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Concept Interview Assignment to Foster Intentional Learning in Nursing Students

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CONCEPT INTERVIEW ASSIGNMENT TO FOSTER INTENTIONAL LEARNING IN

NURSING STUDENTS

By

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ABSTRACT

Intentional learning is the process of acquiring skills and attributes that facilitate knowledge attainment and application, and this process may foster learning skills and attributes in nursing students so they may thrive in student-centered nursing curricula and competently practice in today's dynamic and complex healthcare system. The purposes of this study were to determine 1) if there are any associations between academic achievement and intentional learning and 2) if there is an effect of a nursing concept interview assignment on academic achievement and intentional learning scores in second-semester nursing students.

The majority of studies on intentional learning were quasi-experimental designs providing strong evidence. Positive associations with intentional learning discovered in these studies include higher order thinking, learner satisfaction, efficacy, autonomy, learning how to learn, and self-reflection and evaluation. The interview assignment, developed in the accounting discipline, has demonstrated initial promising results and is adaptable to nursing education as both disciplines have similar end goals to prepare students for practice through professional formation. However, the studies involving the interview assignment did not use an instrument to measure intentional learning, which would strengthen the findings. This study used the Learning Orientation Questionnaire (LOQ), which has demonstrated sound psychometric properties.

The Conceptual Model for Successful Intentional Learning was adapted to guide this study. This model is based on neuroscience research on the limbic system (i.e., emotional center of the brain) and supports the use of individualized approaches to support and teach students. These approaches specifically target areas of need based on the student's intentional learning ability and foster areas for improvement, such as goal setting, prioritization, reflection, and self-evaluation.

A quasi-experimental, two group (experimental and comparison) pretest/posttest design was used for this study. A convenience sample of 92 students in the second semester of a Bachelor of Science in nursing program in the midwestern United States was used. All students enrolled in a nursing theory course were given a demographic survey and LOQ at the beginning of the second semester. The intervention, a nursing concept interview assignment, occurred throughout the semester with the experimental group only. The LOQ was administered again at the end of the semester to both groups of students to answer research questions one and three. Lastly, final exam scores for all students were analyzed at the end of the semester as a measure of academic achievement to answer research questions one and two.

Respective to the three research questions asked in this study, statistical analyses demonstrated 1) no significant relationship between final examination scores and posttest LOQ scores; 2) significant differences for final examination scores between the comparison and experimental group, with students in the comparison group scoring higher on the final examination ($p = .000$), which was an unexpected finding; and 3) no interaction effect of time by group and no differences in pretest and posttest LOQ scores between groups after completing the nursing concept interview assignment. Although not a specific research question in this study, it was discovered that LOQ scores significantly increased from the beginning to the end of the semester, regardless of group ($p = .039$). While the intervention trialed in this study did not influence this change, other interventions and/or factors must be studied to determine how to positively impact intentional learning in nursing students so they gain the characteristics needed for student-centered nursing curricula and practice.

ACKNOWLEDGEMENTS

DEDICATION

This journey started four years ago with a family vote at the kitchen table. Thank you to my family who said "yes" to my goal of earning a PhD so I can continue to achieve my dream of improving the health of others. This dissertation is dedicated to my children, who sacrificed time with me, yet hopefully believe that dreams come true with dedication, passion, and hard work; my husband, who never faltered in his support; and my parents, who raised an independent daughter with a strong work ethic and passion for helping others. The completion of this degree is in honor of my dad, whose passing motivated me to start this journey. I can see the smile on his face and pride in his eyes.

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CHAPTER ONE: INTRODUCTION

For years, transforming nursing education has been on the forefront of the profession's initiatives. This transformation was deemed necessary by numerous stakeholders, who demanded tomorrow's nurses be adequately prepared for the increasingly complex healthcare system (Murray, 2013; Numminen, et al., 2014; Spector & Odom, 2012). In fact, Chambers, Thiekotter, and Chambers (2013) declared nursing education must transition to "educating for the unknown future" instead of "learning what is known" (p. 106). Educating for the future challenges higher education to provide different, rather than more, instruction. Hence, universities are looking for pedagogies that fit this new cognitive era (Youatt & Wilcox, 2008). One way higher education has adjusted to meet the needs of the new era is by shifting to student-centered pedagogies (Billings & Halstead, 2016). Student-centered pedagogies are designed to enhance student learning experiences, necessitating traits such as motivation to learn, self-efficacy, control of one's own learning, goal orientation, and commitment to life-long learning (McComb & Kirkpatrick, 2016). These desired characteristics vary and develop over time, usually increasing as the student moves from freshman to senior level (McComb & Kirkpatrick, 2016).

The traits needed for student-centered pedagogies mirror those of intentional learning, which is a process that builds characteristics of an ideal learner (Cholbi, 2007). Intentional learners take responsibility for their own education as they are autonomous, self-initiating, and self-regulating (Hung, 2014). In developing these characteristics, intentional learning considers the student's motivations, emotions, and efficacy toward learning (Spector & Kim, 2014; Hanham, Ullman, Orlando, & McCormick, 2014). Through this active, cognitive process, students develop an internal, self-initiated state of inquiry that leads them to become life-long learners (Hung, 2014). By this description, intentional learning appears to be a process that can

be developed, which may enable students to be successful in student-centered pedagogies. Additionally, these characteristics will develop human capital, which is the knowledge, skills, and attributes the individual brings to the workforce (Hunter, 2014). This human capital will benefit the workplace by delivering employees who are continually dedicated to and intentional about learning, enabling these employees to be innovative, creative, and responsive to changes (Hunter, 2014). This type of human capital is exactly what is needed in today's nursing workforce. The Institute of Medicine (IOM; 2011) desires nurses who are life-long learners that will stay current in needed competencies to effectively care for a diverse patient population.

Problem Statement

To prepare nursing students for the demands of practicing within a complex healthcare environment, learning environments that foster active learning partnerships between nursing students and educators must be created (Chambers et al., 2013). Thus, nursing education has shifted from teacher-directed content to student-centered pedagogies (Billings & Halstead, 2016; Murray, 2013). Various student-centered pedagogies have been trialed in nursing, such as experiential learning that integrates classroom learning with clinical imagination (Benner, Sutphen, Leonard, & Day, 2010), competency-based curricula (Benner, et al., 2010; IOM, 2011), dedicated education units, and simulation (Murray, 2013). As nurse educators transitioned to student-centered pedagogies, student engagement was intended to be fostered (Murray, 2013); however, nurse educators often felt resistance from students. Students were not ready for this shift in control and responsibility for their own learning (Fiedler & Valjataga, 2010). Students reported preferring the "old way" of teaching and were not able to apply what they knew to new situations (Miners & Nantz, 2009). Additionally, since there is little research on nursing education pedagogies, best practices are obscure (Murray, 2013). This leaves nurse educators to

use whichever pedagogies they feel are effective, even though they are untested (Murray, 2013). While higher education is adapting to this new cognitive era, research is needed to determine if these new pedagogies are effective in preparing graduates for practice (McComb & Kirkpatrick, 2016).

Intentional learning is a process that may encourage students to develop skills necessary to thrive in student-centered pedagogies and competently practice in today's dynamic and complex healthcare system. Intentional learning consists of skills and attributes that facilitate learning how to learn, become highly self-aware of learning, and demonstrate great responsibility and control over learning (Cholbi, 2007). These characteristics are likely to lead to highly desirable learning outcomes (Hung, 2014) and develop learners who will succeed in loosely structured learning settings (Cholbi, 2007), such as student-centered pedagogies.

The term "intentional learning" has been used across numerous disciplines, including nursing. In fact, the Oregon Consortium for Nursing Education (OCNE; 2012) lists intentional learning as one of the professional competencies needed by nursing graduates. However, despite the existence of a conceptual framework and instrument to measure intentional learning, a consistent definition or measurement has not used. This dissertation addressed this issue by using definitions generated from a concept analysis of intentional learning. These definitions correspond to the conceptual framework that provided the theoretical basis for this study, which was also the basis for the instrument used in this study.

Furthermore, the term "intentional learning" is being used in nursing, even as a program outcome, yet it is not being studied in nursing. There are no data to support intentional learning as a successful learning strategy within nursing education. This dissertation intended to address this gap in data by generating evidence supporting an intervention to promote intentional

learning in nursing students. The intervention was a concept interview assignment completed in the second of five semesters of a Bachelor of Science in nursing (BSN) program.

Background and Significance

In 1989, the concept of intentional learning was introduced to the education community by Bereiter and Scardamalia, who declared that intentional learning is the cognitive process, dependent upon the intentions, plans, and mental effort of learners in their pursuit of goal attainment, where learning is the goal, not an incidental outcome. Intentional learners are not simply people who learn throughout their life; rather, they are people who value learning and actively inquire to meet life-long learning goals (Bereiter & Scardamalia, 1989). Studies over the past three decades have shown a positive trend that intentional learning can foster learning skills, learner autonomy (Killian, 2013), satisfaction, efficacy (Martinez, 2000) and higher-order thinking (Van Asselen, Fritschy, & Postma, 2006).

With the aim to better prepare nursing students for today's practice arena, numerous agencies have called for the transformation of nursing education, such as the Future of Nursing: *Campaign for Action* (Campaign for Action, 2014), IOM (2011), the Carnegie Foundation for the Advancement of Teaching (Benner et al., 2010), the American Association of Colleges of Nursing (AACN, 2008), and the National League for Nursing (NLN, 2003). In response, nurse faculty are striving to implement more student-centered pedagogies; however, data indicate nursing students are not accustomed to student-centered learning (Billings & Halstead, 2016) where they are expected to be active participants. This disparity between faculty expectations and student preparedness leads the students to feel frustrated, anxious, and insecure (Chambers et al., 2013), often resisting active learning strategies (Tedesco-Schneck, 2013). Intentional

learning may develop nursing students who will flourish in student-centered learning settings where active learning and higher-order thinking are emphasized.

Purpose of the Study

The purposes of this study were to determine 1) if there are any associations between academic achievement and intentional learning and 2) if there is an effect of a nursing concept interview assignment on academic achievement and intentional learning scores in second semester nursing students.

Research Questions

The research questions for this study were as follows:

1) Is academic performance, as measured by final examination scores, associated with intentional learning scores?

2) Are there between-group differences in academic performance, as measured by final examination scores, if a nursing concept interview assignment is completed?

3) Are there within- and between-group differences in pre/posttest intentional learning scores if a nursing concept interview assignment is completed?

Theoretical and Operational Definitions

Intentional learning has been defined numerous ways across multiple disciplines. To research intentional learning, a clear understanding of the concept is required. A concept analysis was performed by the principal investigator (PI) and a colleague to establish a clear definition for intentional learning.

A concept analysis identifies the attributes that are most often associated with and demonstrate a broad view of the concept as well as the empirical referents, which allow observers to identify and measure the defining attributes of the concept (Walker & Avant, 2011).

According to Remler and Ryzin (2015), conceptualization entails a precise definition of the concept that one intends to measure. Therefore, through concept analysis, defining attributes were delineated, empirical referents were determined, and a conceptual definition was developed. These definitions were used for this study.

The next step is to determine how the concept will be measured or the operationalization of the concept (Remler & Ryzin, 2015). During a concept analysis, empirical referents are also determined which allow for observers to identify the defining attributes of the concept; thus, revealing the concept (Walker & Avant, 2011) and making it measurable. They provide an excellent method to evaluating an existing instrument (Walker & Avant, 2011). Instruments are often utilized to operationalize a concept (Remler & Ryzin, 2015), which was the case in this study. The Learning Orientation Questionnaire (LOQ) was developed by Dr. Martinez to measure intentional learning (The Training Place, 2010).

Intentional Learning

Conceptual definition:
Intentional learning is a process used by learners to gain the abilities to self-direct, self-regulate, and actively engage in learning, which enables them to master their goals. Through this process, learners become intrinsically motivated and confident in their ability to learn, which builds the foundation for intentional learning competence, including being life-long learners. (Mollman & Candela, 2018)

This conceptual definition coincides with the description of intentional learning given in the LOQ Interpretation Manual: "Successful learners distinguish themselves as strategic managers of self-directed, well-planned effort to learn. Influenced by *emotions and intentions*, *autonomy*, and *committed strategic planning and learning effort*, these individuals deliberately use learning to empower themselves" (Martinez, 2005, p. 1). The italicized text in this description identifies the three constructs (i.e., subscales) of intentional learning, as measured in

the LOQ (Martinez, 2005). These constructs correspond well with the empirical referents noted during the concept analysis of intentional learning.

Operational definition:
The empirical referents of intentional learning are: 1) Learner belief and confidence in ability to learn. The learner knows what and how to learn; 2) Learner is an active participant and engaged in learning. The learner understands the value of the effort needed to learn and believes that his effort leads to his learning success; 3) Learner is goal-oriented with learning as the goal. Learner demonstrates mastery of objectives and/or content; 4) Learner shows initiative to learn, control over learning, and responsibility in learning; and 5) Learner self-regulation of learning from beginning to end of learning. This includes motivation to learn as well as self-awareness, self-monitoring, and self-evaluation of learning. (Mollman & Candela, 2018)

Chapter One Summary

Intentional learning is an active, cognitive process that generates skills and attributes in learners that may help them succeed in student-centered pedagogies and in the complex healthcare environment. With characteristics such as goal oriented, motivated, self-regulated, responsible, and self-efficacious, the life-long learner represents ideal students who will not only succeed in academia but also in practice, which is of utmost importance in nursing where educators are transforming curricula to better prepare nursing graduates for the future.

With clear definitions and a measurement for intentional learning, this dissertation study sought to provide evidence on whether intentional learning was associated with academic performance and if a nursing concept interview assignment influenced intentional learning scores and/or academic performance. This study was a step toward finding best practices in nursing education, which Murray (2013) indicated is necessary for minimizing innovative risks in teaching while maximizing benefits.

CHAPTER TWO: REVIEW OF LITERATURE

Chapter Two entails the review of the literature that pertains to the theoretical perspectives on intentional learning. Empirical findings on intentional learning and strategies to enhance intentional learning are also described, including study findings that support intentional learning characteristics, since those characteristics enable nursing students to be successful. To conclude the chapter, the theoretical framework of the study is explained.

Intentional Learning

Theoretical Perspectives

The profession of accounting adopted intentional learning into its curriculum as "a process for learning to learn" (Francis, Mulder, & Stark, 1995, p. ix). Accounting declared that choosing to learn and then choosing what and how to learn empowers a person to be an autonomous, life-long learner (Francis et al., 1995). Intentional learning is viewed as a process with attitudes and skills that can be developed by learners. This process is continual and cyclic, depending on the learning context, and it entails learners who question, organize, connect, reflect, and adapt their knowledge (Francis et al., 1995).

Cholbi (2007) portrayed intentional learners as highly self-aware individuals who desire to meet high standards and acquire self-esteem from meeting learning goals after continued effort. Intentional learners demonstrate high levels of responsibility and control over their learning processes and develop methods of learning when challenged academically. A loosely structured learning environment that is content-rich is an ideal setting for intentional learners, who enjoy problem solving and are motivated by achieving expertise they can share with others (Cholbi, 2007). The knowledge attained by intentional learners is deeper, fully integrated, and more valued by learners themselves and is easily applied to new situations (Cholbi, 2007).

Valjataga and Laanpere (2010) added that intentional learners are self-directed individuals who take initiative and responsibility for their own education, whether in a formal setting or not. Self-direction also involves learner control, where learners make their own decisions related to learning strategies and sequence learning according to their own interests, preferences, and pace (Valjataga & Laanpere, 2010). The cognitive process of intentional learning is directed by goals determined by the learners (Chee, 2014).

Intentional learners believe in their ability to achieve their learning goals (i.e., self-efficacy) and are mastery-approach, goal-oriented learners (Hanham et al., 2014). Intentional learners are also autonomous, self-initiated, self-regulated, and take responsibility and control for their own learning (Hanham et al., 2014; Hung, 2014). In intentional learning, learning is a conscious, voluntary choice by learners who are aware of the purpose of the learning process and self-monitor their own learning (Hung, 2014). Simply stated, intentional learners recognize their learning goal(s) and are active decision makers regarding goal achievement (Spector & Kim, 2014).

For intentional learning to occur, a person must want to learn, understand, and believe in the need to learn as well as know what and how to learn. This constitutes a very active process by those engaged in learning that goes beyond active participation in classroom activities. The intentional learning process invokes deep learning through cognitively challenging learning situations that broaden one's initial understanding of the material (Lee, Rooney, & Parada, 2014). These descriptions of intentional learning denote students who are in control of their own learning from initiation to mastery of goals. These students are confident in their abilities to learn and evaluate their learning through the entire cognitive process, ensuring they are achieving their

goals. While intentional learning sounds very promising in developing the type of learners needed in nursing curricula and practice today, empirical evidence is needed.

Empirical Findings

        Language acquistion. The first empirical evidence to support the use of intentional learning as a learning process was in 1986, when Cumming used a case-study approach to determine if intentional learning was demonstrated by 20 students from diverse cultural backgrounds. Cumming surmised that learners who displayed attributes of intentional learning (i.e., selecting their own goals, practicing goal attainment, and evaluating their progress toward their goals) were most successful in certain areas of English as a second language (ESL) writing. Cumming (1986) concluded that ESL writing would be achieved more successfully if learners initiated their own learning goals rather than reacting to instructional goals. The use of intentional learning was further supported in 1990, when researchers discovered a strong, positive effect on acquisition and recognition memory among 40 university students when learning by intention in contrast to incidental learning (Noldy, Stelmack, & Campbell, 1990).

        While these studies were favorable for intentional learning, a recent study did not find positive results for intentional learning compared to incidental learning in 50 ESL learners. For both receptive and productive knowledge of vocabulary, the incidental group achieved statistically higher scores than the intentional group; however, both groups achieved higher scores on the posttest than the pretest, which demonstrates positive language acquisition (Noori, Gholami, and Rajabi, 2014). Other studies on vocabulary acquisition or recall have had positive findings related to intentional learning, even for participants with learning barriers.

        In 2013, Kuhnert and colleagues discovered verbal memory was enhanced by intentional learning in a sample of 33 participants, comprised of 20 healthy participants and 13 participants

with epilepsy managed by anticonvulsants. Including participants who had chronic epilepsy

managed by anticonvulsants, both of which are known to impede cognitive processes, led to a

broader spectrum of investigation (Kuhnert et al., 2013). They found that, for all participants,

only the members of the intentional learning group had statistically significant recall of words;

the participants in this group were informed they would have to retrieve the words presented to

them (Kuhnert et al., 2013). While these studies provide evidence that intentional learning has

positive associations with language acquisition, memorization is not the learning objective of

many fields. In nursing and other health sciences fields, the objectives reflect higher cognitive

levels, such as application, analysis, synthesis, and evaluation. Therefore, finding evidence for

the association between intentional learning and higher cognitive levels is imperative.

Higher cognitive levels. One study did support that intentional learning leads to higher

cognitive thinking. Van Asselen, Fritschy, and Postma (2006) discovered effortful processing or

intentional learning was needed for spatial knowledge. In this study of 45 university students,

those students in the intentional group who knew they would be tested on their route were able to

reverse the route and draw a map compared to those students in the incidental group who did not

know they would be tested on their route and were not able to recall the route (Van Asselen et

al., 2006). These results indicated that, for students to be able to apply the knowledge learned,

they needed to learn by intention. These findings indicate that intentional learning may lead to

higher cognitive levels, such as application and analysis. Therefore, it may be a learning process

to promote higher order thinking in nursing education. Additionally, intentional learners learn

formally and informally.

Professional development. When analyzing the results of two studies on professional

development activities of faculty in higher education, Knight, Tait, and Yorke (2006) concluded

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that intentional learning in professional settings can occur formally (i.e., in preset curriculum offered by the facility) or informally (i.e., outside set curriculum and often initiated by the learner). In addition, intentional learning encouraged students to stay current with the literature, skills, and knowledge needed for professional formation (Knight et. al, 2006). These attributes of life-long learning are essential in nursing where professionals are working in complex healthcare environments (IOM, 2011).

Attributes of successful nursing students. In a qualitative multiple case study analysis, Bell (2014) discovered the attributes of successful nursing students: being highly motivated, intrinsically and extrinsically; having a mature attitude toward learning; being an independent learner who develops effective learning strategies; being determined; wanting to do one's best and be a good nurse; and having a hard work ethic. These attributes of a successful nursing student correspond directly to the key learning attributes of an intentional learner: self-motivation; commitment to learning and strategic effort, which entails planning for and committing to learn; self-directed learning; hard-working; and learning autonomy (The Training Place, 2010). This evidence supports the use of intentional learning to engrain students with characteristics that will ensure their success in curricula and practice.

In the study by Bell (2014), other factors that contributed to successful nursing students were receiving and using support and feedback from academic and clinical staff, experiencing helpful learning opportunities, organization, teaching and learning, curriculum, and prerequisites. This evidence portrays the importance of additional support and feedback throughout the curriculum. With the evidence supporting intentional learning in nursing, teaching interventions to promote intentional learning are needed.

Strategies to Enhance Intentional Learning

In a study of 71 adults from a variety of backgrounds, the adult learners were matched to a web-based learning environment based on their learning orientation or overall intentional learning level. Four dependent variables (DVs) were measured in this study: satisfaction, learning efficacy, intentional learning performance, and achievement in the course (Martinez, 2000). The first three DVs were measured by student self-report. The results of this study revealed a positive, direct correlation between the higher learning orientations of performing and transforming learners and achievement in the course. Additionally, learner satisfaction and efficacy were significantly affected by a learning environment that suited their learning orientation or overall intentional learning level (Martinez, 2000).

In a study of 130 graduate students in a Master of Arts program, the researchers found 7% of the students in the sample were conforming learners, 65% performing learners, and 28% transforming learners (Jiang, Parent, & Eastmond, 2006). The results of this study indicated that successful completion rates of this competency-based program correlated with the learning orientation levels of the students and were highly dependent on whether the competencies were instructor led or student led. These researchers concluded that the best practice in web-based competency programs is to scaffold learning activities from an instructor-led experience at the beginning of the program to a student-driven experience at the end of the program (Jiang et al., 2006). They also concluded that high instructor interaction was needed at the beginning of the program to offer support to the students as they transitioned to self-directed learning. At the end of the program, students still required coaching during the student-driven or independent experiences (Jiang et al., 2006). This study provides a glimpse of where university students are

along the intentional learning continuum and how to scaffold learning experiences to support to progress students along the continuum.

Motivation. Due to the call to transform nursing education, McComb and Kirkpatrick (2016) studied 1,167 nursing and engineering undergraduate students from freshman to senior year to compare motivation and cognitive complexity between years and majors. McComb and Kirkpatrick (2016) found both cognitive complexity of course material and motivation were the lowest during sophomore year, which may imply that the students were adjusting to the academic rigor, determining relevance of material to their practice profession, or reconsidering their learning expectations and strategies. No matter the cause, the sophomore year is an ideal time for faculty to implement strategies that are student centered to negate the decrease in perception of cognitive complexity and motivation to learn (McComb & Kirkpatrick, 2016).

In this study of nursing and engineering students, researchers also discovered intrinsic motivation, such as the desire to learn, increased over time while extrinsic motivation, such as grades, decreased, which may indicate that the goal of graduating professionals who are life-long learners is being met (McComb & Kirkpatrick, 2016). Lastly, nursing students reported lower levels of cognitive complexity in the classroom than the engineering students. Cognitive complexity was defined as receiving facts in class versus applying facts in class to support reasoning. Two reasons for this difference were stated: 1) nursing students may emphasize content as they must pass a licensure examination before being allowed into practice, whereas engineering students are not required to pass or obtain a certificate prior to employment, and 2) nursing programs combine didactic classroom instruction with clinical practice and may rely on application of content in clinical practice too much (McComb & Kirkpatrick, 2016). Although situated learning is increasing in nursing classrooms, more real-world applications of engineering

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content in the classroom may be the reason behind engineering students reporting higher levels of cognitive complexity than nursing students (McComb & Kirkpatrick, 2016).

This study brings to light numerous considerations for future nursing education research. First, sophomore year is an ideal time to integrate learning experiences to increase motivation and aid students in applying content to real-world practice. Second, nursing students are becoming more intrinsically motivated to learn as the program progresses, which may aid in generating life-long learners who are critical to the profession. Lastly, nursing education needs to continue to bring situated learning into the classroom and facilitate the application of material to real-world situations (i.e. patient scenarios). The intervention for this study connected the real world to the concept(s) the nursing students were studying, which—ideally—would have motivated them intrinsically. The interview assignment also fostered professional formation in students. This intervention was adopted from previous studies that demonstrated enhanced intentional learning after completing the interview assignment.

Interview assignment. The interview assignment to foster intentional learning was first described in conjunction with accounting students. In the first study using this intervention, accounting students in their first course of the program were to complete a financial statement interview with a business professional of their choice (Killian, Huber, & Brandon, 2012). The 128 students were from two different campuses, and the students not only had to choose who to interview but also develop the interview questions. Instructors gave the students a timeline and provided support throughout the semester to guide them through the independent learning activity, which had the goal of connecting the course material to the practice arena to engage students with the material. The researchers discovered the interview assignment encouraged 99% of the students to recognize the real-world applications and limitations of the accounting material

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(Killian et al., 2012). Additionally, 96% of the students were able to broaden and apply their knowledge of the course material with the information in the interview, and students reported being pleasantly surprised that business professionals used concepts covered in the course (Killian et al., 2012). An aspect of the interview assignment was a reflective paper that aimed to develop intentional learning skills by having the students reflect on their learning habits and attitudes. A few students self-reported feeling "satisfied" with this objective, indicating they did not alter their learning habits or attitudes related to this assignment (Killian et al., 2012). However, 58% of students self-reported "above satisfactory" learning, which indicates they did alter their learning habits and/or attitudes after completing the assignment (Killian et al., 2012). Students reported that the changes they needed to undertake were to "study more, pay more attention in class, or rearrange their lives to make learning and college a higher priority" (Killian et al., 2012, p. 347).

The results from the study by Killian and colleagues (2012) demonstrate positive associations between the interview assignment and the intentional learning skills of directing their own learning by choosing a professional to interview and generating their own interview questions. The students were able to discover real-world applications of course material, and over half of the students reflected upon their learning and voiced the need to change their learning habits (Killian et al., 2012). While this study provides initial positive effects by the interview assignment on intentional learning skills, the results are based upon students' self-report of these skills. The interview assignment was later adapted to a government and non-profit accounting (GNP) course as a budgetary interview assignment.

In GNP accounting courses, 27 students completed the adapted interview with the same premises as the earlier accounting study. The students were to choose a GNP business

professional to interview and create their own interview questions (Killian, 2013). A rubric was developed to measure the learning objectives of 1) self-directed learning, 2) connecting interview to course material, and 3) reflecting on potential careers. Students were also directed to write a reflective paper in this study (Killian, 2013). The majority of students—26 of 27—met the first objective of self-directed learning at the "satisfactory" (9 students) or "above satisfactory" (17 students) level (Killian, 2013). The second objective of relating information obtained from the interview to course content was also met by most students—25 of 27—at the "satisfactory" (8 students) or "above satisfactory" (17 students) level (Killian, 2013). Lastly, 24 of the 27 students met the objective of reflecting on potential careers, which entailed identifying whether the role suited them as well as the challenges and rewards of the interviewee's role (Killian, 2013). These results are based on the instructor's evaluation of the students' performance using the rubric.

Killian (2013) concluded that the interview assignment was an effective intervention to foster intentional learning in undergraduate GNP accounting courses. Killian noted the students fulfilled the attributes of intentional learning by completing the assignments. Through performing and reflecting upon the assignment, accounting students learned how to learn, which would prepare them for the practice arena of accounting (Killian, 2013). Nursing education has a similar aim: to prepare nurses who know how to learn or be life-long learners so they are ready to practice competently in today's complex and ever-changing healthcare system.

Reflection. Herrington, Parker, and Boase-Jelinek (2014) declared that reflection is key to authentic learning and critical to service professions who use reflection every day in practice. These researchers aimed to study reflection as a tool to engage students in intentional learning instead of relying on external cues to learn. Two consecutive courses were studied, with 46% and 37% of students participating in the online survey through questions related to reflection

exercises (Herrington et al., 2014). Students reported feeling apprehension and confusion as they took control of their learning, which implied scaffolding of student exercises and support are necessary for students as they move toward independent learning (Herrington et al. 2014). The responses to the reflection exercises ranged from contempt to satisfaction, cementing reflection as a beneficial learning strategy. Some students reported reflective writing was self-fulfilling, meaningful, and a means to self-discover learning qualities they were unaware of previously (Herrington et al., 2014). This study demonstrates the importance of scaffolding intentional learning experiences by progressively allowing students to take over control of their learning while instructors support this transition. Additionally, this study generates evidence to support the use of reflection to foster intentional learning, which is part of the interview assignment.

  Literature review summary. Intentional learning describes a process that generates the ideal learner. Of utmost importance is the skills and attributes of intentional learning can be developed through scaffolding of learning experiences with instructor support and coaching of students as they take control and responsibility for their learning. Most of the studies on intentional learning were quasi-experimental designs, which led to strong evidence. Positive associations with intentional learning discovered in these studies include higher-order thinking (Van Asselen, et al., 2006), learner satisfaction, efficacy (Martinez, 2000), autonomy, learning how to learn, and self-evaluation of learning abilities (Killian, 2013). The interview assignment developed in the accounting discipline has initially demonstrated promising results and is adaptable to nursing education as both have similar end goals of preparing students for practice through professional formation (Killian, 2013; Numminen et al., 2014). However, the studies involving the interview assignment did not use an instrument to measure intentional learning, which would strengthen the findings.

Theoretical Framework of the Study

Conceptual Framework

The Conceptual Model for Successful Intentional Learning provided the foundation for this study. This model is based upon neuroscience research on the limbic system (i.e., emotional center of the brain) and supports the use of individualized approaches to support and teach students. These approaches specifically target areas of need based on the student's intentional learning ability and foster areas of improvement, such as goal setting, prioritization, reflection, and self-evaluation (The Training Place, 2010). The Conceptual Model for Successful Intentional Learning was adapted to guide this study (see Figure 1).
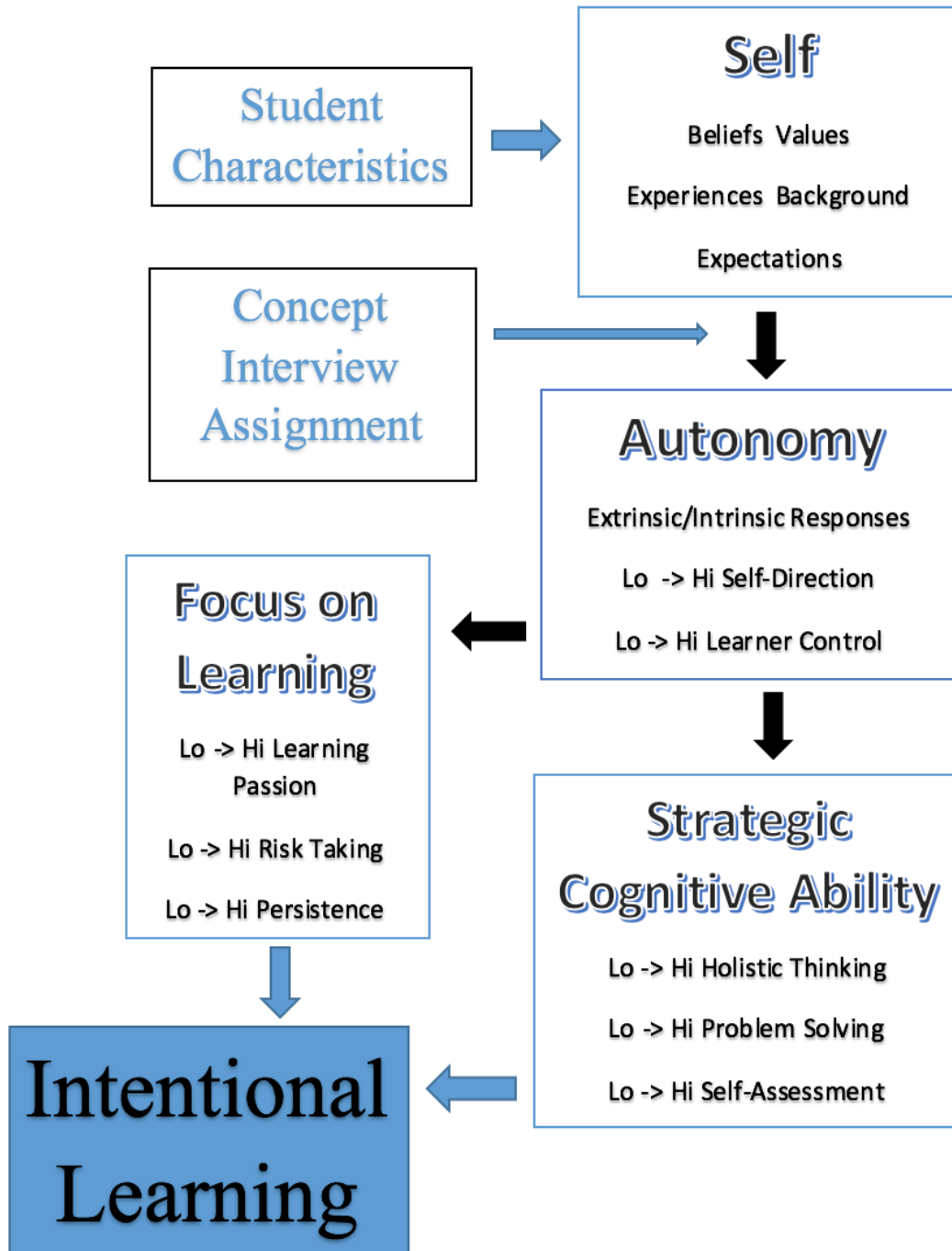
Figure 1. The study used this conceptual model, which denotes demographic variables of interest and an intervention used to foster intentional learning in nursing students. This model was adapted from the Conceptual Model for Successful Intentional Learning (The Training Place, 2010).

Intentional learning continuum. Intentional learning occurs along a continuum from resistant to transforming learners. Learners can progress along the continuum by making a psychological shift to take more control of their learning, increasing learning effort, and having greater intentions and beliefs regarding their learning (Martinez, 2005). Martinez (2005) refers to each type of learner in terms of orientation, which is based on the learner's overall intentional learning score on the LOQ.

Resistant learners. Through previous learning experiences, resistant learners experience frustration related to conflicting values and/or goals, lack of clarity, or learning that is not valued. This frustration is likely to be repeated and may cause resistance to learning in the long term. These frustrations leave self-doubt in one's ability to learn or achieve goals set by others as well as whether there is a personal benefit to academic learning or if academic learning can support personal goals (Martinez, 2005). The likelihood of finding resistant learners in the college setting is very low (Cholbi, 2007). In the studies used to test and validate the LOQ, approximately 1 to 4% of high school and university students were resistant learners (Martinez, 2005).

Conforming learners. Conforming learners prefer structured learning environments that follow a routine. These learners are motivated by external sources, learn passively, and can reiterate knowledge for assignments and/or examinations; however, they struggle to think abstractly or critically to meet challenging goals (Martinez, 2005). Studies with samples of high school and university students identified that approximately 15 to 50% of students are conforming learners, with the higher percentage in high school populations (Martinez, 2005). Nonetheless, with purposeful support, guidance, and a comfortable learning environment, conforming learners discover how to take greater risks to learn and can progress along the intentional learning continuum (Martinez, 2005).

Performing learners. Approximately 42 to 63% of high school and university students are performing learners, with the higher percentage of performing learners in the university setting (Martinez, 2005). Performing learners meet standards, expectations, and benchmark grades; however, they do not take extra time or effort to go above requirements, often due to stated time and/or interest constraints. Often, performing learners are extrinsically motivated, task oriented, and prefer semi-structured learning environments. They are open to collaboration and teamwork to foster learning but struggle with abstract theories and avoid taking risks or making mistakes. They demonstrate selective use of self-regulation of learning and exert effort on learning what interests them or what they perceive to be beneficial. Performing learners can progress to transforming learners through opportunities to practice critical thinking, problem-solving, and abstract thought (Martinez, 2005). Faculty often hear from students that their barriers to learning are time and/or interest constraints, which align with the majority of college students being performing learners. Again, these learners can progress along the continuum with feedback, guidance, and support from faculty (Martinez, 2005).

Transforming learners. Loosely structured learning environments fit the preferences of transforming learners, who strive to be responsible and in control of their own learning. They are holistic, abstract thinkers who are committed, are persistent, and use intrinsic motivations to achieve their learning goals. Transforming learners need stimulating learning environments that promote innovation, problem solving, the building of expertise, and risk taking to achieve personal goals. These learners rely on time management skills and support to direct their learning. Transforming learners are detail oriented and focus on implementation and completion of tasks (Martinez, 2005). From this description, one can see how transforming learners are ideal college graduates who will thrive by knowing how and what to learn, knowing how to evaluate

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their own learning, and placing value on learning. Transforming learners will remain current through life-long learning, both formally and informally. Efforts to progress these students along the intentional learning continuum to transforming learners are essential to ensure nursing graduates are ready to apply their knowledge in today's complex and dynamic healthcare system.

Chapter Two Summary

The literature provides preliminary positive and strong evidence for the use of intentional learning in nursing. Intentional learning appears to be the bridge between where nursing students are at when they are admitted to a program and where we need them to be at graduation. The characteristics of intentional learning match the characteristics of successful nursing students and employees. With distinct definitions and measurement based on a concept analysis and conceptual framework, intentional learning can clearly be researched. An intervention with initial promising results was also used. With evidence supporting each aspect of this dissertation study, the findings are more likely to be valid and reliable, which supports the need for more evidence-based practice in nursing education.

CHAPTER THREE: METHODOLOGY

The methodology for this study, including the purpose, design, setting, and sample, is discussed below. Study procedures such as data collection, data analysis, and study limitations as well as ethical considerations are also described.

Research Purpose and Design

The purposes of this study were to determine if intentional learning was associated with academic achievement and if an evidence-based intervention enhanced intentional learning and/or academic achievement in nursing students. As Murray (2013) stated, best practices in nursing education are scarce. This study was a step toward providing best practices by researching the use of intentional learning for nursing students.

Research Questions

The research questions for this study were:

1) Is academic performance, as measured by final examination scores, associated with intentional learning scores?

2) Are there between-group differences in academic performance, as measured by final examination scores, if a nursing concept interview assignment is completed?

3) Are there within- and between-group differences in pre/posttest intentional learning scores if a nursing concept interview assignment is completed?

To answer these research questions, a quasi-experimental, two group pretest/posttest design was used. According to Remler and Ryzin (2015), a quasi-experimental design is similar to a randomized experiment but lacks full random assignment of participants. Quasi-experimental designs allow researchers to plan an intervention to determine its influence on outcomes, and the use of an exogenous, planned intervention produces sounder causal

evaluations than natural experiments (Remler & Ryzin, 2015). This study used a quasi-experimental design because group assignment (i.e., experimental versus comparison) was determined by which campus the student attended rather than at random. Furthermore, performing a two-group pretest/posttest design creates a stronger study by enhancing internal validity by looking for differences preintervention and postintervention in both the experimental and comparison groups (Remler & Ryzin, 2015).

Setting and Sample

The setting was a state university in the midwestern United States with three campuses offering a generic BSN program, two of which were used for this study. The third campus was not used since its program is continuous and includes five semesters, which made it difficult to align with the standard semester schedule of the other two campuses. The target population for this study was BSN students in the United States. A convenience sample of students in the second semester of a BSN program was used. Inclusion criteria were nursing students who were active nursing students in the second semester of the program and enrolled in the nursing theory course, Patient-Centered Care Concepts II. Participants were excluded if they were not active nursing students in the second semester of the program and/or enrolled in the nursing theory course, Patient-Centered Care Concepts II. The main campus (i.e., comparison group) admits 64 students per semester, and the second campus (i.e., experimental group) admits 48 students per semester for a total of 112 potential nursing students per semester.

<div align="center">

Study Procedures

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Data Collection

Data were collected to answer the three research questions posed in this study. All students were given the demographic survey (see Appendix A) and the LOQ (see Appendix B) at

the beginning of the second semester to provide descriptive statistics of the sample and the pretest intentional learning scores for research question three. The intervention, a nursing concept interview assignment, occurred throughout the semester with the experimental group only. The intervention was adapted to nursing from the accounting interview assignment discussed in the literature review (see Appendices C through H for additional details). The LOQ was administered again at the end of the semester to students at both campuses to answer research questions one and three. Lastly, final exam scores for all students were analyzed at the end of the second semester as a measure of academic achievement to answer research questions one and two. Both the demographic survey and LOQ were administered online using QuestionPro v21.2 to reduce errors related to data entry. Final exam scores were calculated and stored in an online learning management system, D2L (Desire to Learn).

Instrument to Measure Intentional Learning

While Martinez (2000) and Jiang et al. (2006) used the LOQ, previously performed studies had established and verified its psychometric properties. The LOQ has been tested and validated with 13,908 participants and demonstrated a Cronbach's alpha of .82 (Martinez, 2005). Two studies were included to discover test/retest reliability of the LOQ, which revealed Cronbach's alpha of .89 and .84 (Martinez, 2005). In these studies, participants varied in terms of age, gender, ethnicity, primary language, and level of education; moreover, undergraduate and graduate nursing students were also included as participants. Additionally, the LOQ has also demonstrated construct validity throughout these studies (Martinez, 2005). The LOQ has proven to be a valid and reliable instrument to measure intentional learning across a vast number of diverse participants, including nursing students. Hence, it was used in this study to provide an objective measurement of intentional learning, strengthening the findings of this study.

Learning orientation questionnaire. The LOQ is a 25-item self-report questionnaire that identifies learning orientation along a continuum—from resistant to transforming learner (overall intentional learning level)—and scores learners on three subscales: 1) conative and affective learning focus, 2) learning independence and autonomy, and 3) committed strategic planning and learning effort (see Appendix B). The LOQ items have a seven-point Likert scale, ranging from 1 (*Very Uncharacteristic of Me*) to 7 (*Very Characteristic of Me*). The learners rate their agreement, which is directly related to the possession of the identified characteristic (Martinez, 2005). The results of the LOQ give each participant a learning orientation score (i.e., an overall intentional learning score) ranging from 1 to 7, which determines what type of learner the participant is: resistant, conforming, performing, or transforming (Martinez, 2005).

Conative and affective focus on learning. The conative and affective learning focus subscale measures the participant's feelings, attitudes, and willingness to learn—apart from learning content, environment, or delivery—through 15 questions. Growing knowledge, self-evaluating values and principles, and setting difficult learning goals are characteristics of this subscale, which is greatly impacted by learner beliefs and motivations to improve learning performance (Martinez, 2005). Learners who score high on this subscale display high self-efficacy, intentions, and intrinsic motivation to master goals. This subscale is reported as *self-motivation* to the learner and has an internal consistency reliability coefficient of .89 (Martinez, 2005). An example of an item from this subscale is "I push myself to accomplish personal learning goals beyond those expected by the instructor" (Martinez, 2005).

Learning independence or autonomy. The subscale of learning independence or autonomy entails self-directed and self-regulated learning. Participants who score high on this subscale can understand their learning abilities and methods, control and self-manage their

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learning, and evaluate their learning performance to enhance future learning. These characteristics develop through learning experiences and as participants mature. This subscale consists of six questions (Martinez, 2005) and is reported as *Learning Autonomy* to the participant. In addition, this scale has an internal-consistency reliability coefficient of .79 (Martinez 2005). The six items in this subscale are reverse scored, and an example of an item from this subscale is "The instructor is the best person to monitor, evaluate, and determine how well I learn" (Martinez 2005).

> ***Committed strategic planning and learning effort.*** The last four questions comprise the subscale of committed strategic planning and learning effort, which involves learners who display deliberate and enduring effort to learn. These learners have high goals, standards, and planning skills, and they are committed to accomplishing goals and meeting learning challenges. Additionally, they strive to expand and improve their own learning, and they recognize learning achievement is based upon effort. These characteristics are portrayed no matter the learning situation, environment, beliefs, feelings, and interest (Martinez, 2005). This subscale is reported as *Self-Directed Strategic Planning* to the learner and has an internal-consistency reliability coefficient of .79 (Martinez 2005). The four items in this subscale are reverse scored, and an example of an item from this subscale is "I avoid courses if the objectives are challenging or difficult (Martinez 2005).

> ***Learning orientation.*** The overall intentional learning level indicates whether the learner is a resistant, conforming, performing, or transforming learner (Martinez, 2005). According to Fuller and Krumova (n.d.), the overall intentional learning score falls in a range from zero to seven (see Figure 2).

Resistant Learners	Conforming Learners	Performing Learners	Transforming Learners
Score: 0 – 3.5	3.51- 4.5	4.51 – 5.5	5.51 – 7.0

Figure 2. Overall intentional learning score with corresponding learner type.

Other Instrumentation

      Demographic survey. A demographic survey was included with the LOQ. Demographic information included the participant's campus, student ID number, age (including confirmation the student was 18 years or older), gender, ethnicity, college student generation (e.g., first genration), and highest level of education previously attained (see Appendix A). Consent to use information/data in this dissertation study was also acquired.

      Academic performance. Academic performance was measured by the theory final examination score at the end of second semester.

Data Analysis

      All statistical analyses were performed with IBM SPSS-25 software on the PI's computer, which was password protected and locked in an office. Instead of student names, student ID numbers were used to maintain confidentiality throughout the study. Final examination scores in percentages were retrieved from D2L and added to the data set corresponding with the student ID numbers. Also, interaction with the University of Nevada Las Vegas's (UNLV's) School of Nursing's Statistical Consultant was ongoing throughout this study.

      According to Tabachnick and Fidell (2012), larger effect sizes are expected for nonexperimental and/or nonclinical research. Therefore, medium effect size was used for all power analyses conducted for this study. Creswell (2012) indicated power is typically set at .80,

which was the case for this study. Several power analyses using G*Power (Faul, Erdfelder, Buchner, & Lang, 2009) were performed prior to the beginning of the study, relative to the research question being answered.

1) An analytical sample size of 64 participants will provide 80% power at alpha level of 0.05 for bivariate correlation with Pearson's *r*, with effect size ($|\rho| = .3$) at alpha = .05, one-tailed. This analysis was performed for research question one.

2) An analytical sample size of 102 participants will provide 80% power at alpha level of 0.05 for an independent *t*-test, with effect size ($d = .5$) at alpha = .05, one-tailed. This analysis was performed for research question two. According to Creswell (2012), an effect size of .5 or above is standard to use when comparing two group means.

3) An analytical sample size of 98 participants will provide 80% power at alpha level of 0.05 for within- and between-group analysis of variance (ANOVA) for two groups, with effect size ($f = .25$) at alpha = .05. This analysis was performed for research question three.

For research question one, bivariate correlation utilizing Pearson's *r* was used to discover if a correlation existed between final examination scores and intentional learning scores. The independent variable was the intentional learning score while the DV was the final examination score.

Data were submitted to an independent *t*-test to ascertain whether performing the nursing concept interview assignment influenced final examination scores. This answered research question two, where group membership—performing the nursing concept interview assignment or not—served as the independent variable and final examination score served as the DV.

For research question three, a mixed-model ANOVA was conducted with group assignment as the between-subjects factor and time (i.e., pretest, posttest) as the within-subjects factor (i.e., repeated measure). According to Field (2013), a combination of between-group and repeated measures variables is termed a mixed design. Intentional learning score served as the DV.

Ethical Considerations

Institutional Review Board (IRB) approval for data collection was obtained from UNLV and South Dakota State University (SDSU; see Appendix I and J for respective IRB approvals). During the second semester of the BSN program, nursing students at the two campuses were invited to participate in the study. Students were provided with a cover letter (see Appendix K) explaining how completing the demographic survey and LOQ were a course requirement, with the data being used for course evaluation. The students were informed that further use of their information for this dissertation study was voluntary, and they could withdraw their consent at any time without consequence. A research assistant facilitated the process at both campuses at the beginning and end of the semester. To keep the data confidential from the PI, only the research assistant accessed the online surveys until the end of the semester, following the posting of final grades. This ensured the PI did not know which students participated in the study, preventing a conflict of interest since the PI teaches at the second campus in the second semester.

Study Limitations

One of the study limitations was the potential bias resulting from using a convenience sample, which may not represent the population (Polit & Beck, 2010). Another potential source of bias was that the LOQ is a self-reporting questionnaire. Self-reporting may be influenced by response set biases, such as extreme or acquiescence responses, where participants constantly

report extreme beliefs or agree with statements, no matter the content of the statement (Polit &

Beck, 2010). These response set biases can be offset by having questions that are positively and

negatively worded statements (Polit & Beck, 2010), which was the case in the LOQ. Therefore,

this bias should be minimal.

Chapter Three Summary

This research study used a quasi-experimental, two-group pretest/posttest research design

to determine if intentional learning was correlated with academic performance and if performing

an intervention to promote intentional learning influenced academic performance and/or

intentional learning. This chapter presented the methodology of the study, study procedures, and

ethical considerations. Findings from this study are presented in Chapter Four.

CHAPTER FOUR: RESULTS

Chapter Four presents the results of this study, beginning with the sample's demographic description, participant pre/post scores on the LOQ, and—lastly—the results of each individual research question. This chapter concludes with an overall summary of the results.

Demographic Characteristics of Sample

The sample consisted of students enrolled in the nursing theory course, Patient-Centered Care Concepts II, at two campuses. All students affirmed they met the inclusion criteria and consented to participate in the study. The final sample consisted of 92 students; 64 were enrolled at the university's main campus (i.e., comparison group) and 28 at the secondary campus (i.e., experimental group). The majority of participants were female and self-identified as being non-Hispanic Caucasian. Seven percent of the sample were first-generation college students, and 11% had previously obtained an associate's or bachelor's degree. The demographic characteristics of the sample are depicted in Table 1. The two groups were significantly different in terms of age and highest level of education previously attained. The experimental group was two years older on average, $p = .002$, and contained more students who previously attained associate's or bachelor's degrees: 28.5% compared to 4.7% in the comparison group, $p = .0008$.

Table 1

Demographic Characteristics of Sample

	Entire Sample (N = 92)	Experimental Group (n = 28)	Comparison Group (n = 64)	Statistic/significance between groups
Age (years)				
Mean	21.0	22.7	20.3	t (-3.407) p 0.002
SD	2.43	3.77	0.76	
Median	20.0	21.0	20.0	
Gender				X^2(0.012) p 1.000
Female	85 (92.4 %)	26 (92.9%)	59 (92.2%)	
Male	7 (7.6 %)	2 (7.1%)	5 (7.8%)	
Ethnicity				X^2(3.831) p 0.280
African American	1 (1.1%)	0	1 (1.6%)	
Caucasian (non-Hispanic)	89 (96.7%)	27 (96.4%)	62 (96.9%)	
Native American	1 (1.1%)	1 (3.6%)	0	
Prefer not to answer	1 (1.1%)	0	1 (1.6%)	
First Generation College Student				X^2(0.012) p 1.000
Yes	7 (7.6%)	2 (7.1%)	5 (7.8%)	
No	85 (92.4%)	26 (92.9%)	59 (92.2%)	
Highest Level of Education Attained				X^2(9.707) p 0.008
High school	81 (88%)	20 (71.4%)	61 (95.3%)	
Associate's degree	3 (3.3%)	2 (7.1%)	1 (1.6%)	
Bachelor's degree	8 (8.7%)	6 (21.4%)	2 (3.1%)	

*Note. N* = Sample size; n = group size.

Pretest LOQ Scores

For the entire sample, the pretest LOQ provided overall intentional learning scores

ranging from 3.52 to 6.04. The average pretest LOQ score was 4.96 for the entire sample, 4.92

for the comparison group, and 5.05 for the experimental group. Figure 3 presents the percentage

of each type of learner according to their pretest LOQ score and compares the two groups.

According to the pretest LOQ scores, there were no resistant learners, 16 (16.3%) conforming

learners, 61 (66.3%) performing learners, and 15 (16.3%) transforming learners in the entire

sample.
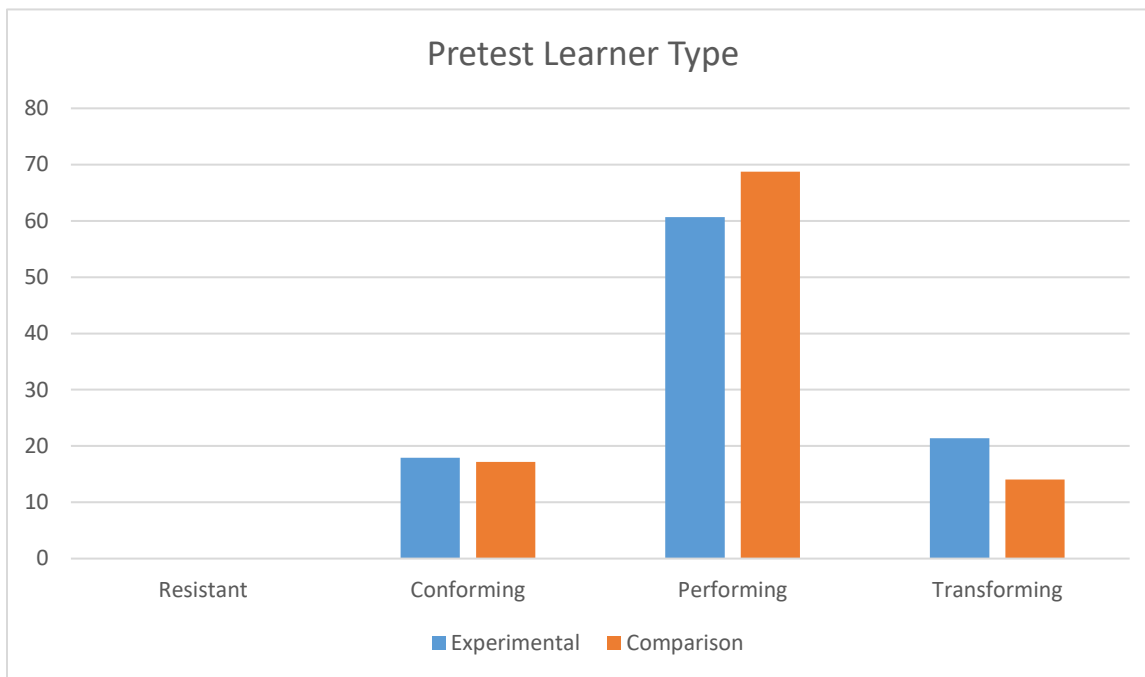
Figure 3. Percentage of each type of learner based on their overall intentional learning scores at the beginning of the semester. $N = 92$; experimental group $n = 28$; comparison group $n = 64$.

Posttest LOQ Scores

For the entire sample, the posttest LOQ scores ranged from 3.36 to 6.68 with an average

score of 5.07. The average posttest LOQ score was 5.04 for the comparison group and 5.13 for

the experimental group. Figure 4 depicts the percentage of each type of learner according to the

posttest LOQ score and compares the two groups. At the end of the semester, there were 2

(2.2%) resistant learners, 14 (15.2%) conforming learners, 53 (57.6%) performing learners, and

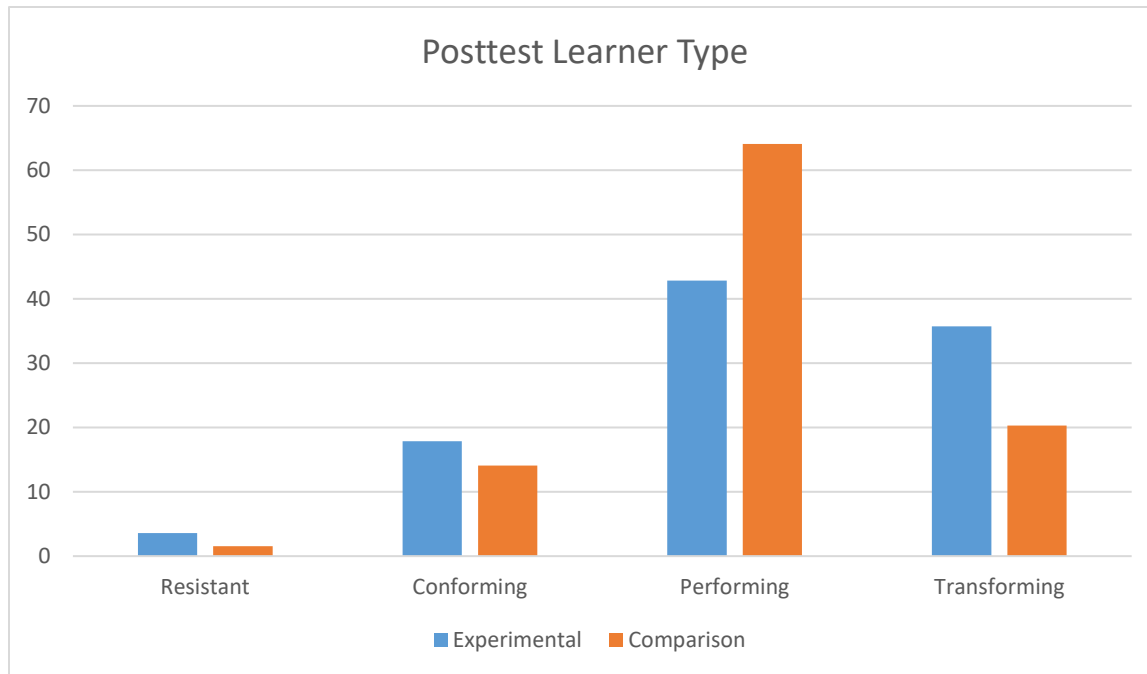23 (25%) transforming learners.

Figure 4. Percentage of each type of learner based on their overall intentional learning scores at the end of the semester. *N* = 92; experimental group *n* = 28; comparison group *n* = 64.

Data Analysis

Survey results were directly exported from QuestionPro to SPSS. Final examination scores were exported from D2L to Excel and then imported into SPSS, matching data by student ID numbers. Initial data screening on the 98 participants revealed missing data from six participants (6.1%). These participants were excluded from the analysis, resulting in a final sample size of 92 participants. Prior to analysis, data were screened for outliers and tested against relevant assumptions.

Assumption testing revealed pretest and posttest LOQ scores met all requisite assumptions, including normality (all skewness and kurtosis values were <|2|) and homogeneity of variance (all *p*-values were > .05 for Levene's Test) for each survey time. Sphericity was met since there were only two conditions or two levels of the repeated measure variable; for sphericity to be an issue, there must be at least three conditions (Field, 2013).

The Kolmogorov-Smirov normality test indicated the final examination scores were not normally distributed, $p = .000$. However, the Kolmogorov-Smirov normality test is very sensitive and should be interpreted with plots and skewness and kurtosis values (Field, 2013). All skewness and kurtosis values were $<|2|$, so it was concluded that the normality assumption was met. Final examination scores had a slightly negative skew (-.481), which signifies more scores to the right. This is an expected result as students are projected to earn passing scores on the final examination. Any further violation of assumptions is noted with the study results.

Research Question One

The first research question sought to determine if academic performance, as measured by final examination scores, is associated with intentional learning scores. No significant relationship between final examination scores and posttest intentional learning scores ($r = -.055$, $p = .603$) was found.

Research Question Two

Between-group differences in final examination scores were analyzed to determine if there is a difference in academic performance when a nursing concept interview assignment is completed. The analysis revealed a statistically significant difference in final examination scores between the comparison and experimental group: t (41.866) = 4.910, $p = .000$, two-tailed. Students in the comparison group scored higher on the final examination than those in the experimental group. The magnitude of the difference in means (.0636, 95% CI: .0374 to .0898) was large as indicated by Cohen's $d = 1.15$. Table 2 presents the final examination scores.

Table 2

Final Examination Scores

Variable	*M*	*SD*	*SE*
Comparison Group	0.877	0.05	0.006
Experimental Group	0.814	0.06	0.011

Note. M = Mean; SD = Standard Deviation; SE = Standard Error of the Mean; n = 64 for comparison group, n = 28 for experimental group.

Research Question Three

The last research question considered whether there were within- and between-group differences in pretest and posttest LOQ scores if the nursing concept interview assignment was completed. Results of the mixed-model ANOVA with LOQ score as the DV demonstrated time by group interaction was not statistically significant, F (1, 90) = 0.269, p = .606, partial η^2 = .003. The between-subjects effects demonstrated there was not a significant main effect of group on students' intentional learning scores, F (1, 90) = .818, p = .368, partial η^2 = .009. Table 3 displays the pretest and posttest LOQ scores. Intentional learning scores were not affected by group.

Table 3

Pretest and Posttest LOQ Scores

Variable	Pretest		Posttest		
	M	*SD*	*M*	*SD*	*n*
Comparison Group	4.92	.497	5.04	.583	64
Experimental Group	5.05	.602	5.13	.683	28

Note. M = Mean; *SD* = Standard Deviation; n =Group size

  The within-subjects effects revealed a significant main effect of time on students'

intentional learning scores, F (1, 90) = 4.388, p = .039, partial η^2 = .046; therefore, time had a

significant effect on intentional learning scores, regardless of group, as indicated in Table 3. The

entire sample's LOQ scores improved from pretest (*M* = 4.96, *SD* = 0.52) to posttest (*M* = 5.07,

SD = 0.61). Figure 5 displays the average LOQ score change from beginning to end of the
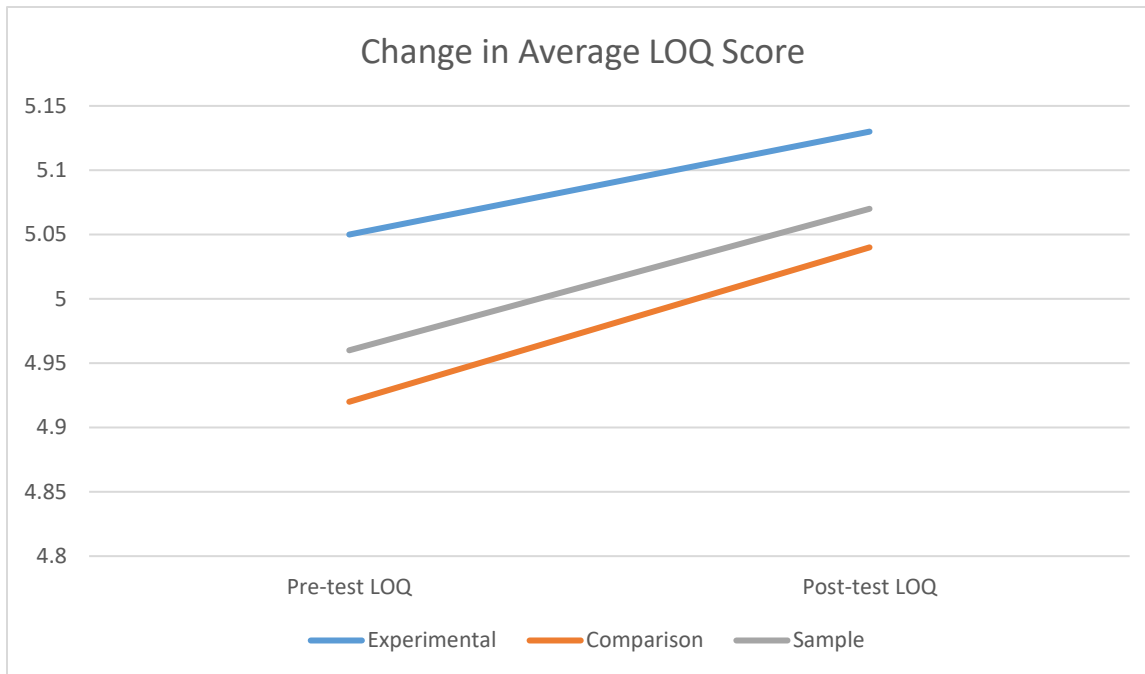
semester for each group and for the sample overall.

Figure 5. Change in average LOQ Score from beginning (pretest) to the end (posttest) of the semester. $N = 92$; experimental group $n = 28$; comparison group $n = 64$.

Reliability

   The overall LOQ had a high reliability, Cronbach's $\alpha = .85$, as did the three subscales: conative and affective focus on learning, learning independence and autonomy, and committed strategic planning and learning effort, Cronbach's $\alpha = .88$, .79, and .78, respectively. Reliability analysis was conducted on posttest LOQ scores; see Table 4 for the reliability statistics. Cronbach's α is affected by reversed scored items; thus, the ten reverse-phrased items were set to reverse score prior to reliability testing (Field, 2013).

Table 4

Reliability Statistics

Scale	*Cronbach's Alpha*	*N of Items*
Subscale		
LOQ	.85	25
Focus on learning	.88	15
Autonomy	.79	6
Learning effort	.78	4

Note. Reliability based on posttest LOQ scores.

Chapter Four Summary

Results of the three research questions asked in this study indicated 1) no significant relationship between final examination scores and posttest LOQ scores, 2) significant differences for final examination scores between the comparison and experimental group, with students in the comparison group scoring higher on the final examination ($p = .000$), and 3) no interaction effect of time by group and no differences in pretest and posttest LOQ scores. While not a specific research question in this study, it was discovered that LOQ scores significantly increased from the beginning to end of the semester, regardless of group ($p = .039$).

CHAPTER FIVE: DISCUSSION

This final chapter includes a) discussion of the demographic characteristics and results (organized by research question), b) implications for nursing education and practice, c) recommendations for future research, d) limitations, and e) summary and conclusion.

Study Results

The characteristics of the sample are primarily consistent with the current demographics of nursing students, especially in the midwestern United States. The consistency was relative to the majority of the sample being female (91%) and self-identifying as non-Hispanic Caucasian (95%). According to the South Dakota Board of Nursing (2015), enrollment in BSN programs in South Dakota consists of 89% female students and 86% white students. Additionally, 7% of the sample was first-generation college students. As published by the National Association of Colleges and Employers (2016), approximately 9% of healthcare/nursing students are first-generation college students.

Moreover, the percentages of each type of learner in the sample were consistent with the literature (Martinez, 2005). Cholbi (2007) stated the likelihood of resistant learners attending college is very low. At the beginning of the semester, no students fell into the resistant learner category; however, two students fell into the resistant learner category at the end of the semester. Upon further analysis, it was determined there was one student from each group that was just above the high end of the resistant learner range at the beginning of the semester and slipped to just below the high end of the resistant learner range by the end of the semester.

The number of conforming learners remained similar from the beginning to the end of the semester with an approximate 2% drop, which can be accounted for by the two students whose scores decreased into the resistant learner category. Performing learners decreased by 8% from

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the beginning to the end of the semester. More importantly, there was an approximate 8% increase in transforming learners over the course of the semester. The increase in transforming learners demonstrates that learners can progress along the intentional learning continuum over time.

Research Question One

The first research question was to determine if a correlation existed between final examination scores (as a measure of academic performance) and intentional learning (measured by the LOQ score). A plausible explanation for the absence of a significant correlation between final exam scores and intentional learning scores is while the final examinations for the two groups cover the same concepts and exemplars, they were not identical in point value or questions. Though differences in questions and scoring between the two final exams were unintended, this is a significant weakness in testing research question one. In future studies, the final exam needs to be identical for all groups if a determination is to be made between the relationship between final exam scores and intentional learning.

Research Question Two

Research question two sought to determine whether between-group differences existed in final examination scores as a measure of academic performance if the nursing concept interview assignment was completed. The homogeneity of variance assumption was not met for final examination scores, indicating the variance was not equal between the comparison and experimental groups, $p = .045$. To correct for the lack of homogeneity of variance, *equal variances not met* was used when reading the independent *t*-test results.

A significant difference between groups was found with the comparison group performing significantly better on the final examination than the experimental group. The

concept interview assignment performed by the experimental group had preliminary positive evidence that it improved intentional learning rather than academic performance, so this finding is not surprising. Again, a reasonable explanation for this finding is that the final examinations were not identical in point value or questions. Additionally, there may have been unknown variables between the two groups that could influence the final examination scores, such as student GPA or the difficulty level of the exam.

Research Question Three

The last research question asked whether within- and between-group differences existed in pretest and posttest intentional learning scores following the intervention. The results indicate no significant group differences. Hence, one cannot conclude that the nursing concept interview assignment significantly changed LOQ scores. This finding appears contrary to study results reported in the literature, wherein the concept interview assignment had promising preliminary evidence in that it enhanced intentional learning in accounting students (Killian et al., 2012; Killian, 2013). This study does not support this preliminary evidence when an objective measure, the LOQ, is used to measure intentional learning. One explanation for this finding would be the high rate of attrition from the secondary campus sample along with a large amount of missing data which eliminated some respondents from the study. This caused under-powering of this analysis. The potential sample size for this study was 112 students, but the sample size used in the analysis was 92 students. Power analysis indicated that for statistical significance with a sample size of 98 participants was needed with a medium effect size.

Another possibility for the contrary findings in this study is that there is no effect when using the concept interview assignment (at least for this sample) to improve intentional learning scores, or the effect is so small that a much larger sample is needed to obtain statistical results.

Nevertheless, with the probably of a Type II error created by under-powering, and the promising findings in the literature about the concept interview assignment, it might be more reasonable to repeat the study with the correction of the methodologic issues discussed here and described in the Limitations section of this paper.

While not an expressed aim of this study, time was discovered to have a significant effect on intentional learning scores, regardless of group. In other words, students improved their intentional learning scores from the beginning to the end of the semester, regardless of whether they were in the comparison or experimental group. Both groups' intentional learning scores increased significantly from the beginning to the end of the semester. This finding is consistent with the literature that learners can progress along the intentional learning continuum over time (Martinez, 2005). This study demonstrated that 8% of the sample evolved from performing to transforming learners over the course of the semester. Nursing education often uses situated learning which brings together classroom and clinical teaching through case studies, real-life examples, and clinical reasoning exercises. This type of learning environment may account for the progression of performing to transforming learners. Besides situated learning in the classroom, nursing education is known for its clinical experiences.

The concept interview assignment had proven to enhance intentional learning in accounting students and while accounting and nursing are similar in being practice disciplines, nursing programs are known for students spending a substantial amount of time in clinical. Clinical allows students to apply what they are learning in the classroom to the complex problems in the clinical environment as well as practice applying the knowledge and skills they have attained. During clinical experiences, students are developing their clinical reasoning skills, actively learning, focusing on patients, and are in small groups. Additionally, clinical

experiences often have a small teacher to student ratio, such as 1:8, which allows for more individualized teaching than in the classroom setting. Both the comparison and experimental group in this study participated in 180 hours of clinical experiences throughout the semester. This included time in acute adult, pediatric, and community settings as well as simulation. These clinical experiences may have influenced both groups' intentional learning characteristics which may explain why both groups' intentional learning scores increased significantly from the beginning to the end of the semester.

However, one strength of the study is that the reliability statistics reported in this study are consistent with those published in the LOQ Interpretation Manual (Martinez, 2005). According to Field (2013), Cronbach's α value of .7 to .8 is acceptable and indicates that the scale and subscales are consistently measuring the appropriate construct(s) (Field, 2013). Even though the LOQ had previously demonstrated sound psychometrics, it is important to note its continued reliability, especially in nursing students, so future studies can use the LOQ to measure intentional learning.

Implications and Future Research for Nursing

Of utmost importance, as demonstrated in this study, students can move along the intentional learning continuum over time. While two students dropped along the continuum, eight students moved upwards along the continuum. These changes reveal the characteristics of intentional learning are not fixed, and there are potential factors that influence intentional learning. The specific nurse educators may be one factor that can influence intentional learning. It has been suggested in the literature that through coaching, scaffolding of learning activities, and increasing student autonomy, intentional learning can be enhanced (Jiang et al., 2006; Herrington et al., 2014).

While the findings of this study do not support the use of the nursing concept interview assignment to enhance intentional learning or academic performance, there remain key implications for nursing. This study tested a specific intervention to promote intentional learning. Even though this intervention cannot be supported in this sample, there are other teaching strategies that may promote intentional learning. Additionally, a replication of this study that corrects methodological limitations may be warranted to reduce the chance of Type II error. Lastly, a study that uses a standardized examination rather than a course examination may improve the accuracy of the results.

Nurse educators may also want to test evidence-based teaching strategies rather than just continue to use common teaching strategies in nursing education. Another area of potential research in nursing is to see if the characteristics of intentional learning match the characteristics nurses need in today's practice arena, such as autonomy and life-long learning.

Limitations

There are several limitations to this study. First a convenience sample was used from one geographic area, which may not reflect the target population of BSN students in the United States, creating a potential source of bias. Another potential source of bias is self-reporting. The LOQ is a self-reporting questionnaire; however, the LOQ contains both positively and negatively worded statements to minimize the bias.

In addition, the sample size was not large enough to test whether the demographic variables are associated with intentional learning. Additionally, data analysis for research question two and three was underpowered according to the power analysis performed prior to the beginning of the study. Power analysis indicated 102 and 98 participants would be needed for research question two and three, respectively; the final sample for this study was 92 participants.

Summary and Conclusion

Intentional learning may be a good match to nursing as the characteristics of a transforming learner are those needed in nurses today. While this study did not find support for the concept interview assignment, it does support the literature as students can move along the intentional learning continuum (Martinez, 2005). Finding what factors influence this movement will be key in developing strategies or support that facilitate students toward becoming transforming learners. Further research is required to determine what teaching strategies are effective in helping students progress along the intentional learning.

DEMOGRAPHIC SURVEY

1. I affirm that I am 18 years old or older
   - o   Yes
   - o   No

2. Which campus do you attend?
   - o   Brookings
   - o   Rapid City

3. What is your student ID number?

   _____

4. I consent to my information (data) being used in the dissertation study.
   - o   Yes
   - o   No

5. What is your age?

   _____

6. What is your gender?
   - o   Female
   - o   Male

7. To which racial or ethnic group(s) do you most identify?
   - o   African-American (non-Hispanic)
   - o   Asian/Pacific Islanders
   - o   Caucasian (non-Hispanic)
   - o   Latino or Hispanic
   - o   Native American or American Indian
   - o   Other
   - o   I prefer not to answer

8. Are you the first member of your family to attend college?
   - o   Yes
   - o   No

9. What is the highest level of education you have attained?
   - o   High school
   - o   Associate degree
   - o   Bachelor degree
   - o   Graduate degree
   - o   Doctoral degree

APPENDIX B

LEARNING ORIENTATION QUESTIONNAIRE

Purpose: The next 25 questions of this survey asks how you personally rate characteristics and reactions which are typical of your GENERAL or usual approach to learning. Think of your most TYPICAL learning situations when you answer this survey. Remember, there are no right or wrong answers, simply answer as realistically as possible.

Examples:
(1) If you believe the statement is almost always uncharacteristic or untrue of you, select Very Uncharacteristic of Me.
(2) If a statement is almost always characteristic or true of you, select Very Characteristic of Me.
(3) Or, select one of the other characteristics to describe yourself.

	Very Uncharacteristic of Me	Moderately Uncharacteristic of Me	Slightly Uncharacteristic of Me	Neutral	Slightly Characteristic of Me	Moderately Characteristic of Me	Very Characteristic of Me
* 1. I push myself to accomplish personal learning goals beyond those expected by the instructor.	○	○	○	○	○	○	○
* 2. I enjoy learning.	○	○	○	○	○	○	○
* 3. The instructor is the best person to monitor, evaluate, and determine how well I learn.	○	○	○	○	○	○	○
* 4. I look for additional information sources that help me learn about new topics.	○	○	○	○	○	○	○
* 5. The instructor helps me stay on task and meet course objectives.	○	○	○	○	○	○	○
* 6. I use learning as a vital resource in accomplishing my professional or personal goals.	○	○	○	○	○	○	○
* 7. I avoid learning situations if I can.	○	○	○	○	○	○	○
* 8. I do well on a course if I rely on the instructor.	○	○	○	○	○	○	○
* 9. My personal goals have priority over the instructor's course objectives.	○	○	○	○	○	○	○
* 10. I like to learn and feel comfortable learning for any reason.	○	○	○	○	○	○	○

	Very Uncharacteristic of Me	Moderately Uncharacteristic of Me	Slightly Uncharacteristic of Me	Neutral	Slightly Characteristic of Me	Moderately Characteristic of Me	Very Characteristic of Me
* 11. I learn best if I personally manage my learning goals, strategies, and tasks.	○	○	○	○	○	○	○
* 12. I carefully plan out my learning goals, strategies, and expected outcomes before I do a learning task.	○	○	○	○	○	○	○
* 13. Learning helps me achieve challenging personal goals.	○	○	○	○	○	○	○
* 14. I avoid courses if the objectives are challenging or difficult.	○	○	○	○	○	○	○
* 15. I use learning to improve the quality of my life.	○	○	○	○	○	○	○
* 16. Monitoring my own progress helps me manage and improve my learning and professional performance.	○	○	○	○	○	○	○
* 17. I set and accomplish personal learning goals beyond the stated course objectives.	○	○	○	○	○	○	○
* 18. I do not try to set risky or challenging learning goals.	○	○	○	○	○	○	○
* 19. I enjoy discovering new topics that help me achieve personal learning goals.	○	○	○	○	○	○	○
* 20. I rely on the instructor to assess my learning achievement.	○	○	○	○	○	○	○
* 21. I continually assess my progress and determine how to improve my learning ability.	○	○	○	○	○	○	○
* 22. I know that the instructor can show me the best way to evaluate achievement of my learning goals.	○	○	○	○	○	○	○
* 23. The instructor can play my best learning approach for accomplishing training objectives.	○	○	○	○	○	○	○
* 24. I know what to do if I am not doing well in a course.	○	○	○	○	○	○	○
* 25. Learning is not an enjoyable or comfortable process for me.	○	○	○	○	○	○	○

APPENDIX C

CONCEPT INTERVIEW AASSIGNMENT INSTRUCTIONS FOR INSTRUCTORS

The concept interview is administered in five parts. Each part of the interview has a separate due date over a 12-week timeline (for a semester-length course) as shown in Appendix C. Students need to preview the interview as a whole so they can envision how the parts fit together. When Part 1 is assigned, instructions for Parts 2 through 5 and associated due dates should also be provided. As the course progresses, students should be reminded of next steps and approaching due dates. Instructors should incorporate the following key points as they craft and tailor the assignment for their particular students.

Part 1: Identify agency and interviewee; discuss reasons for choice and how you will benefit.

- Choose a healthcare agency or unit that interests you or one where you might want to work someday.
- Consider this an opportunity to expand your professional network.
- Identify an individual within the agency who plays a key role in nursing for a unit or for the entire agency.
- Submit your response via (paper or online) by (due date). A good response will contain about 100 words.
- This part of the exercise is worth 5 points; to receive credit for future parts of the assignment, you must complete this part.
- If you have difficulty identifying an agency, see the instructor. *[Instructor may suggest suitable nursing agencies.]*

Part 2: Develop six to eight questions about how the agency uses one of the concepts from this course and relationship to its environment.

- Develop a list of six to eight questions you hope to have answered during the nursing concept interview.
- In formulating your questions, consider course material, current events, or other sources.
- Consider topics about how the concept would be used in the agency/unit.
- Submit your list of potential questions via (paper or online) by (due date).
- This part of the exercise is worth 5 points; to receive credit for future parts of the assignment, you must complete this part.

Part 3: Arrange and conduct the interview.

- Refer to your list of questions (Part 2) and to the generic questions provided by the instructor to help prepare for your interview.
- Aim for an interview of about 45 min.
- Dress professionally and exhibit respect for the agency and the interviewee.
- Conduct the interview during normal working hours in an office of the agency; do not conduct the interview in a personal place (such as the interviewee's home).
- Stick to the agreed-upon schedule and respect the interviewee's time.
- Take written notes (asking to record the interview may make the interviewee uncomfortable).

Part 4: Submit a short paper summarizing the results of the interview.

- Your paper should be 4 to 6 pages in length, double-spaced, 12-pt font.
- Summarize the technical information you learned about how the agency uses the concept and related topics; you may also include general impressions on the information or the interview experience.
- Your paper will be evaluated on both content and composition; if there are excessive errors (poor organization; errors in grammar, spelling, or punctuation) you will be asked to revise and resubmit.
- It is highly recommended that you have your paper reviewed by a consultant in the [campus writing tutorial center] before submission.
- Submit your paper via (paper or online) by (due date).
- This part of the exercise is worth 15 points.

Part 5: Submit personal reflections.

- Respond to the reflective prompts on the interview experience.
- Provide thoughtful, well-developed responses in complete sentences; if your responses are too brief or repetitive (same response for different prompts) points may be deducted or you may be asked to resubmit.
- Most prompts require a few sentences for a well-developed response.
- Submit your responses via (paper or online) by (due date).
- This part of the exercise is worth 10 points.

(Adapted from Killian, 2013)

APPENDIX D

CONCEPT INETERVIEW DESCRIPTION

The concept interview is administered in five steps. Each step of the interview has a separate due date over the semester, see Implementation Steps & Points Values. You need to preview the interview as a whole so you can envision how the steps fit together.

Step 1: Identify agency and interviewee; <u>discuss reasons for choice</u> and <u>how you will benefit</u>.

- Choose a <u>healthcare agency or unit</u> that interests you or one where you might want to work someday.
- Consider this an opportunity to expand your professional network.
- <u>Identify an individual</u> (by name, indicating that you have contacted him or her and have permission to interview) within the agency who plays a key role in nursing for a unit or for the entire agency.
- <u>Identify a concept</u> from this course that you will base the interview upon.
- Submit your response via drop box by September 10, 2017. A good response will contain approximately 100 words.
- This part of the exercise is worth 5 points (each underlined component is worth 1 point); to receive credit for future parts of the assignment, you must complete this part.
- If you have difficulty identifying an agency, see the instructor. *[Instructor may suggest suitable nursing agencies.]*

Step 2: Develop <u>six to eight questions</u> about <u>how the agency uses the concepts in relationship to its environment.</u>

- Develop a list of six to eight questions you hope to have answered during the nursing concept interview.
- In formulating your questions, consider course material, current events, or other sources.
- Consider topics about how the concept would be used in the agency/unit.
- Submit your list of potential questions via drop box by October 1, 2017.
- This part of the exercise is worth 5 points (each underlined component is worth 2.5 point); to receive credit for future parts of the assignment, you must complete this part.

Step 3: Arrange and conduct the interview.

- Refer to your list of questions (Step 2) and to the generic questions provided by the instructor to help prepare for your interview.
- Aim for an interview of about 45 min.
- Dress professionally and exhibit respect for the agency and the interviewee.
- Conduct the interview during normal working hours in an office of the agency; do not conduct the interview in a personal place (such as the interviewee's home).
- Stick to the agreed-upon schedule and respect the interviewee's time.
- Take written notes (asking to record the interview may make the interviewee uncomfortable).

Steps 4 & 5: Submit a short paper summarizing the results of the interview and personal reflection.
- Your paper and reflection should be 4–6 pages in length, double spaced, 12-pt font.
- Summarize the technical information you learned about how the agency uses the concept and related topics; you may also include general impressions and conclusions on the information or the interview experience.
- Respond to the reflective prompts on the interview experience.
- Provide thoughtful, well-developed responses in complete sentences; if your responses are too brief or repetitive (same response for different prompts) points may be deducted. Most prompts require a few sentences for a well-developed response.
- Your paper and reflection will be evaluated on both content and composition; if there are excessive errors (poor organization; errors in grammar, spelling, or punctuation), points will be deducted.
- It is highly recommended that you have your paper reviewed by a peer before submission to reduce errors.
- Submit your paper via drop box by November 12, 2017.
- This part of the exercise is worth 25 points.

(Adapted from Killian, 2013)

APPENDIX E

IMPLEMENTATION STEPS AND POINT VALUES

Step		Due Date	Point value
1.	Choose one of the concepts presented in this course (listed below). Identify agency/unit and interviewee; discuss reasons for choice and how you will benefit.*[Complete sentences, good grammar, and reasonable justification required for full point value.]*	Week 3	5
2.	Develop six to eight questions about how the agency/unit uses the concept you chose. *[Connection to course material and respectful or ''professional'' wording required for full point value. Students may resubmit to improve questions.]*	Week 6	5
3.	Arrange and conduct interview.*[Not scored.]*	Week 7 to 12	-
4.	Submit short paper.*[Range of scores based on technical content, organization, grammar, and length of paper.]*	Week 12 (or earlier)	15
5.	Submit personal reflections.*[Depth of thought, good grammar, and sufficient length required for full point value.]*	Week 12 (or earlier)	10

List of Course Concepts: Development, Family, Acid base balance, Cellular regulation, Elimination, Fluid and electrolyte balance, Gas exchange, Immunity, Infection, Inflammation, Intracranial regulation, Metabolism, Perfusion, Ethics, Health promotion, Patient education, and Safety

(Adapted from Killian, 2013)

APPENDIX F

GENERIC QUESTIONS FOR THE CONCEPT INTERVIEW

1. What is the significance of the concept of _____ for your agency/unit?
2. How frequently is the concept of _____ used in your agency/unit?
3. How is the concept of _____ used in your agency/unit?
4. How is the concept of _____ measured in your agency/unit? Is there a tool used to measure it? Who performs the measurements?
5. Who (different roles) uses the concept of _____ in your agency/unit?
6. How do you expect nursing graduates to be able to use the concept of _____ at your agency/unit?

(Adapted from Killian, 2013)

APPENDIX G

REFLECTIVE PROMPTS

Name of and position title of interviewee:

Name of organization:

Date and location of interview:

1. How did you choose this particular agency/unit to interview?
2. What terms, concepts, or principles were used during the interview that relate to terms, concepts, or principles we study in class?
3. What unexpected things did you learn about the nursing concept that you chose?
4. What unexpected things did you learn about the interviewee's organization or agency?
5. How would you describe this person's professional demeanor? Were there behaviors or other clues that indicated ''This person is competent'' or ''This person takes his/her job seriously''?
6. What do you think it would be like to work for this agency/organization, and why?
7. What did you learn from this interview that will help you in the future?
8. How do you think the interviewee felt about your discussion, and what clues or evidence bring you to this conclusion?
9. As a nursing student, how do you feel about the concept that you chose for the interview? Did your view of the nursing concept change after the interview?

(Adapted from Killian, 2013)

ASSESSMENT RUBRIC FOR CONCEPT INTERVIEW PAPER & REFLECTION

	0 points	**2.5 points**	**5 points**	**7.5 points**
Student discovers, through self-directed learning, how the concept is used in nursing practice.	Student fails to conduct interview and submit technical summary and personal reflections.	Student conducts interview and submits brief paper and personal reflections. a. Paper is a technical summary but does not indicate how the concept is used in nursing practice. b. Reflections are brief but adequate.	Student conducts interview and submits paper and personal reflections that demonstrate partial commitment to learning. a. Paper is organized, includes a technical summary and brief application of the concept to nursing practice. b. Personal reflections indicate depth of thought and personal development as a result of the exercise. OR a. Paper is well-organized, well-developed, and includes conclusions as well as technical descriptions when applying the concept to	Student conducts interview and submits paper and personal reflections that demonstrate commitment to learning. c. Paper is well-organized, well-developed, and includes conclusions as well as technical descriptions when applying the concept to nursing practice. d. Personal reflections indicate depth of thought and personal development as a result of the exercise.

			nursing practice. b. Reflections are brief but adequate.	
Student connects information from the interview to course material.	Student fails to describe how the concept is used in the agency or unit.	Student describes how the nursing concept is used in the agency or unit using terms, concepts, or principles used in the course.	Student describes how the nursing concept is used in the agency or unit using terms, concepts, or principles used in the course and minimally reflects on how the interview information relates to course material. OR Student briefly describes how the concept is used in the agency and reflection indicates depth of thought and personal development.	Student thoroughly describes how the nursing concept is used in the agency or unit using terms, concepts, or principles used in the course and reflects on how the interview information relates to course material. Reflection indicates depth of thought and personal development.
	0 points	**2.5 points**	**5 points**	**7.5 points**
Student reflects on potential careers.	Student fails to reflect on the challenges or rewards of the interviewee's role.	Student briefly reflects on the challenges or rewards of the interviewee's role.	Student reflects on the challenges or rewards of the interviewee's role; however, does not include the perspective of *suitability for self.*	Student reflects on the challenges or rewards of the interviewee's role from the perspective of *suitability for self.*
Paper & reflection is 4-6 pages in length, double spaced, 12 pt font and free of spelling and grammar errors.	Paper does not meet standards for formatting and/or has more than 2 errors.	Paper & reflection meet standards for formatting and has minimal errors (2 or less).		

(Adapted from Killian, 2013)

APPENDIX I

UNIVERSITY OF LAS VEGAS IRB APPROVAL

UNLV Biomedical IRB - Exempt Review
Exempt Notice

DATE:	August 15, 2017
TO:	Mary Bondmass, PhD
FROM:	Office of Research Integrity - Human Subjects
PROTOCOL TITLE:	[1107288-1] Concept Interview Assignment to Foster Intentional Learning in Nursing
ACTION:	DETERMINATION OF EXEMPT STATUS
EXEMPT DATE:	August 15, 2017
REVIEW CATEGORY:	Exemption category # 1

Thank you for your submission of New Project materials for this protocol. This memorandum is notification that the protocol referenced above has been reviewed as indicated in Federal regulatory statutes 45CFR46.101(b) and deemed exempt.

We will retain a copy of this correspondence with our records.

PLEASE NOTE:
Upon final determination of exempt status, the research team is responsible for conducting the research as stated in the exempt application reviewed by the ORI - HS and/or the IRB which shall include using the most recently submitted Informed Consent/Assent Forms (Information Sheet) and recruitment materials.

If your project involves paying research participants, it is recommended to contact Carisa Shaffer, ORI Program Coordinator at (702) 895-2794 to ensure compliance with the Policy for Incentives for Human Research Subjects.

Any changes to the application may cause this protocol to require a different level of IRB review. Should any changes need to be made, please submit a **Modification Form**. When the above-referenced protocol has been completed, please submit a **Continuing Review/Progress Completion report** to notify ORI - HS of its closure.

If you have questions, please contact the Office of Research Integrity - Human Subjects at IRB@unlv.edu or call 702-895-2794. Please include your protocol title and IRBNet ID in all correspondence.

Office of Research Integrity - Human Subjects
4505 Maryland Parkway . Box 451047 . Las Vegas, Nevada 89154-1047
(702) 895-2794 . FAX: (702) 895-0805 . IRB@unlv.edu

Generated on IRBNet

APPENDIX J

SOUTH DAKOTA STATE UNIVERSITY IRB APPROVAL

Human Subjects Committee
Human Subjects Approval Request
South Dakota State University

____X____ Exempt _____X_____ Expedited Review _____ Committee Review

1. Principal investigator ___Sarah Mollman_____ Phone No. _(605) 645-8312_____

   E-mail address of principal investigator _____sarah.mollman@sdstate.edu_____

   ___X___ Faculty ___X___ Graduate Student _____Undergraduate Student _____Not SDSU Researcher

   If student, faculty advisor ___Dr. Mary Bondmass_____

   College/School _____University of Nevada, Las Vegas_____ Department _____School of Nursing_____

(Please use an additional sheet to list names and contact information for others involved with the project).

2. Project title ___Concept Interview Assignment to Foster Intentional Learning in Nursing Students_____

3. Sponsoring agency University of Nevada, Las Vegas_____

4. Project Period (contact with participants): From __8__ / __21__ / __17__ To __12__ / __18__ / __17__

5. Location of study _____Brookings & Rapid City Campus - Nursing_____

6. Number of human participants to be selected ___Up to 112_____

7. Types of participants to be selected:

   __X__ Normal Adults _____Pregnant Women _____Prisoners

   ___Minors _____Fetuses _____Mentally Disabled or Delayed

8. Exemption from Committee Review Requested? __X____ Yes _____ No

   If "yes", indicate basis for exemption. For complete descriptions of the exempt categories of research, see:

   http://www.sdstate.edu/research/compliance/humansubjects/index.cfm

   __X__ Educational Research ___Educational Tests ____Study of Existing Data

   ___Survey/Interview Research ___Observational Research ___ Food Tasting

   (The above do not automatically make a project exempt; it may require expedited or full committee review.)

9. Will any drugs, chemical or biological agents be administered to human subjects?

   _____ Yes _X___ No *If Yes, include documentation regarding safety from a source other than the manufacturer in METHODS.*

10. Will specimens or samples of tissues, body fluids, or other substances be collected from participants?

    _____ Yes _X__ No *If Yes, include details of collection, storage, labeling, use, and disposal in METHODS.*

11. Has each investigator involved in the study completed CITI on-line training and filed a copy of the certificate in the Office of

Research and Sponsored Programs? _____ Yes _X (Attached)__ No

12. *Research Protocol:* Complete a description of the proposed study following instructions.

13. *Informed Consent:* Attach copies of all forms which will be used to obtain the legally effective informed consent of human

subjects or their legal representatives, or justification why informed consent should be altered or waived.

14. *Additional Materials:* Attach a copy of all surveys, recruitment materials, and any other relevant documents.

Authorized Signatures: *Sarah Mollman*

Principal Investigator : *Mary D Bondmass* Date ___7-11-2017_____

I ____ do _X___ do not wish to appear before the committee

Advisor (if student project)_____*Mary D Bondmass*_____ Date _7-11-2017_

Department Head or Dean ___*Barbara Heeles*_____ Date _7/12/2017_

APPENDIX K

COVER LETTER

Cover Letter

Dear Student:

I, Sarah Mollman, am conducting a research project entitled "Concept Interview Assignment to Foster Intentional Learning in Nursing Students" as part of my dissertation at the University of Nevada, Las Vegas. Previous research has shown that intentional learning promotes better understanding of complex concepts and material; however, no research on intentional learning has been done specifically with nursing students. The purposes of the study are to determine if intentional learning is associated with academic achievement (i.e., grades) and if an evidence-based intervention will enhance intentional learning and/or academic achievement in nursing students.

Your faculty will be examining the use of an assignment to foster intentional learning for a course evaluation and completing any questionnaires or surveys is a requirement in your course. Your data will be used for course evaluation only. I am asking for your consent to further use your information (data) in my dissertation. A dissertation is a research study that is completed to obtain a Ph.D. The use of your data will be for any publications as a result of my dissertation; however, there will be no way to identify you as an individual, as all data will be in aggregate form. It will take you approximately 15 minutes of your time. Your consent to use your data part in my dissertation is voluntary; however, participating in the course evaluation is mandatory. You may withdraw your consent to use your data in my dissertation at any time without consequence. It will not affect your grade in the course.

There are no known major risks to you for participating in this study. Some students may feel uncomfortable during the completion of the questionnaire not knowing if they are providing the correct answer or not. Please be assured that there are no 'right' or 'wrong' answers, nor will your grade be affected by what you answer on the questionnaire.

There may be no benefits to you for your participation in this study. However, after the semester, you will receive a description of intentional learning and its benefits, the aggregate results to the Learning Orientation Questionnaire, and an Internet link to strategies to improve intentional learning skills. Some students may feel a sense of satisfaction in having their data

used as part of nursing research.

Your responses are strictly confidential. When the data and analysis are presented or published, you will not be linked to the data by your name, title, student ID number, or any other identifying item. Additionally, I will not know which students participate in the study until after final grades are posted (this is to assure you that your grade is not contingent in any way with you consenting to the use of your data).

Please complete the online demographic survey and questionnaire as a course requirement.

Your consent to include your data in my dissertation research will be acknowledged by you selecting the option to have your data included in my research. Please keep this letter for your information. If you have any questions, now or later, you may contact us at the number below. Thank you very much for your time and assistance. If you have any questions regarding your rights as a research participant in this study, you may contact the SDSU Research Compliance Coordinator at 605-688-6975, SDSU.IRB@sdstate.edu.

Sincerely,

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REFERENCES

American Association of Colleges of Nursing [AACN]. (2008). *The essentials of baccalaureate education for professional nursing practice*. Retrieved from: http://www. aacn.nche.edu/Education/pdf/BaccEssentials08.pdf

Bell, H. S. (2014). Becoming a successful student in pre-registration nurse education: A qualitative multiple case study (Master's thesis). Available from ProQuest Dissertation and Theses database. (UMI No. 10057986).

Benner, P., Sutphen, M., Leonard, V. & Day, L. (2010). *Educating nurses: A call for radical transformation.* Jossey-Bass, San Francisco, CA.

Bereiter, C., & Scardamalia, M. (1989). Intentional learning as a goal of instruction. In L. Resnick (Ed.), *Knowing, learning, and instruction: Essays in honor of Robert Glaser* (pp. 361–392). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Billings, D. M., & Halstead, J. A. (2016). *Teaching in nursing: A guide for faculty* (5th ed.). St. Louis, MO: Elsevier Inc.

Campaign for Action. (2013). *Transforming nursing education: More highly educated nursing workforce needed to provide more complex patient care, experts say.* Retrieved from http://campaignforaction.org/transforming-nursing-education/

Chambers, D., Thiekotter, A., & Chambers, L. (2013). Preparing student nurses for contemporary practice: The case for discovery learning. *Journal of Nursing Education and Practice, 3*(9), 106–113.

Chee, Y.S. (2014). Intentional learning with education games: A Deweyan reconstruction. *Australian Journal of Education, 58*(1), 59–73.

Cholbi, M. (2007). Intentional learning as a model for philosophical pedagogy. *Teaching Philosophy, 30*(1), 35–58.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Upper Saddle River, NJ: Pearson Education Inc.

Cumming, A. (1986). Intentional learning as a principle for ESL writing instruction: A case study. *TESL Canada Journal, 3*(1), 69–83.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*(4), 1149–1160.

Fiedler, S., & Valjataga, T. (2010). Interventions for second-order change in higher education: Challenges and barriers. *Electronic Journal of e-Learning, 8*(2), 85–92.

Field, A. (2013). *Discovering statistics using IBM SPSS Statistics* (4th ed.). California: Sage

Francis, M. C., Mulder, T. C., & Stark, J. S. (1995). *Intentional learning: A process for learning to learn in accounting curriculum.* Accounting Education Series, Volume No. 12. Tempe, AZ: Accounting Education Change Commission and American Accounting Association.

Fuller, T., & Krumova, G. (n.d.). Students' learning demand, zone of proximal development and learning orientation. Retrieved from http://www.learningdemand.com/MOODLE/adaptive_learning_instruments.htm

Hanham, J., Ullman, J., Orlando, J., & McCormick, J. (2014). Intentional learning with technological proxies: Goal orientations and efficacy beliefs. *Australian Journal of Education 58*(1), 36–49.

Herrington, J., Parker, J., & Boase-Jelinek, D. (2014). Connected authentic learning: Reflection and intentional learning. *Australian Journal of Education 58*(1), 23–35.

Hung, W. (2014). Intrinsic and extrinsic intentional learning: The difference made by self-determination. *Australian Journal of Education, 58*(1), 50–58.

Hunter, C. (2014). Perspectives in AE: Intentional incidental learning in the workplace: Implications for adult learning. *New Horizons in Adult Education & Human Resource Development, 26*(2), 49–53.

Institute of Medicine [IOM]. (2011). *The future of nursing: Leading change, advancing health.* National Academies Press, Washington DC.

Jiang, M., Parent, S., & Eastmond, D. (2006). Effectiveness of a web-based learning opportunities in a competency-based program. *International Journal on E-Learning, 5*(3), 353–360.

Killian, L. (2013). The budgetary interview: Intentional learning for students in governmental and non-profit accounting. *Journal of Accounting Education, 31,* 350–362.

Killian, L. J., Huber, M. M., & Brandon, C. D. (2012). The financial statement interview: Intentional Learning in the First Accounting Course. *Issues in Accounting Education, 27*(1), 337–360.

Knight, P., Tait, J., & Yorke, M. (2006). The professional learning of teachers in higher education. *Studies in Higher Education, 31*(3), 319–339.

Kuhnert, M. T., Bialonski, S., Noennig, N., Mai, H., Hinrichs, H., Helmstaedter, C., & Lehnertz, K. (2013). Incidental and intentional learning of verbal episodic material differentially modifies functional brain networks. *PLoS one 8*(11), e80273.

Lee, C. B., Rooney, P., & Parada, R. H. (2014). Fostering intentional learning with systems dynamic modeling. *Australian Journal of Education, 58*(1), 89–103.

Martinez, M. (2005). *Learning orientation questionnaire – manual.* Retrieved from

http://www.trainingplace.com/source/research/LOQPKG-Manual2005.pdf

Martinez, M. (2000). Intentional learning in an intentional world: Audience analysis and

instructional system design for successful learning and performance. *ACM Journal of
Computer Documentation, 24*(1), 3–20.

McComb, S. A., & Kirkpatrick, J. M. (2016). Impact of pedagogical approaches on cognitive

complexity and motivation to learn: Comparing nursing and engineering undergraduate

students. *Nursing Outlook, 64*, 37–48.

Miners, L., & Nantz, K. (2009). More significant and intentional learning in the economics

classroom. *New Directions for Teaching and Learning, 119*, 25–33.

Mollman, S., & Candela, L. (2018). Intentional learning: A concept analysis. *Nursing Forum, 53*,

106-111.

Murray, T. A. (2013). Innovations in nursing education: The state of the art. *Journal of Nursing
Regulation, 3*(4), 25–31.

National Association of Colleges and Employers [NACE]. (2016). *First-generation students and
job success.* Retrieved from http://www.naceweb.org/job-market/special-

populations/first-generation-students-and-job-success/

National League for Nursing [NLN]. 2003. *Position statement. Innovation in nursing education:
A call to reform.* Retrieved from http://www.nln.org/docs/default-source/about/archived-

position-statements/innovation-in-nursing-education-a-call-to-reform-pdf.pdf?sfvrsn=4

Noldy, N. E., Stelmack, R. M., & Campbell, K. B. (1990). Event-related potentials and

recognition memory for pictures and words: The effects of intentional and incidental

learning. *Psychophysiology, 27*(4), 417–428.

Noori S., Gholami, H., & Rajabi, S. (2014). The development of the receptive and productive knowledge of collocations through incidental vs. intentional learning. *Modern Journal of Language Teaching Methods, 4*(2), 146–153.

Numminen, O., Laine, T., Isoaho, H., Hupli, M., Leino-Kilpi, H., & Meretoja, R. (2014). Do educational outcomes correspond with the requirements of nursing practice: educators' and managers' assessments of novice nurses' professional competence. *Scandinavian Journal of Caring Sciences, 28* (4), 812–821.

Oregon Consortium for Nursing Education [OCNE]. (2012). *Curriculum competencies.* Retrieved from https://sakai.ohsu.edu/access/content/group/32698984-10de-44e0-0038-5cc768716e6e/Agreements%20-%20Curriculum/Curriculum%20Competency%20Approved%205-11-2012.pdf

Polit, D. F., & Beck, C. T. (2010). *Essential of nursing research: Appraising evidence for nursing practice* (7th ed.). Philadelphia, PA: Wolters Kluwer Health/Lippincott, Williams, & Wilkins.

Remler, D. K., & Ryzin, G. G. (2015). *Research methods in practice: Strategies for description and causation* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Spector, J. M., & Kim, C. M. (2014). Technologies for intentional learning: Beyond the cognitive perspective. *Australian Journal of Education, 58*(1), 9–22.

Spector, N., & Odom, S. (2012). The initiative to advance innovations in nursing education: Three years later. *Journal of Nursing Regulation, 3*(2), 40–44.

South Dakota Board of Nursing [SDBON]. (2015). *South Dakota annual report of nursing education programs*. Retrieved from https://doh.sd.gov/boards/nursing/documents/AnnualEducationReport2015.pdf

Tabachnick, B. G., & Fidell, L. S. (2012). *Using multivariate statistics* (6th ed.). New York, NY:

    Allyn & Bacon.

Tedesco-Schneck, M. (2013). Active learning as a path to critical thinking: Are competencies a

    roadblock? *Nursing Education in Practice, 13*(1), 58–60.

The Training Place. (2010). *Conceptual model for successful intentional learning: Providing*

    criteria to measure progress, predict outcomes, and improve ability. Retrieved from

    http://www.trainingplace.com/source/research/learningsuccess.htm

Valjataga, T., & Laanpere, M. (2010). Learner control and personal learning environment: A

    challenge for instructional design. *Interactive Learning Environments, 18*(3), 277–291.

Van Asselen, M., Fritschy, E., & Postma, A. (2006). The influence of intentional and incidental

    learning an acquiring spatial knowledge during navigation. *Psychological Research, 70*,

    151–156.

Walker, L. O., & Avant, K. C. (2011). *Strategies for theory construction in nursing* (5th Ed.).

    Prentice Hall, Upper Saddle River, NJ.

Youatt, J., & Wilcox, K. A. (2008). Intentional and integrated learning in a new cognitive age: A

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    10(4), 24–26.

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