376	.377	.527	.520	.437	.575	.685	1.000	.548
tse9	.425	.449	.558	.553	.470	.729	.581	.548	1.000

Goal Commitment to Complete Program

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.734	.745	6

Inter-Item Correlation Matrix

	goal1	goal2	goal3	goal4	goal5	goal6
goal1	1.000	.860	.230	.297	.201	.511
goal2	.860	1.000	.185	.271	.172	.455
goal3	.230	.185	1.000	.299	.473	.134
goal4	.297	.271	.299	1.000	.421	.254
goal5	.201	.172	.473	.421	1.000	.145
goal6	.511	.455	.134	.254	.145	1.000

Goal Orientation- Extrinsic

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.497	.493	4

Inter-Item Correlation Matrix

	goe1	goe2	goe3	goe4
goe1	1.000	.057	.047	.061
goe2	.057	1.000	.375	.271
goe3	.047	.375	1.000	.361
goe4	.061	.271	.361	1.000

Goal Orientation- Intrinsic

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.788	.797	4

Inter-Item Correlation Matrix

	goi1	goi2	goi3	goi4
goi1	1.000	.706	.502	.417
goi2	.706	1.000	.454	.498
goi3	.502	.454	1.000	.392
goi4	.417	.498	.392	1.000

Satisfaction with Institution

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.790	.792	7

Inter-Item Correlation Matrix

	sins1	sins2	sins3	sins4	sins5	sins6	sins7
sins1	1.000	.267	.101	.257	.295	.276	.177
sins2	.267	1.000	.211	.294	.278	.223	.219
sins3	.101	.211	1.000	.403	.295	.317	.324
sins4	.257	.294	.403	1.000	.443	.432	.420
sins5	.295	.278	.295	.443	1.000	.787	.714
sins6	.276	.223	.317	.432	.787	1.000	.673
sins7	.177	.219	.324	.420	.714	.673	1.000

Satisfaction with Faculty

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.857	.860	5

Inter-Item Correlation Matrix

	sfac1	sfac2	sfac3	sfac4	sfac5
sfac1	1.000	.483	.497	.521	.576
sfac2	.483	1.000	.723	.503	.502
sfac3	.497	.723	1.000	.539	.518
sfac4	.521	.503	.539	1.000	.651
sfac5	.576	.502	.518	.651	1.000

Learned Resourcefulness

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.828	.842	36

Inter-Item Correlation Matrix

	scs1	scs2	scs3	scs4	scs5	scs6	scs7	scs8	scs9	scs10	scs11
	scs12	scs13	scs14	scs15	scs16	scs17	scs18	scs19	scs20	scs21	scs22
	scs23	scs24	scs25	scs26	scs27	scs28	scs29	scs30	scs31	scs32	scs33
	scs34	scs35	scs36								
scs1	1.000	.351	.311	.056	.297	.037	.223	.011	-.040	.293	.214
	.168	.251	.070	.241	-.004	.176	-.122	.004	.213	.041	.213
	.112	.200	.232	.229	.244	.207	-.091	.234	.157	.217	.197
	.221	-.036	.183								
scs2	.351	1.000	.336	-.007	.310	.042	.190	.046	-.085	.277	.234
	.271	.279	.064	.249	-.088	.189	-.134	-.052	.247	-.004	.247
	.148	.232	.238	.316	.179	.234	-.057	.240	.175	.289	.211
	.200	-.032	.181								
scs3	.311	.336	1.000	-.025	.337	-.119	.264	.016	-.120	.266	.220
	.230	.352	.051	.318	-.101	.235	-.116	-.007	.230	-.085	.190
	.126	.190	.334	.246	.254	.186	-.004	.317	.207	.248	.171
	.215	-.172	.216								
scs4	.056	-.007	-.025	1.000	.019	.301	-.129	.122	.240	-.030	-.011
	.063	.041	.136	.048	.308	.005	.189	.309	.069	.329	-.078
	-.025	.010	-.128	-.050	-.130	-.078	.160	-.061	.024	-.120	-.019
	-.066	.418	-.003								
scs5	.297	.310	.337	.019	1.000	.034	.278	.017	-.046	.255	.160
	.170	.521	-.007	.428	-.081	.390	-.052	-.023	.253	-.005	.154
	.185	.252	.305	.343	.241	.182	-.012	.274	.276	.256	.158
	.211	-.096	.238								
scs6	.037	.042	-.119	.301	.034	1.000	.011	.110	.204	.025	.057
	.039	.006	.048	.039	.246	.027	.247	.209	.156	.355	.002
	.070	.177	-.017	.051	-.054	.074	.099	-.055	.076	.064	.025
	.000	.429	.070								
scs7	.223	.190	.264	-.129	.278	.011	1.000	-.019	-.186	.269	.292
	.199	.264	-.061	.234	-.161	.214	-.223	-.117	.166	-.088	.295
	.166	.284	.304	.281	.278	.410	-.193	.204	.221	.497	.217
	.398	-.197	.178								
scs8	.011	.046	.016	.122	.017	.110	-.019	1.000	.176	.047	-.064
	.023	.071	.067	.071	.139	.058	.231	.139	.075	.158	-.112
	.008	.096	.033	.013	-.067	-.084	.219	-.048	.033	-.040	.013
	-.008	.134	-.027								
scs9	-.040	-.085	-.120	.240	-.046	.204	-.186	.176	1.000	-.079	-.157
	-.033	-.065	.070	-.032	.232	.002	.526	.225	.010	.248	-.259
	.001	-.040	-.114	-.037	-.127	-.048	.338	-.037	-.012	-.203	-.027
	-.145	.279	-.069								
scs10	.293	.277	.266	-.030	.255	.025	.269	.047	-.079	1.000	.328
	.330	.332	.002	.284	-.078	.226	-.122	-.027	.348	-.015	.213
	.081	.269	.230	.267	.278	.306	-.167	.278	.115	.294	.195
	.272	-.084	.204								
scs11	.214	.234	.220	-.011	.160	.057	.292	-.064	-.157	.328	1.000
	.388	.239	.075	.190	-.074	.190	-.208	.035	.283	-.081	.392
	.148	.261	.259	.278	.220	.283	-.218	.195	.179	.360	.229
	.312	-.034	.220								
scs12	.168	.271	.230	.063	.170	.039	.199	.023	-.033	.330	.388
	1.000	.273	.055	.198	-.028	.169	-.119	.003	.298	-.018	.265
	.064	.239	.334	.290	.247	.293	-.151	.219	.122	.255	.283
	.282	-.014	.099								
scs13	.251	.279	.352	.041	.521	.006	.264	.071	-.065	.332	.239
	.273	1.000	.027	.455	-.092	.365	-.056	.006	.319	-.031	.157
	.174	.288	.371	.292	.258	.274	-.001	.340	.322	.315	.190
	.289	-.112	.242								
scs14	.070	.064	.051	.136	-.007	.048	-.061	.067	.070	.002	.075
	.055	.027	1.000	.068	.177	.046	.149	.544	.112	.126	.012

	.048	.176	.084	.076	-.055	-.017	.077	.061	.076	.009	-.047
	.072	.120	.029								
scs15	.241	.249	.318	.048	.428	.039	.234	.071	-.032	.284	.190
	.198	.455	.068	1.000	-.078	.509	-.044	.054	.340	.043	.158
	.250	.324	.340	.330	.255	.190	.035	.259	.340	.264	.178
	.250	-.025	.301								
scs16	-.004	-.088	-.101	.308	-.081	.246	-.161	.139	.232	-.078	-.074
	-.028	-.092	.177	-.078	1.000	.011	.265	.343	.071	.310	-.163
	-.038	-.032	-.133	-.109	-.243	-.123	.199	-.101	-.076	-.185	-.114
	-.125	.300	-.002								
scs17	.176	.189	.235	.005	.390	.027	.214	.058	.002	.226	.190
	.169	.365	.046	.509	.011	1.000	.020	.035	.350	.088	.157
	.300	.339	.329	.331	.156	.193	.017	.260	.322	.228	.193
	.225	-.026	.213								
scs18	-.122	-.134	-.116	.189	-.052	.247	-.223	.231	.526	-.122	-.208
	-.119	-.056	.149	-.044	.265	.020	1.000	.339	.031	.238	-.323
	.035	.011	-.093	-.032	-.202	-.082	.452	-.094	-.023	-.262	-.121
	-.201	.287	-.080								
scs19	.004	-.052	-.007	.309	-.023	.209	-.117	.139	.225	-.027	.035
	.003	.006	.544	.054	.343	.035	.339	1.000	.159	.231	-.050
	.068	.159	-.010	-.011	-.150	-.054	.186	.024	.072	-.066	-.034
	-.009	.262	-.018								
scs20	.213	.247	.230	.069	.253	.156	.166	.075	.010	.348	.283
	.298	.319	.112	.340	.071	.350	.031	.159	1.000	.042	.184
	.165	.367	.376	.360	.147	.217	.018	.318	.228	.226	.179
	.227	.059	.249								
scs21	.041	-.004	-.085	.329	-.005	.355	-.088	.158	.248	-.015	-.081
	-.018	-.031	.126	.043	.310	.088	.238	.231	.042	1.000	-.085
	-.009	.066	-.126	-.032	-.148	-.053	.222	-.109	-.048	-.057	-.021
	-.048	.517	-.045								
scs22	.213	.247	.190	-.078	.154	.002	.295	-.112	-.259	.213	.392
	.265	.157	.012	.158	-.163	.157	-.323	-.050	.184	-.085	1.000
	.179	.272	.297	.219	.234	.285	-.367	.141	.126	.415	.199
	.276	-.076	.187								
scs23	.112	.148	.126	-.025	.185	.070	.166	.008	.001	.081	.148
	.064	.174	.048	.250	-.038	.300	.035	.068	.165	-.009	.179
	1.000	.227	.185	.153	.158	.180	-.015	.202	.694	.197	.115
	.131	-.014	.223								
scs24	.200	.232	.190	.010	.252	.177	.284	.096	-.040	.269	.261
	.239	.288	.176	.324	-.032	.339	.011	.159	.367	.066	.272
	.227	1.000	.482	.356	.245	.321	.013	.324	.284	.317	.145
	.271	.070	.178								
scs25	.232	.238	.334	-.128	.305	-.017	.304	.033	-.114	.230	.259
	.334	.371	.084	.340	-.133	.329	-.093	-.010	.376	-.126	.297
	.185	.482	1.000	.489	.349	.383	-.059	.408	.299	.354	.285
	.400	-.163	.219								
scs26	.229	.316	.246	-.050	.343	.051	.281	.013	-.037	.267	.278
	.290	.292	.076	.330	-.109	.331	-.032	-.011	.360	-.032	.219
	.153	.356	.489	1.000	.310	.394	.036	.366	.240	.357	.260
	.260	-.043	.265								
scs27	.244	.179	.254	-.130	.241	-.054	.278	-.067	-.127	.278	.220
	.247	.258	-.055	.255	-.243	.156	-.202	-.150	.147	-.148	.234
	.158	.245	.349	.310	1.000	.510	-.194	.288	.241	.359	.231
	.244	-.193	.203								
scs28	.207	.234	.186	-.078	.182	.074	.410	-.084	-.048	.306	.283
	.293	.274	-.017	.190	-.123	.193	-.082	-.054	.217	-.053	.285
	.180	.321	.383	.394	.510	1.000	-.111	.308	.242	.481	.261
	.336	-.068	.188								
scs29	-.091	-.057	-.004	.160	-.012	.099	-.193	.219	.338	-.167	-.218
	-.151	-.001	.077	.035	.199	.017	.452	.186	.018	.222	-.367
	-.015	.013	-.059	.036	-.194	-.111	1.000	.042	.024	-.208	-.107
	-.161	.196	-.063								

scs30	.234	.240	.317	-.061	.274	-.055	.204	-.048	-.037	.278	.195
	.219	.340	.061	.259	-.101	.260	-.094	.024	.318	-.109	.141
	.202	.324	.408	.366	.288	.308	.042	1.000	.296	.302	.186
	.278	-.137	.234								
scs31	.157	.175	.207	.024	.276	.076	.221	.033	-.012	.115	.179
	.122	.322	.076	.340	-.076	.322	-.023	.072	.228	-.048	.126
	.694	.284	.299	.240	.241	.242	.024	.296	1.000	.254	.174
	.203	-.079	.344								
scs32	.217	.289	.248	-.120	.256	.064	.497	-.040	-.203	.294	.360
	.255	.315	.009	.264	-.185	.228	-.262	-.066	.226	-.057	.415
	.197	.317	.354	.357	.359	.481	-.208	.302	.254	1.000	.318
	.506	-.114	.169								
scs33	.197	.211	.171	-.019	.158	.025	.217	.013	-.027	.195	.229
	.283	.190	-.047	.178	-.114	.193	-.121	-.034	.179	-.021	.199
	.115	.145	.285	.260	.231	.261	-.107	.186	.174	.318	1.000
	.369	-.018	.221								
scs34	.221	.200	.215	-.066	.211	.000	.398	-.008	-.145	.272	.312
	.282	.289	.072	.250	-.125	.225	-.201	-.009	.227	-.048	.276
	.131	.271	.400	.260	.244	.336	-.161	.278	.203	.506	.369
	1.000	-.104	.168								
scs35	-.036	-.032	-.172	.418	-.096	.429	-.197	.134	.279	-.084	-.034
	-.014	-.112	.120	-.025	.300	-.026	.287	.262	.059	.517	-.076
	-.014	.070	-.163	-.043	-.193	-.068	.196	-.137	-.079	-.114	-.018
	-.104	1.000	-.018								
scs36	.183	.181	.216	-.003	.238	.070	.178	-.027	-.069	.204	.220
	.099	.242	.029	.301	-.002	.213	-.080	-.018	.249	-.045	.187
	.223	.178	.219	.265	.203	.188	-.063	.234	.344	.169	.221
	.168	-.018	1.000								

Cost-Benefit Appraisal

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.849	.841	4

Inter-Item Correlation Matrix

	cba1	cba2	cba3	cba4
cba1	1.000	.750	.701	.341
cba2	.750	1.000	.798	.411
cba3	.701	.798	1.000	.416
cba4	.341	.411	.416	1.000

Intent to Persist

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.675	.735	2

Inter-Item Correlation Matrix

	pers1	pers2
pers1	1.000	.581
pers2	.581	1.000

Appendix K

SPSS Output of Correlations

Correlations

		Age	Hrs/week employed in nursing	GPA
Age	Pearson Correlation	1	-.017	-.049
	Sig. (2-tailed)		.646	.221
	N	701	698	632
Hrs/week employed in nursing	Pearson Correlation	-.017	1	.005
	Sig. (2-tailed)	.646		.904
	N	698	700	630
GPA	Pearson Correlation	-.049	.005	1
	Sig. (2-tailed)	.221	.904	
	N	632	630	633

Correlations

		First degree	Yrs working as RN	Dependents	Age
First degree	Pearson Correlation	1	.965(**)	-.072	.687(**)
	Sig. (2-tailed)		.000	.057	.000
	N	701	700	701	698
Yrs working as RN	Pearson Correlation	.965(**)	1	-.096(*)	.690(**)
	Sig. (2-tailed)	.000		.011	.000
	N	700	703	703	700
Dependents	Pearson Correlation	-.072	-.096(*)	1	-.084(*)
	Sig. (2-tailed)	.057	.011		.026
	N	701	703	704	701
Age	Pearson Correlation	.687(**)	.690(**)	-.084(*)	1
	Sig. (2-tailed)	.000	.000	.026	
	N	698	700	701	701

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Correlations

		Technology self-efficacy	Goal orientation- intrinsic
Technology self-efficacy	Pearson Correlation	1	.131(**)
	Sig. (2-tailed)		.001
	N	704	703
Goal orientation- intrinsic	Pearson Correlation	.131(**)	1
	Sig. (2-tailed)	.001	
	N	703	703

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Technology self-efficacy	Goal orientation- extrinsic
Technology self-efficacy	Pearson Correlation	1	.077(*)
	Sig. (2-tailed)		.042
	N	704	703
Goal orientation- extrinsic	Pearson Correlation	.077(*)	1
	Sig. (2-tailed)	.042	
	N	703	703

* Correlation is significant at the 0.05 level (2-tailed).

Correlations

		Technology self-efficacy	Learned resourcefulness-total score
Technology self-efficacy	Pearson Correlation	1	-.074
	Sig. (2-tailed)		.050
	N	704	704
Learned resourcefulness-total score	Pearson Correlation	-.074	1
	Sig. (2-tailed)	.050	
	N	704	704

Correlations

		Age	Technology self-efficacy	Satisfaction with institution	Satisfaction with faculty
Age	Pearson Correlation	1	-.125(**)	.009	-.026
	Sig. (2-tailed)		.001	.820	.490
	N	701	701	701	696
Technology self-efficacy	Pearson Correlation	-.125(**)	1	.239(**)	.258(**)
	Sig. (2-tailed)	.001		.000	.000
	N	701	704	704	699
Satisfaction with institution	Pearson Correlation	.009	.239(**)	1	.609(**)
	Sig. (2-tailed)	.820	.000		.000
	N	701	704	704	699
Satisfaction with faculty	Pearson Correlation	-.026	.258(**)	.609(**)	1
	Sig. (2-tailed)	.490	.000	.000	
	N	696	699	699	699

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Age	Goal orientation-intrinsic	Goal orientation-extrinsic	Learned resourcefulness-total score
Age	Pearson Correlation	1	.036	-.064	.052
	Sig. (2-tailed)		.336	.089	.172
	N	701	700	700	701
Goal orientation- intrinsic	Pearson Correlation	.036	1	.059	.198(**)
	Sig. (2-tailed)	.336		.119	.000
	N	700	703	703	703
Goal orientation- extrinsic	Pearson Correlation	-.064	.059	1	.180(**)
	Sig. (2-tailed)	.089	.119		.000
	N	700	703	703	703
Learned resourcefulness-total score	Pearson Correlation	.052	.198(**)	.180(**)	1
	Sig. (2-tailed)	.172	.000	.000	
	N	701	703	703	704

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Age	Continual cost-benefit appraisal	Goal commitment to complete program	Intent to persist
Age	Pearson Correlation	1	-.049	-.150(**)	-.114(**)
	Sig. (2-tailed)		.200	.000	.003
	N	701	697	700	701
Continual cost-benefit appraisal	Pearson Correlation	-.049	1	.647(**)	.482(**)
	Sig. (2-tailed)	.200		.000	.000
	N	697	700	700	700
Goal commitment to complete program	Pearson Correlation	-.150(**)	.647(**)	1	.468(**)
	Sig. (2-tailed)	.000	.000		.000
	N	700	700	703	703
Intent to persist	Pearson Correlation	-.114(**)	.482(**)	.468(**)	1
	Sig. (2-tailed)	.003	.000	.000	
	N	701	700	703	704

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		GPA	First degree	Yrs working as RN	Dependents
GPA	Pearson Correlation	1	.055	.059	-.060
	Sig. (2-tailed)		.170	.140	.131
	N	633	630	632	633
First degree	Pearson Correlation	.055	1	.965(**)	-.072
	Sig. (2-tailed)	.170		.000	.057
	N	630	701	700	701
Yrs working as RN	Pearson Correlation	.059	.965(**)	1	-.096(*)
	Sig. (2-tailed)	.140	.000		.011
	N	632	700	703	703
Dependents	Pearson Correlation	-.060	-.072	-.096(*)	1
	Sig. (2-tailed)	.131	.057	.011	
	N	633	701	703	704

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Correlations

		GPA	Technology self-efficacy	Satisfaction with institution	Satisfaction with faculty
GPA	Pearson Correlation	1	.059	.113(**)	.054
	Sig. (2-tailed)		.137	.004	.178
	N	633	633	633	629
Technology self-efficacy	Pearson Correlation	.059	1	.239(**)	.258(**)
	Sig. (2-tailed)	.137		.000	.000
	N	633	704	704	699
Satisfaction with institution	Pearson Correlation	.113(**)	.239(**)	1	.609(**)
	Sig. (2-tailed)	.004	.000		.000
	N	633	704	704	699
Satisfaction with faculty	Pearson Correlation	.054	.258(**)	.609(**)	1
	Sig. (2-tailed)	.178	.000	.000	
	N	629	699	699	699

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		GPA	Continual cost-benefit appraisal	Goal commitment to complete program	Intent to persist
GPA	Pearson Correlation	1	.049	.075	.042
	Sig. (2-tailed)		.220	.061	.293
	N	633	629	632	633
Continual cost-benefit appraisal	Pearson Correlation	.049	1	.647(**)	.482(**)
	Sig. (2-tailed)	.220		.000	.000
	N	629	700	700	700
Goal commitment to complete program	Pearson Correlation	.075	.647(**)	1	.468(**)
	Sig. (2-tailed)	.061	.000		.000
	N	632	700	703	703
Intent to persist	Pearson Correlation	.042	.482(**)	.468(**)	1
	Sig. (2-tailed)	.293	.000	.000	
	N	633	700	703	704

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		GPA	Goal orientation-intrinsic	Goal orientation-extrinsic	Learned resourcefulness-total score
GPA	Pearson Correlation	1	-.008	.052	-.049
	Sig. (2-tailed)		.839	.191	.220
	N	633	632	632	633
Goal orientation- intrinsic	Pearson Correlation	-.008	1	.059	.198(**)
	Sig. (2-tailed)	.839		.119	.000
	N	632	703	703	703
Goal orientation- extrinsic	Pearson Correlation	.052	.059	1	.180(**)
	Sig. (2-tailed)	.191	.119		.000
	N	632	703	703	703
Learned resourcefulness-total score	Pearson Correlation	-.049	.198(**)	.180(**)	1
	Sig. (2-tailed)	.220	.000	.000	
	N	633	703	703	704

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Hrs/week employed in nursing	Technology self-efficacy	Satisfaction with institution	Satisfaction with faculty
Hrs/week employed in nursing	Pearson Correlation	1	.023	-.015	.024
	Sig. (2-tailed)		.535	.692	.529
	N	700	700	700	695
Technology self-efficacy	Pearson Correlation	.023	1	.239(**)	.258(**)
	Sig. (2-tailed)	.535		.000	.000
	N	700	704	704	699
Satisfaction with institution	Pearson Correlation	-.015	.239(**)	1	.609(**)
	Sig. (2-tailed)	.692	.000		.000
	N	700	704	704	699
Satisfaction with faculty	Pearson Correlation	.024	.258(**)	.609(**)	1
	Sig. (2-tailed)	.529	.000	.000	
	N	695	699	699	699

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Hrs/week employed in nursing	Goal orientation-intrinsic	Goal orientation-extrinsic	Learned resourcefulness-total score
Hrs/week employed in nursing	Pearson Correlation	1	-.036	.010	-.066
	Sig. (2-tailed)		.345	.788	.083
	N	700	699	699	700
Goal orientation- intrinsic	Pearson Correlation	-.036	1	.059	.198(**)
	Sig. (2-tailed)	.345		.119	.000
	N	699	703	703	703
Goal orientation- extrinsic	Pearson Correlation	.010	.059	1	.180(**)
	Sig. (2-tailed)	.788	.119		.000
	N	699	703	703	703
Learned resourcefulness-total score	Pearson Correlation	-.066	.198(**)	.180(**)	1
	Sig. (2-tailed)	.083	.000	.000	
	N	700	703	703	704

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Hrs/week employed in nursing	Continual cost-benefit appraisal	Goal commitment to complete program	Intent to persist
Hrs/week employed in nursing	Pearson Correlation	1	.005	-.011	.075(*)
	Sig. (2-tailed)		.897	.776	.046
	N	700	696	699	700
Continual cost-benefit appraisal	Pearson Correlation	.005	1	.647(**)	.482(**)
	Sig. (2-tailed)	.897		.000	.000
	N	696	700	700	700
Goal commitment to complete program	Pearson Correlation	-.011	.647(**)	1	.468(**)
	Sig. (2-tailed)	.776	.000		.000
	N	699	700	703	703
Intent to persist	Pearson Correlation	.075(*)	.482(**)	.468(**)	1
	Sig. (2-tailed)	.046	.000	.000	
	N	700	700	703	704

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Dependents	Technology self-efficacy	Satisfaction with institution	Satisfaction with faculty
Dependents	Pearson Correlation	1	-.018	-.020	-.012
	Sig. (2-tailed)		.627	.592	.761
	N	704	704	704	699
Technology self-efficacy	Pearson Correlation	-.018	1	.239(**)	.258(**)
	Sig. (2-tailed)	.627		.000	.000
	N	704	704	704	699
Satisfaction with institution	Pearson Correlation	-.020	.239(**)	1	.609(**)
	Sig. (2-tailed)	.592	.000		.000
	N	704	704	704	699
Satisfaction with faculty	Pearson Correlation	-.012	.258(**)	.609(**)	1
	Sig. (2-tailed)	.761	.000	.000	
	N	699	699	699	699

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Dependents	Goal orientation- intrinsic	Goal orientation- extrinsic	Learned resourcefulness- total score
Dependents	Pearson Correlation	1	.024	.036	-.051
	Sig. (2-tailed)		.529	.343	.174
	N	704	703	703	704
Goal orientation- intrinsic	Pearson Correlation	.024	1	.059	.198(**)
	Sig. (2-tailed)	.529		.119	.000
	N	703	703	703	703
Goal orientation- extrinsic	Pearson Correlation	.036	.059	1	.180(**)
	Sig. (2-tailed)	.343	.119		.000
	N	703	703	703	703
Learned resourcefulness- total score	Pearson Correlation	-.051	.198(**)	.180(**)	1
	Sig. (2-tailed)	.174	.000	.000	
	N	704	703	703	704

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Dependents	Continual cost-benefit appraisal	Goal commitment to complete program	Intent to persist
Dependents	Pearson Correlation	1	-.075(*)	-.068	.025
	Sig. (2-tailed)		.046	.072	.501
	N	704	700	703	704
Continual cost-benefit appraisal	Pearson Correlation	-.075(*)	1	.647(**)	.482(**)
	Sig. (2-tailed)	.046		.000	.000
	N	700	700	700	700
Goal commitment to complete program	Pearson Correlation	-.068	.647(**)	1	.468(**)
	Sig. (2-tailed)	.072	.000		.000
	N	703	700	703	703
Intent to persist	Pearson Correlation	.025	.482(**)	.468(**)	1
	Sig. (2-tailed)	.501	.000	.000	
	N	704	700	703	704

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Continual cost-benefit appraisal	Goal commitment to complete program	Intent to persist
Continual cost-benefit appraisal	Pearson Correlation	1	.647(**)	.482(**)
	Sig. (2-tailed)		.000	.000
	N	700	700	700
Goal commitment to complete program	Pearson Correlation	.647(**)	1	.468(**)
	Sig. (2-tailed)	.000		.000
	N	700	703	703
Intent to persist	Pearson Correlation	.482(**)	.468(**)	1
	Sig. (2-tailed)	.000	.000	
	N	700	703	704

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Continual cost-benefit appraisal	Technology self-efficacy	Satisfaction with institution	Satisfaction with faculty
Continual cost-benefit appraisal	Pearson Correlation	1	.288(**)	.495(**)	.394(**)
	Sig. (2-tailed)		.000	.000	.000
	N	700	700	700	697
Technology self-efficacy	Pearson Correlation	.288(**)	1	.239(**)	.258(**)
	Sig. (2-tailed)	.000		.000	.000
	N	700	704	704	699
Satisfaction with institution	Pearson Correlation	.495(**)	.239(**)	1	.609(**)
	Sig. (2-tailed)	.000	.000		.000
	N	700	704	704	699
Satisfaction with faculty	Pearson Correlation	.394(**)	.258(**)	.609(**)	1
	Sig. (2-tailed)	.000	.000	.000	
	N	697	699	699	699

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Continual cost-benefit appraisal	Goal orientation - intrinsic	Goal orientation-extrinsic	Learned resourcefulness-total score
Continual cost-benefit appraisal	Pearson Correlation	1	.205(**)	.006	-.016
	Sig. (2-tailed)		.000	.884	.682
	N	700	700	700	700
Goal orientation-intrinsic	Pearson Correlation	.205(**)	1	.059	.198(**)
	Sig. (2-tailed)	.000		.119	.000
	N	700	703	703	703
Goal orientation-extrinsic	Pearson Correlation	.006	.059	1	.180(**)
	Sig. (2-tailed)	.884	.119		.000
	N	700	703	703	703
Learned resourcefulness-total score	Pearson Correlation	-.016	.198(**)	.180(**)	1
	Sig. (2-tailed)	.682	.000	.000	
	N	700	703	703	704

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Goal commitment to complete program	Technology self-efficacy	Satisfaction with institution	Satisfaction with faculty
Goal commitment to complete program	Pearson Correlation	1	.259(**)	.439(**)	.307(**)
	Sig. (2-tailed)		.000	.000	.000
	N	703	703	703	698
Technology self-efficacy	Pearson Correlation	.259(**)	1	.239(**)	.258(**)
	Sig. (2-tailed)	.000		.000	.000
	N	703	704	704	699
Satisfaction with institution	Pearson Correlation	.439(**)	.239(**)	1	.609(**)
	Sig. (2-tailed)	.000	.000		.000
	N	703	704	704	699
Satisfaction with faculty	Pearson Correlation	.307(**)	.258(**)	.609(**)	1
	Sig. (2-tailed)	.000	.000	.000	
	N	698	699	699	699

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Goal commitment to complete program	Goal orientation-intrinsic	Goal orientation - extrinsic	Learned resourcefulness-total score
Goal commitment to complete program	Pearson Correlation	1	.182(**)	.080(*)	-.001
	Sig. (2-tailed)		.000	.035	.972
	N	703	702	702	703
Goal orientation-intrinsic	Pearson Correlation	.182(**)	1	.059	.198(**)
	Sig. (2-tailed)	.000		.119	.000
	N	702	703	703	703
Goal orientation-extrinsic	Pearson Correlation	.080(*)	.059	1	.180(**)
	Sig. (2-tailed)	.035	.119		.000
	N	702	703	703	703
Learned resourcefulness-total score	Pearson Correlation	-.001	.198(**)	.180(**)	1
	Sig. (2-tailed)	.972	.000	.000	
	N	703	703	703	704

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Correlations

		Intent to persist	Technology self-efficacy	Satisfaction with institution	Satisfaction with faculty
Intent to persist	Pearson Correlation	1	.183(**)	.304(**)	.251(**)
	Sig. (2-tailed)		.000	.000	.000
	N	704	704	704	699
Technology self-efficacy	Pearson Correlation	.183(**)	1	.239(**)	.258(**)
	Sig. (2-tailed)	.000		.000	.000
	N	704	704	704	699
Satisfaction with institution	Pearson Correlation	.304(**)	.239(**)	1	.609(**)
	Sig. (2-tailed)	.000	.000		.000
	N	704	704	704	699
Satisfaction with faculty	Pearson Correlation	.251(**)	.258(**)	.609(**)	1
	Sig. (2-tailed)	.000	.000	.000	
	N	699	699	699	699

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Intent to persist	Goal orientation- intrinsic	Goal orientation- extrinsic	Learned resourcefulness- total score
Intent to persist	Pearson Correlation	1	.166(**)	.010	.028
	Sig. (2-tailed)		.000	.782	.465
	N	704	703	703	704
Goal orientation- intrinsic	Pearson Correlation	.166(**)	1	.059	.198(**)
	Sig. (2-tailed)	.000		.119	.000
	N	703	703	703	703
Goal orientation- extrinsic	Pearson Correlation	.010	.059	1	.180(**)
	Sig. (2-tailed)	.782	.119		.000
	N	703	703	703	703
Learned resourcefulness- total score	Pearson Correlation	.028	.198(**)	.180(**)	1
	Sig. (2-tailed)	.465	.000	.000	
	N	704	703	703	704

** Correlation is significant at the 0.01 level (2-tailed).

Appendix L

SPSS Output of Linear Regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.492(a)	.242	.235	.44318

a Predictors: (Constant), Learned resourcefulness-total score, Goal commitment to complete program, Goal orientation- extrinsic, Goal orientation- intrinsic, Technology self-efficacy, Satisfaction with faculty, Satisfaction with institution

b Dependent Variable: Intent to persist

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.315	7	6.188	31.506	.000(a)
	Residual	135.519	690	.196		
	Total	178.834	697			

a Predictors: (Constant), Learned resourcefulness-total score, Goal commitment to complete program, Goal orientation- extrinsic, Goal orientation- intrinsic, Technology self-efficacy, Satisfaction with faculty, Satisfaction with institution

b Dependent Variable: Intent to persist

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	1.783	.171		10.425	.000
	Technology self-efficacy	.046	.038	.043	1.215	.225
	Satisfaction with institution	.078	.051	.068	1.527	.127
	Satisfaction with faculty	.065	.043	.064	1.497	.135
	Goal commitment to complete program	.442	.042	.399	10.565	.000
	Goal orientation- intrinsic	.028	.016	.063	1.797	.073
	Goal orientation- extrinsic	-.012	.015	-.029	-.847	.397
	Learned resourcefulness-total score	.000	.001	.016	.472	.637

a Dependent Variable: Intent to persist

Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.0745	4.4072	3.7837	.24929	698
Residual	-2.60320	.87099	.00000	.44094	698
Std. Predicted Value	-2.845	2.501	.000	1.000	698
Std. Residual	-5.874	1.965	.000	.995	698

a Dependent Variable: Intent to persist

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.704(a)	.495	.490	.47823

a Predictors: (Constant), Learned resourcefulness-total score, Goal commitment to complete program, Goal orientation- extrinsic, Goal orientation- intrinsic, Technology self-efficacy, Satisfaction with faculty, Satisfaction with institution

b Dependent Variable: Continual cost/benefit appraisal

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	154.660	7	22.094	96.607	.000(a)
	Residual	157.576	689	.229		
	Total	312.236	696			

a Predictors: (Constant), Learned resourcefulness-total score, Goal commitment to complete program, Goal orientation- extrinsic, Goal orientation- intrinsic, Technology self-efficacy, Satisfaction with faculty, Satisfaction with institution

b Dependent Variable: Continual cost/benefit appraisal

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	-1.060	.185		-5.716	.000
	Technology self-efficacy	.118	.041	.084	2.895	.004
	Satisfaction with institution	.290	.055	.191	5.247	.000
	Satisfaction with faculty	.123	.047	.092	2.648	.008
	Goal commitment to complete program	.745	.045	.507	16.479	.000
	Goal orientation- intrinsic	.035	.017	.059	2.071	.039
	Goal orientation- extrinsic	-.020	.016	-.035	-1.248	.213
	Learned resourcefulness-total score	-.001	.001	-.034	-1.190	.234

a Dependent Variable: Continual cost/benefit appraisal

Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.6050	4.1691	2.9121	.47139	697
Residual	-1.80611	1.58885	.00000	.47582	697
Std. Predicted Value	-2.773	2.667	.000	1.000	697
Std. Residual	-3.777	3.322	.000	.995	697

a Dependent Variable: Continual cost/benefit appraisal

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.527(a)	.278	.270	.42370

a Predictors: (Constant), Continual cost/benefit appraisal, Goal orientation- extrinsic, Learned resourcefulness-total score, Goal orientation- intrinsic, Technology self-efficacy, Satisfaction with faculty, Goal commitment to complete program, Satisfaction with institution
b Dependent Variable: Intent to persist

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.566	8	5.946	33.121	.000(a)
	Residual	123.508	688	.180		
	Total	171.074	696			

a Predictors: (Constant), Continual cost/benefit appraisal, Goal orientation- extrinsic, Learned resourcefulness-total score, Goal orientation- intrinsic, Technology self-efficacy, Satisfaction with faculty, Goal commitment to complete program, Satisfaction with institution
b Dependent Variable: Intent to persist

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	2.088	.168		12.422	.000
	Technology self-efficacy	.025	.036	.024	.681	.496
	Satisfaction with institution	.003	.050	.003	.068	.946
	Satisfaction with faculty	.032	.042	.032	.761	.447
	Goal commitment to complete program	.275	.047	.253	5.819	.000
	Goal orientation- intrinsic	.022	.015	.050	1.477	.140
	Goal orientation- extrinsic	-.010	.014	-.024	-.723	.470
	Learned resourcefulness-total score	.001	.001	.023	.666	.506
	Continual cost-benefit appraisal	.213	.034	.288	6.320	.000

a Dependent Variable: Intent to persist

Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.9684	4.3951	3.7877	.26142	697
Residual	-2.58618	.91719	.00000	.42125	697
Std. Predicted Value	-3.134	2.324	.000	1.000	697
Std. Residual	-6.104	2.165	.000	.994	697

a Dependent Variable: Intent to persist

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CURRICULUM VITA

Sonia R. Strevy

EDUCATION

Degree Granting Institution	Degree	Date Awarded
Indiana University- Indianapolis	PhD in Nursing	May, 2009
Indiana Wesleyan University	15 hrs. toward MA in Community Counseling	2001-2003
Ball State University	MS in Nursing Education	1993
Indiana University- Kokomo	BSN in Nursing	1989
Central Arizona College	ASN in Nursing	1984
Tucker Career Center	LPN in Nursing	1976

PROFESSIONAL MEMBERSHIPS

Indiana Association Healthcare Quality
National Association Healthcare Quality
National League for Nursing
Sigma Theta Tau International
Midwest Nursing Research Society

FELLOWSHIPS/GRANTS

Granting Agency	Date Awarded
U.S. Department of Energy (#DE-FG02-08CH11544)	2008
IUPUI Research Incentive Fellowship	2006
IUPUI Fellowship	2005

ACADEMIC COMMITTEES

Committee	Dates
IWU Academic Affairs Council	2007-2008
IWU National League for Nursing Ambassador	2007-2008
IWU Faculty Senate	2007-2008

CLINICAL APPOINTMENTS

Title	Dates
Staff RN, Intensive-Coronary Care Unit	1984-1987
Staff LPN for Med/Surg and ICU, Hoemako Hospital, Casa Grande, AZ	1980-1984
Office LPN/Private Surgical Scrub, Family Physicians, Inc.	1976-1980

MANAGEMENT/LEADERSHIP APPOINTMENTS

Title	Dates
Coordinator, GROW Nurses, Indiana Wesleyan University (IWU)	2008-current
Assistant Director, Nursing Online, IWU	2006-2008
Assistant Director, RNBS Online, IWU	2003-2006
Coordinator, Optimal Health Center, Marion General Hospital	1999-2003
President, Health Education, Inc.	1995-1999
Director, Intensive-Coronary Care Unit	1993-1995
Director, Inservice Education	1987-1993

ACADEMIC APPOINTMENTS

Appointment	Dates
Adjunct Faculty- Indiana Wesleyan University (IWU)	2008-current
Adjunct Faculty- Indiana University, Kokomo, IN	1997-2001

RESEARCH

Topic	Dates
Attributes, Behaviors and Characteristics of Exemplary Nursing Faculty, Phase II	2009
Persistence of Students in RNBS Completion Online Programs	2008
Attributes, Behaviors and Characteristics of Exemplary Nursing Faculty, Phase I	2007
Psychometric Testing of the Student Online Academic Persistence Questionnaire	2007
Factors Related to Transition to Practice after Participating in Online Critical Care Courses	2006

PROFESSIONAL ACTIVITIES

Presentations — Date

Strevy, S., Hoffpauir, B, Leach, J., & Bence, C. 2008
Attributes, Behaviors, and Characteristics of Exemplary Faculty: A Descriptive Study. Midwest Scholars Conference, Indianapolis, IN

Billings, D., Jeffries, P., Mzumara, H., & Strevy, S. 2006
Outcomes of Online Courses to Prepare Nurses for Practice in Critical Care: A Six Month Follow Up Study. Sigma Theta Tau Conference, Indianapolis, IN

Strevy, S. Attributes, Antecedents, and Consequences of Student Persistence: Implications for Students and Faculty of Accelerated Adult Programs. Midwest Scholars Conference, Indianapolis, IN 2006

Posters

Strevy, S. Attributes, Antecedents, and Consequences of Student Persistence: Implications for Students and Nursing Faculty of Accelerated Nursing Programs. Drexel University, Philadelphia, PA 2006

Publications

Strevy, S. (2005). Integrating Faith in Online Nursing Education. JCN, 22(4), 22-24.
Strevy, S. (2000). Alternative Health Modalities: What Educators Need to Know, NCEA Newsletter, 3(2), pg. 7.
Holl, R. & Strevy, S. (1999). Nurses' Evidentiary Expectations of Conventional and Alternative Therapies. Alternative Health Practitioner, 5(2), 121-126.
Strevy, S. (1999). Listen to the Music. Nursing '99, 29(4), 32hn6-32hn8.
Strevy, S. (1999). A Whole-Person Approach to Healthcare. Vim & Vigor, 15(4), 62-63.
Strevy, S. (1998). Myths and Facts Regarding Pain, RN, 61(2), 42-45.

SERVICE

Role — Dates

Nursing Educator Research Section, Midwest Nursing Research Society 2007
Parish Nurse, First Church of God 2002-2005
Camp Nurse, Girl Scouts 2000
Reading Coach, Laubach 1997-1999