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# The Meaning of Nursing Education As Described By Students With Learning Disabilities

Jacqueline Lee Reep-Jarmin

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THE MEANING OF NURSING EDUCATION  
AS DESCRIBED BY  
STUDENTS WITH LEARNING DISABILITIES

by

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Bachelor of Science in Nursing, Minot State University, 2002  
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A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

Grand Forks, North Dakota

December  
2016

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This dissertation, submitted by Jacqueline Lee Reep-Jarmin, in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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December 6, 2016

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Department: College of Nursing and Professional Disciplines

Degree: Doctor of Philosophy

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Jacqueline Lee Reep-Jarmin  
December 2016

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## ABSTRACT

The numbers of students with learning disabilities (LD) in post-secondary education settings is rising (National Center for Education Statistics (NCES), 2016). The Americans with Disabilities Act, Amendments Act was passed in 2008, since that time little research has been done to reflect any impact of the original ADA (1990) being amended. Research is needed about the experiences of students with learning disabilities in higher education, and more specifically nursing education. The purpose of this study was to develop an understanding of the lived experience of nursing education from the perspective of students with learning disabilities, and delineate the essence of the phenomenon.

This descriptive phenomenological study was guided by the methods of reflective lifeworld research (Dahlberg, Drew & Nystrom, 2001; Dahlberg, Dahlberg & Nystrom, 2008). Specific aims of the study were to describe 1) through the experiences of students with learning disabilities, how having a learning disability is part of their nursing education experience, 2) to describe factors which help them succeed and progress in their nursing education programs, and 3) to describe factors which have made success and progression difficult in their nursing education programs.

Nine student nurses with learning disabilities who either self-identify as having a learning disability, or have a diagnosis of a learning disability participated in the study.

Data was collected through semi-structured interviews of all participants to learn about their experiences of nursing school. The essence of the phenomenon of nursing school, as experienced by students with learning disabilities, was “developing adaptive pathways on the way to becoming a good nurse.” The essence of the phenomenon displayed itself through three constituents, 1) identify as having a learning disability, 2) “just another hump to get over,” and 3) use of accommodations.

The findings from this study are significant for both students with learning disabilities and educators of nursing. Students with learning disabilities described their experiences of nursing school, what factors were important to their success, and what made success difficult. The findings of this study can also be used to inform nursing practice, policy, and future research in the area of nursing students with learning disabilities.

## **CHAPTER I**

### **INTRODUCTION**

The number of students who report having a disability in post-secondary education settings is rising. Students with learning disabilities make up the largest group of students with disabilities (University of Washington, 2016). Learning disabilities have shown to encompass about 30% of students with disabilities from 1995-2010 (NCES, 1999; Raue & Lewis, 2011; NCES, 2012). After specific learning disabilities the next largest group of disabilities is ADD/ADHD with 18%, followed by mental and psychological conditions with 15% of students with disabilities (Raue & Lewis, 2011). Between 1990 and 2005 the percentage of students with learning disabilities enrolled in post-secondary education increased by 18% (National Center for Learning Disabilities, NCLD, 2014). In fact, students with learning disabilities attend post-secondary education at the same rate as students without disabilities (NCLD, 2014). This signifies a need for a greater understanding of students with learning disabilities and their education experiences. The author comes to an interest in this topic based on experience as a nurse educator in a university setting.

The number of students with disabilities applying to and being accepted into nursing programs is also increasing (Ijiri & Kudzma, 2000; Selekman, 2002; Arndt,

2004). Between 1995 and 2008 the percentage of students with disabilities in a health related field of study rose from 11% to 14.8% (National Center for Education Statistics, NCES, 1999; NCES, 2012). Nursing is the third most popular career choice of full-time freshman with learning disabilities (Helms, Jorgensen, & Anderson, 2006). With the increase of students with disabilities in nursing education, nurse educators are faced with challenges of how to meet the individual educational needs of the students (Selekman, 2002). Most nurse educators rate themselves as having fairly low levels of knowledge of issues related to students with disabilities (Kolanko, 2003). Because of an increase in the numbers of students with learning disabilities, it is prudent to learn about their experiences in nursing education. Any barriers the students face in trying to progress in their nursing education programs can then be addressed.

The phenomenon of interest in this study was nursing education, as described through the lived experiences of nursing students with learning disabilities. The research question for the study was, “How is nursing education experienced by undergraduate students with learning disabilities?” The following sections will describe the specific aims, research method, impact and significance of the study.

### **Specific Aims**

The specific aims of this descriptive phenomenological qualitative research study were:

1. To describe, through the experiences of students with learning disabilities, how having a learning disability is part of their nursing education experience.

2. To describe factors which help them succeed and progress in their nursing education programs.
3. To describe factors which have made success and progression difficult in their nursing education programs.

### **Approach**

The research method used to address the specific aims of this research study was descriptive phenomenology. Descriptive phenomenology describes and elucidates the lived world, which expands understanding of human beings and their experiences (Dahlberg, Dahlberg & Nystrom, 2008). Phenomenology is concerned with the essence of a phenomenon, which is what is constant and essential in the data. Discovering the essence of a phenomenon means identifying what is the same in separate unique experiences (Dahlberg, Drew & Nystrom, 2001).

Descriptive phenomenology does not aim to answer questions, but instead seeks to describe experiences. In education, to understand teaching and learning, we must look at the student's experiences, as they are the most central and important person (Dahlberg, Drew & Nystrom, 2001). Within descriptive phenomenology the researcher strives to understand the meaning as another person experiences it (Dahlberg, Drew & Nystrom, 2001). The goal of descriptive phenomenology and lifeworld research is to discover, analyze, clarify, understand and describe meaning to contribute to the development of scientific knowledge (Dahlberg, Drew & Nystrom, 2001).

## **Impact Statement**

Developing an understanding of experiences students with learning disabilities face in nursing education leads to more knowledge about learning disabilities within nursing education programs. The experiences of students with learning disabilities is lacking within recent literature on nursing education. Nursing knowledge can be enhanced by involving people to whom the phenomenon relates, giving them the opportunity to be active participants in sharing their personal experiences. The understanding of experiences of students with learning disabilities may reveal strategies students with learning disabilities have used to ensure success within nursing education.

Knowledge of the impact of having a learning disability while in nursing school may lead to future research about students with learning disabilities in nursing education. In addition to the impact on nursing education, this study may also impact practice and policy. Practice may be impacted by increasing the diversity of the nursing workforce, and changes in policy may include new training on learning disabilities for both employers and educators. Enhancing the knowledge of learning disabilities among nurse educators may influence student retention and academic success.

## **Significance**

The nursing profession has an obligation, both ethical and legal, to educate qualified people with disabilities (Carroll, 2004). People with disabilities can improve nursing care and advance culturally relevant care with their understanding of disability issues (Marks, 2007). The Institute of Medicine (IOM, 2011), now known as the National

Academy of Medicine, explained that, to meet the current health care needs in America, the nursing workforce needs to become more diverse. For the nursing workforce to become more diverse, nurse educators need to make a conscious effort to increase the diversity of students in nursing education. Benner, Sutphen, Leonard and Day (2010) also discussed the need for more diversity in nursing. To be able to provide culturally relevant care, nurses must be alert to the diversity of concerns, attitudes, and values patients and their families bring to healthcare; this level of care can be achieved with increased diversity in nursing (Benner et al., 2010). Although the IOM (2011) and Benner et al. (2010) focused on increasing the diversity of gender and ethnicity, increasing the numbers of nursing students and nurses with disabilities will also improve the diversity of nursing. Nursing students with disabilities can foster a new set of knowledge, skills, and abilities in the nursing profession (Marks, 2007).

In nursing education there is a lack of recent information regarding students with learning disabilities in nursing programs. The national accreditation agencies, Accreditation Commission for Education in Nursing (ACEN) and American Association of Colleges of Nursing Commission on Collegiate Nursing Education (CCNE), both reported not collecting data related to students with learning disabilities in nursing education or graduation rates (personal communications with ACEN and CCNE representatives on October 7, 2014). The North Dakota Board of Nursing (NDBON) also does not collect any data related to students with disabilities when they do site visits or

review self-studies for nursing programs they approve (personal communications with NDBON representative on December 15, 2014).

### **Conceptual Definitions**

**Disability.** The Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act define an individual with a disability as a person who has

- (1) a physical or mental impairment that substantially limits a major life activity;
- (2) a record of such an impairment; or (3) being regarded as having such an impairment (US Department of Education, 2012, “Q4. How does the amendments act alter coverage under Section 504 and Title II?, para.2”).

The courts also use this definition to define a disability (Helms et al., 2006). The Individuals with Disabilities Education Act (IDEA) lists thirteen categories of disability (2004). The categories include learning disability, speech or language impairment, cognitive impairment, emotional disturbance, autism, hearing impairment, visual impairment, deaf-blindness, orthopedic impairment, traumatic brain injury, other health impairment, multiple disabilities, and developmental delay (National Dissemination Center for Children with Disabilities, NICHCY, 2012).

**Learning Disability.** There are many different definitions for learning disabilities. For the purposes of this study a combination of definitions was used to create a comprehensive definition of a learning disability to be flexible for use in multiple situations with all types of students. The definition for the study defined a learning disability as a heterogeneous group of disorders, including issues with the use of listening



skills, listening comprehension, speaking, reading/language, writing, reasoning, spelling, and mathematical calculating and reasoning skills. Learning disabilities or conditions included within the definition were those listed as learning disabilities under the IDEA and also ADHD and ADD. These conditions were included because of the effects of the disorders on educational experiences.

The following information will further describe definitions of learning disability from which the study's definition was determined. Ijiri and Kudzma (2000) stated most definitions for learning disability have common elements including: (a) heterogeneous group of disorders, (b) lifelong difficulties, (c) significant difficulty in reasoning, oral language, or mathematics, (d) discrepancies in processing information, and (e) co-occurrence with other disabling conditions.

The IDEA (2004) defined a specific learning disability as, a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. (20 US Code § 1401)

Some conditions included within this diagnosis are perceptual disabilities, dyslexia, developmental aphasia, brain injuries and brain dysfunction. A learning disability does not include problems with hearing, vision or motor disabilities. It also does not include disadvantages related to the environment, culture or economic status

(IDEA, 2004; NICHCY, the National Dissemination Center for Children with Disabilities, 2012).

A learning disability as defined by Kolanko (2003) was, a heterogeneous group of disorders that manifest themselves in the acquisition and use of listening skills, listening comprehension, speaking, reading/language, writing, reasoning, spelling, and mathematical calculating and reasoning skills (p. 251).

A learning disability according to Selekman (2002) was, a “lifelong condition that continues to affect the manner in which the individuals take in information and retain and express the knowledge and understanding they possess” (p. 334).

Although attention deficit hyperactivity disorder (ADHD) and attention deficit disorder (ADD) are not considered specific learning disabilities under the IDEA, students with these diagnoses were included in the study. Many people with these disabilities receive accommodations based on the effects the conditions have on learning and educational performance. ADHD and ADD are classified under other health impairment. Other health impairment is described as,

having limited strength, vitality or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment... (NICHCY, 2012, p. 4).

This study’s definition of learning disability did not include disorders involving visual or hearing impairments, motor deficits, or intellectual or emotional disabilities, or

disadvantages related to economics, environment or culture as listed under the IDEA. The definition, or versions of it, was also seen most often throughout the literature and it included all common elements as discussed by Ijiri and Kudzma (2000). A common definition will allow for greater understanding of learning disabilities and possibly greater collaboration between educators.

**Disability Support Services.** Most colleges and universities have a student support or disability support service department to help meet the needs of students with disabilities in accordance with Section 504 of the Rehabilitation Act of 1973 and the ADA Amendments Act of 2008. The services provided include such things as study assistance, individualized testing options, administrative support, tutors, time management skills and instructional accommodations. Some services provided require the student to have a diagnosed disability. Disability support services also can offer emotional and social support, which college students indicate is a very important aspect to their college careers and success (Bender, 2008).

**Traditional Nursing Program.** A traditional nursing program offers nursing classes on campus with an instructor in the class, and has clinical experiences in the health care setting, plus lab and simulation. Nursing programs that were online, accelerated, or at the graduate level were not included in this study.

### Summary

With an increase in the numbers of students with learning disabilities, more research is needed in the area of students with learning disabilities enrolled in higher

education and more specifically nursing education. Students with learning disabilities can improve the cultural care provided to patients by increasing the diversity within nursing and nursing education. With the changing healthcare needs of society, students with learning disabilities may have creative skills to help meet the needs of today's patient. With a lack of information related to disabilities in higher education, nurse educators are faced with challenges of how to meet the needs of students with learning disabilities. This study may lead to more knowledge in the area of learning disabilities within nursing education. The purpose of the study was to develop an understanding of the lived experience of nursing education from the perspective of students with learning disabilities, and delineating the essence of the phenomenon.

## CHAPTER II

### LITERATURE REVIEW

The following literature review will discuss publications regarding students with learning disabilities in higher education, and then more specifically in nursing education. The literature reviewed included both quantitative and qualitative studies along with mixed-method designs, both recent and early studies. The early studies are used to demonstrate trends in views of disability and how these have changed or remained the same in the last 20 years.

Databases utilized included CINAHL, PubMed, MDConsult, Academic Search Planner, EBSCO, ERIC, Health Source, Professional Development Collection, PsycArticles, Teacher Reference Center, and Google Scholar. Key search words included *nursing, education, learning disabilities, disability, nursing education, higher education, and post-secondary education*. The number of results varied according to how the key words were used in the search. When learning disability was used in the title and nursing education in the abstract there were 91 results. With disability in the title and nursing education in the abstract 251 results appeared. When higher education was used in the abstract and learning disability in the title the results were 331, and with disability in the title the results were 1,769. When post-secondary education was used in the abstract and

learning disability in the title the results were 49, and with disability in the title the results were 183. A review of abstracts was done, and articles for the literature review were chosen based on relevancy to the study.

The most recent search for literature in October of 2016 revealed 25 references when the key words of *learning disability*, *higher education*, and *nursing student* were used with a time frame of the last five years. Among the 25 references three were relevant to the study or had not been previously used, and were added to this literature review. Efforts to find current literature on students with learning disabilities in higher education and specifically nursing education have included multiple personal searches of the literature every few months. In addition, four meetings with librarians were held with the latest in October of 2016. The literature review illustrated a dearth of literature specific to nursing students with learning disabilities since the early part of the 21<sup>st</sup> century.

### **Students with Learning Disabilities in Higher Education**

The number of students with learning disabilities is not only rising in nursing education but in all areas of higher education. Between 1985 and 1992, the percentage of students in higher education reporting learning disabilities increased 10 percentage points, from 15% to 25% (Henderson, 1992). From 1988 to 2000, “learning disability” was the fastest growing disability among students, with two out of five students with a disability reporting a learning disability (Henderson, 2001). More recently over a five year span, a university in the Pacific Northwest reported an increase of about 20% of

students who reported a disability, and of these students 63% reported a learning disability or ADHD (Lombardi & Murray, 2011). The following sections will discuss the background of students with learning disabilities, transition into higher education, the legal aspects of policy and case law, barriers, stereotypes and success strategies for students with learning disabilities in higher education.

## **Background**

In 1999, the National Center for Education Statistics reported that, among all college students in the United States (US) with disabilities, those who began their education in the 1989-1990 academic years, 53% had obtained their degree or certificate, compared to 64% of undergraduate students without a disability. In 2014, the *State of Learning Disabilities* identified 67% of young adults who reported having a learning disability entered some type of post-secondary education, which is similar to the general population without a learning disability (National Center for Learning Disabilities [NCLD], 2014). Among students with learning disabilities in college, 41% completed college in comparison to 52% of students without a disability. The highest college completion rates for students with learning disabilities were 57% in vocational/technical schools, compared to 64% of students without a learning disability. On the other hand, the lowest college completion rates for students with learning disabilities were 34% in 4-year colleges versus 51% of students without a learning disability (NCLD, 2014). In 1999, the National Center for Education Statistics reported, although college students with disabilities were less likely to complete their degree, they were just as likely to

obtain full-time employment after leaving college as those without a disability. The employment rates of working-age adults with learning disabilities dropped from 55% to 46% between 2005 and 2010 (NCLD, 2014). The US Department of Labor's Bureau of Labor Statistics (2014) reported people with disabilities had an unemployment rate of 13.2 compared to 7.1 among people without a disability; the type of disability was not reported.

Altarac and Saroha (2007) found that the lifetime prevalence rate of being diagnosed with a learning disability was approximately one in ten students. Starting in the 1990's and into the early 2000's, more students with disabilities entered institutions of higher education, including nursing education. Data revealed students with disabilities were less likely to complete their degrees. In addition, over the last ten or more years the employment rates of people with disabilities has changed. In 1999, people with disabilities were just as likely to find employment as a person without a disability, but data from 2013 (US Department of Labor, 2014) revealed people with disabilities had higher unemployment rates in comparison to people without disabilities. The following section will discuss the impact of learning disabilities in nursing education.

### **Background of Learning Disabilities in Nursing Education**

Nursing education is hierarchical; the student must first be able to understand the content and then be able to apply the knowledge to another setting or course (Ijiri & Kudzma, 2000). This hierarchical structure of nursing education can create additional challenges for students with learning disabilities. Students must possess the ability to



organize patient care, have problem-solving skills, have the ability to understand and communicate using both verbal and non-verbal language, and respond safely and appropriately in unpredictable emergency situations (Selekman, 2002).

Many nursing education programs have developed a list of standards based on the 1996 National Council of State Boards of Nursing (NCSBN) list of functional abilities. In 1996, the NCSBN published a list of functional abilities essential for a nurse to practice in a safe and effective manner with or without accommodations. The functional abilities were placed within sixteen categories; gross motor skills, fine motor skills, physical endurance, mobility, hearing, visual, tactile, smell, reading, arithmetic, emotional stability, analytical thinking, critical thinking, interpersonal skills and communication skills (Yocom, 1996). When the list of functional abilities came out many nursing programs listed all or some of the abilities informing students of the expectations they had to meet as nurses (National Council of State Boards of Nursing, Inc., 1996). The functional abilities were intended to communicate the requirements for functioning as a nurse, and not intended to be used as requirements for nursing students. The list of functional abilities were landmark criteria, however many nursing programs continue to use the list for admission and progression decisions in their programs, which is in violation of the ADA (Marks & Ailey, 2014). Students with disabilities have to be held to the same level of expectations as all students are, but the difference is how the student can demonstrate the knowledge and skills needing to be mastered (Selekman, 2002).

Nursing programs that use the functional abilities for admission into their nursing program are possibly excluding qualified students with disabilities.

Developing a list of required functional abilities is complicated for nursing education. The concern is creating a list of abilities all nurses must possess is difficult for nursing to do, because of the broad spectrum of nursing and what nurses can do. Nurse educators must look at their own thoughts and beliefs as to what it is to be a nurse before a list of functional abilities is determined for their nursing program (Arndt, 2004). The list should include the essential characteristics and abilities required for any nursing role and not focus on the physical, emotional, interpersonal, and cognitive skills of the student (Arndt, 2004). The Guide to the Code of Ethics for Nurses with Interpretive Statements (Fowler, 2015) explained all nurses are accountable for nursing judgements and assessing one's individual competence. The Nursing Scope and Standards of Practice (American Nurses Association, 2015) explained all nurses must maintain competence through professional and personal development. Therefore, no nurse should perform an act that they do not feel competent to perform; nurses with disabilities would follow the same code (Arndt, 2004; Bohne, 2004).

### **Legal Implications**

There are three main laws to protect adults with learning disabilities from discrimination: the Individuals with Disabilities Education Act (IDEA) of 2004, Section 504 of the Rehabilitation Act (PL 93-112), and the Americans with Disabilities Act with the 2008 ADA Amendments Act (ADAAA) (NCLD, 2014). The IDEA provides special

education services to children and adults up to the age of 22. It provides for free appropriate public education and an individualized education program for eligible students. Section 504 of the Rehabilitation Act prohibits the discrimination of adults and children with disabilities, and guarantees equal access to programs and services that receive federal funds. The ADA protects school-age children and adults with disabilities from discrimination in employment, public, and privately-operated settings, including public and private educational institutions (NCLD, 2014).

It is against the law to discriminate against any person with a disability in an education setting such as schools and colleges (Sanderson-Mann & McCandles, 2006). Educational institutions are required to make “reasonable adjustments” in order to accommodate a person with a disability, thereby creating an equal opportunity. However, if a student does not disclose they have a disability, the institution is not required and shouldn’t make accommodations, although they should anticipate the need that a qualified student may present themselves. At the postsecondary level, there are no special education laws that require schools to identify and provide services to students with learning disabilities. At this level, it is the student’s responsibility to provide evidence of a disability and the need for services (Helms, Jorgensen, & Anderson, 2006). Programs cannot discriminate on the basis of a disability, but the student “must be qualified to participate in spite of rather than except for their disability” (Helms et al., 2006, p. 192). The Americans with Disabilities Act does not require programs of higher education, including nursing programs, to alter their programs’ academic or clinical standards to

meet a student's needs related to a learning disability (Sowers & Smith, 2004). Making accommodations without declaration of disability by the student creates precedence and that accommodation has to be available to all students. Educators need to be aware of disability law and policy to make decisions regarding accommodations and admissions of students into their programs.

**Policy.** Several laws are in place regarding students with disabilities. The Rehabilitation Act of 1973 explains no student can be excluded from a course based on a learning disability and reasonable accommodations must be made available. The Americans with Disabilities Act (ADA) of 1990 explains courses must be offered in a place and manner that is accessible to people with disabilities. The Act also ensures equal opportunity, nondiscrimination, and full participation with accommodations, if necessary.

In 2008, the ADA was amended to provide motivation to address the attitudinal barriers that continued to hinder people with disabilities (Marks & Ailey, 2014). The Americans with Disabilities Act Amendments Act of 2008 (ADAAA), was passed to carry out the ADA's original intent of mandating the elimination of discrimination, and promoting equality, independence and freedom. The definition of disability was changed in the ADA Amendments Act (2008) to broaden the scope of coverage; the burden shifted from determining if an individual has a disability, to proving that efforts were made for accommodations (Dupler, Allen, Maheady, Fleming, & Allen, 2012; Marks & Ailey, 2014). The definition of disability according to the ADAAA (2008) is;

A) a physical or mental impairment that substantially limits one or more major life activities of such individual, B) a record of such an impairment, or C) being regarded as having such an impairment (ADA, 2009, Sec. 12102.1).

Major life activities “include, but are not limited to, caring for oneself, performing manual tasks, seeing, hearing, eating, sleeping, walking, standing, lifting, bending, speaking, breathing, learning, reading, concentrating, thinking, communicating, and working” (ADA, 2009, Sec. 12102.2). The main focus of the ADAAA is intended to be whether or not an entity or institution has complied with the statutory requirements, and if discrimination occurred. The focus should not be on the individual’s disability and if it substantially limits a major life activity (Dupler et al., 2012). A change in the ADAAA of 2008 explained individuals with an impairment that limits one major life activity do not have to have impairments in multiple major life activities to have their disability acknowledged (Dupler et al., 2012).

Federal laws make it illegal for private and public higher education institutions from discriminating against students with disabilities. Section 504 of the Rehabilitation Act, “prohibits discrimination on the basis of a disability by any program receiving federal financial assistance,” such as federal financial aid (Nott & Zafft, 2006, p. 28). The Americans with Disabilities Act and Section 504 have an overlap in what they cover and educational institutions must be compliant with both (Nott & Zafft, 2006). Both Section 504 and the ADA define disability the same as a “physical or mental impairment which substantially limit one or more...major life activities, [those with] a record of such an

impairment, or [those who are] regarded as having such an impairment” (Nott & Zafft, 2006, p. 29).

“Section 504 and the ADA are designed to ensure equal opportunity, not merely equal treatment” (Nott & Zafft, 2006, p. 31). Programs are responsible to make their offerings accessible for students with disabilities, ensuring the most opportunity to the benefits of a college education. Both also explain only students who are otherwise qualified and able to meet the requirements for admission and program progression are protected by the laws (Nott & Zafft, 2006). Schools cannot provide a student with a disability with opportunities of unequal benefit over students without disabilities. Schools are also not required to modify their curriculum or educational programs, lower their standards, or provide students with modifications that are not reasonable to the institution (Nott & Zafft, 2006).

**Case Law.** Case laws and judicial rulings have identified five major areas of concern with nursing education programs including: (a) admission decisions, (b) retention and dismissal policies for admitted students, (c) provisions of auxiliary aids, (d) accessibility of continuing education programs, and (e) employment policies (American Association of Colleges of Nursing, n.d., p. 42).

Cases assessing the fundamental requirements of a program are commonly seen in the healthcare field with a student’s clinical experiences. Institutions are not required to alter clinical requirements to accommodate a student’s disability, if the accommodations would alter the fundamentals of a program (Nott & Zafft, 2006). A university was not in

violation of Section 504 when it denied admission to a deaf student who was applying to their nursing program. The university found it impossible for the student to safely complete her clinical requirements (*Southeastern Community College v. Davis, 1979*). The school was not required to waive the clinical requirements for the student who was deaf because it was not seen as a reasonable modification.

Davis was a student who applied to the nursing program at Southeastern Community College, but was denied admission based on a hearing disability. Davis was not able to understand speech without lip reading, even with the use of a hearing aid. The Supreme Court determined Section 504 of the 1973 Rehabilitation Act did not require the College to admit the student. This decision was based on the statement that the person must be an “otherwise qualified” person who can meet the program requirements in spite of their handicap or disability. Davis was not able to understand speech even with the use of a hearing aid and was determined to be not otherwise qualified. It was concluded, if Davis was admitted to the program, it would require substantial changes to the program’s admission requirements and programs are allowed to have technical standards required for admission to their program (*Southeastern Community College v. Davis, 1979*).

Situations in which discrimination is claimed, based on a disability, refer to the ADA for guidance.

The ADA defines discrimination as (a) the use of criteria that unnecessarily screen out or tend to screen out individuals with disabilities from the use and enjoyment of goods and services; (b) the failure to make non-fundamental

reasonable modifications of policies, practices and procedures when the modification is necessary to accommodate an individual with a disability; and  
(c) the failure to take necessary steps “to ensure that no individual with a disability is excluded, denied services, segregated or otherwise treated differently than other individuals” (Nott & Zafft, 2006, p. 29).

*Guckenberger v. Boston University* (*Guckenberger v. Boston University*, 1997) was a class action suit brought against Boston University (BU) by a group of students with learning disabilities claiming they had been discriminated against based on their disability. Prior to 1995, BU had an extensive disability support program and was able to provide academic support and accommodations for students with learning disabilities. In 1995, BU’s Provost changed the way the disability support programs were run without consulting others in the university system. The Provost made a statement, that “the learning disability movement is a great mortuary for the ethics of hard work, individual responsibility, and pursuit of excellence, and also for genuinely humane social order.” (Blanck, 1998, p. 3). He also stated “students with learning disabilities were often fakers who undercut academic rigor” even though the courts found no evidence of an instance at BU where a student tried to fake a learning disability to gain accommodations (Blanck, 1998, p. 3). The Provost put directives in place and required all accommodation requests be sent through his office for approval. These new directives and instructions led the staff of the disability support office to resign, leaving the office unstaffed.



The students from BU claimed the University discriminated against them and violated their rights under the ADA and Section 504. They claimed three areas of discrimination: (a) the students were required to be retested by learning disability evaluators with specific credentials, (b) the process of the new accommodations request evaluation process and appeals procedures going through the Provost's office, and (c) the new course substitution policy of foreign language and math requirements (Blanck, 1998).

The courts showed the effects of discrimination by revealing the number of students identifying themselves as learning disabled dropped by 40% during 1994 – 1997, after BU implemented its new policies. The ruling of the court found that the university's policies regarding students with learning disabilities were based on uninformed stereotypes, myths, and misconceptions. BU discriminated against students with learning disabilities by establishing unreasonable eligibility criteria, by not providing reasonable procedures for requests of accommodations, and having a blanket policy regarding course substitutions for foreign language and math requirements. The courts ruled BU had violated the student's rights under the ADA and other disability related laws (*Guckenberger v. Boston University*, 1997).

Postsecondary education institutions have no responsibility to identify a student with a disability. It is the student's responsibility to notify the institution of his or her disability and provide documentation to the institution of the disability. In addition, the

student must then also ask for any academic modifications or accommodations they need (Nott & Zafft, 2006).

Alexander, an individual with a severe hearing impairment, was admitted to the State University of New York (SUNY) at Buffalo nursing program in December of 2008 (*Alexander v. State University of New York at Buffalo*, 2013). In June of 2009, Alexander's mother emailed the university's Office of Disability Services describing the accommodations her daughter needed, which included: (1) a note taker; (2) preferential seating; (3) an FM radio station for lectures; and (4) assist with exams. On July 10, 2009, Alexander and her mother met with the Office of Disability Services and the following accommodations were approved: (1) extra time on tests and an alternative location for testing; (2) preferential seating; (3) an FM loop for lectures; and (4) note-takers.

It was soon identified the FM system did not function properly and Alexander was told they were getting a new system. The new system did not work with Alexander's hearing aids so her mother had her high school email the Office of Disability Services indicating what was needed. The school did not have the FM loop system in place until after three weeks of the semester had passed. Alexander also claimed the school did not provide professional note takers, and the accommodation of preferential seating was not honored in all of her classes. Alexander eventually withdrew from all but her nursing course, in which she received an "A." In December of 2009, Alexander completely withdrew from the University due to a lack of accommodations. Alexander filed a complaint against the SUNY at Buffalo stating a violation of the ADA and Section 504 of

the Rehabilitation Act. The SUNY at Buffalo asked for the complaint to be dismissed but it was denied. An order for a separate pretrial was given, and no further information is available at this time (*Alexander v. State University of New York at Buffalo*, 2013).

Schools cannot cause an unnecessary burden to the student in asking for proof of disability status (*Abdo v. University of Vermont*, 2003). Abdo was a student enrolled in graduate courses at the University of Vermont in 1999. She was suffering from physical disabilities related to a car accident and asked for accommodations. Abdo had difficulties sitting for long periods of time without rest, and because of jaw and neck injuries, she was not able to talk very much. After the University explained to Abdo the process of requesting accommodations, she presented the University with a letter from her medical doctor. The letter stated Abdo had a 45 minute sitting limitation, would need an hour long break after 3-4 hours of upright activity, unspecified limitations on talk time, and the need to park close to her class site (*Abdo v. University of Vermont*, 2003).

Abdo was given access to a lounge where she could rest during the day, but she found it inadequate because faculty and students passed through the lounge. She was also given names of other people who could possibly be able to offer a place to rest, but after several weeks of not being able to find an acceptable place, Abdo was referred to the Student Health Clinic. The Student Health Clinic did not have a place for her to rest and referred her to resident life, which then provided her with an apartment. Abdo was able to rest in the apartment between classes and was also able to stay in the apartment overnight, if she felt she could not drive home. Abdo stated the apartment was “just what

she needed” but she believed her school work suffered because of a lack of accommodations from the University.

Abdo did not return back to college in 1999 and waited until 2001 to re-enroll. She at that time requested accommodations related to her disabilities. The University asked for documentation stating her specific disability/diagnosis and limitations. Abdo again submitted a letter from a medical doctor stating she had chronic pain, had sitting limitations, may need rest periods of up to an hour, and had limitations to the amount of talking she could do. The University denied her request for accommodations saying the documentation provided was inadequate to support a disability. Abdo then filed a suit arguing the University violated the ADA, the Rehabilitation Act and Vermont’s Public Accommodations Act. She also claimed the University was in breach of contract. Abdo claimed the University failed to provide her with reasonable accommodations, imposed an undue burden by having her work and communicate with several different offices, extended delays in accommodation requests, and penalized her in class for her disabilities (*Abdo v. University of Vermont, 2003*).

The courts found the University was not in breach of contract as Abdo was less than diligent in pursuing her claim for accommodations and had not looked at the information regarding the University’s policy and procedures for students with disabilities. The University was found to have not violated the ADA by having several specialized offices handle accommodation requests or require documentation of a disability or its limitations. The courts acknowledged that the documentation Abdo

provided was sufficient to show a disability and receive accommodations (*Abdo v. University of Vermont*, 2003).

In postsecondary education settings, for a student to receive accommodations or modifications, they must provide the appropriate documentation stating their disability and needed accommodations to the appropriate people within their college or university.

Once the disability is made known to the institution the school is required to take an individualized look at the nature of the disability and the requested accommodations. The school must also (a) make itself aware of his or her disability, (b) explore alternatives for accommodating the student, (c) exercise professional judgment in deciding whether the modifications being considered would give the student the opportunity to complete the program without fundamentally and substantially modifying the schools standards (*School Board of Nassau County v. Arline*, 1987, quoting *Wynne v. Tufts University School of Medicine*, 1991). (Nott & Zafft, 2006, p. 32)

If a school rejects a student's proposed modifications of accommodations, it needs to be prepared to explain the decision in detail. The school must provide facts that display an effort of finding alternative means and the cost and effect of the educational program (Nott & Zafft, 2006).

Wynne was a medical student with a learning disability who had asked for an accommodation allowing him not to take multiple choice exams and instead be tested in a different format. Tufts University refused to accommodate this request explaining critical

thinking skills were taught through multiple choice exams and, if required to accommodate the request, they would be lowering their academic standards. The courts accepted Tuft University's explanation and allowed for the dismissal of Wynne (Disability Support Services, n.d.).

McCulley, who was a student at University of Kansas in January of 2012, was denied admittance to the School of Medicine based on her lack of ability to meet the schools motor technical standards (*Emily McCulley v. The University of Kansas School of Medicine, and Steven Stites*, 2013). McCulley has a diagnosis of spinal muscular atrophy, is unable to walk and has little upper body strength. Through her admission information McCulley requested accommodations based on her disability, which included the appointment of a staff person to serve as her assistant or surrogate during clinical rotations. McCulley brought legal action against the school and its Dean alleging they violated her rights under the ADA and the Rehabilitation Act.

After review of her admission information McCulley was invited to an interview to evaluate her capacity to meet the medical school's technical standards. During the interview McCulley was asked to do things to demonstrate her motor, strength and mobility, which included chest compressions and the Heimlich maneuver, but she was unable to demonstrate the skills. After this it was determined she would be unable to meet the schools technical standards, and her request of accommodations would substantially alter the medical school's education program. The University of Kansas School of Medicine argued McCulley is not "otherwise qualified" to participate in the medical

school program. She is not able to meet the motor technical standards previously adopted as essential to the school's accreditation.

The University of Kansas explained their professional medical education trains individuals to be physicians, which includes hands on practice and clinicals carried out by the student. The school is accredited by the Liaison Committee on Medical Education (LCME), and students who complete their program are expected to pass the Medical Licensure Examination (USMLE). The school's technical standards and requirements are in place to meet the requirements of both agencies. For LCME accreditation, a school must have in place technical standards that are clearly stated, which a student must be able to meet with or without accommodations. The USMLE is a three-step examination, which requires the student to pass a clinical skills assessment where they are required to demonstrate their physical examination skills.

McCulley's denial of admission was based on several meetings and exchanges of information between March and July of 2012. McCulley was asked to provide information on the type of accommodations she would need, and evidence to her ability to meet the school's standards. The decision was not based on her having a disability but instead was based on the evidence she was physically too weak and limited to meet the school's motor technical standards.

In September of 2012, McCulley filed a legal complaint against the School of Medicine and its Dean, alleging discrimination. The courts found McCulley had failed to provide information about her need for reasonable accommodations to meet the program

requirements. The courts also found the use of a staff aide or surrogate to perform physical and motor movements, as an accommodation, would reduce McCulley's role to that of an observer. This would fundamentally change the school's curriculum and reduce the quality of the educational program. The school had asked for a professional recommendation as to what accommodations would be needed and in what areas, but McCulley failed to produce the information. Instead, her needs for accommodations were based on her own impressions of what medical school education would involve, and that of her personal physician, who has no experience in teaching medical students. The court's decision was in favor of the University of Kansas School of Medicine and its Dean, explaining the school does not have to fundamentally change its program, and there was no evidence of intentional discrimination.

Turner, an individual with dyslexia, applied to take the nursing NCLEX examination through the Kansas State Board of Nursing and also requested the use of accommodations during the examination (*Turner v. National Council of State Boards of Nursing*, 2014). Turner contacted the Kansas Board of Nursing in April 2008 to discuss his need for accommodations on the NCLEX examination and was told he would need to submit: (1) proof through school records he had dyslexia; (2) confirmation from his college he received the same accommodations on his examinations that he is requesting for the NCLEX examination; and (3) a letter stating the specific accommodations requested.



In November of 2008 Turner applied to take the NCLEX examination in May of 2009. The application did not have an area to indicate the need for accommodations so Turner again contacted the Kansas Board of Nursing, and spoke with the same individual he did before. This time the Kansas Board of Nursing employee told him, if he used accommodations on the NCLEX examination, he would have a restricted and limited license. In March of 2009, Turner again contacted the Kansas Board of Nursing, and was told the employee he had spoken with in the past was no longer working for the board, and he had not left any information about Turner needing accommodations for the NCLEX, only that he would be taking it in May. Turner took the NCLEX examination in May of 2009 without any accommodations and did not pass.

Turner contacted the Kansas Board of Nursing and the National Council of State Boards of Nursing requesting to be able to retake the NCLEX examination because of a computer testing issue. Turner claimed he was only administered 57 questions and the minimum question set is to be no less than 75 questions. Turner did not mention his dyslexia or test anxiety as causes for his failure of the exam. When Turner contacted the Kansas Board of Nursing about appealing his test results, he was told there was no point, as no one had ever won an appeal against the Kansas Board of Nursing.

Turner then filed a legal complaint against both the Kansas Board of Nursing and National Council of State Boards of Nursing based on five allegations: (1) failing to have a spot on the licensure examination application to describe a disability and need for accommodations, (2) denying him reasonable accommodations on the licensing

examination, (3) threatening to restrict his license if he used accommodations on the examination, (4) failing to provide an appeal process for those who took the licensing examination, and (5) failing to provide the examination in a format other than the computer adaptive test. The District court dismissed the claim by Turner stating it did not substantiate a claim under the ADA.

Laws and policy are put in place to help protect people with disabilities. If the laws and policies are not followed as intended, people can face discrimination and have additional barriers to overcome. This next section will discuss the transition into higher education for a student with a learning disability, followed by barriers and stereotypes students with disabilities face in higher education settings.

### **Transitions into Higher Education**

When students with disabilities transition to postsecondary education or employment from high school, they are no longer covered by the IDEA (Individuals with Disabilities Education Act). Adults with disabilities may find protection against discrimination from Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. For individuals to receive the accommodations available from the ADA and Section 504 they must have evidence of a disability that substantially limits a major life function. When a student graduates from high school with plans to attend a postsecondary education institution, it is not required they have an exit evaluation. This leaves many students without the appropriate documentation colleges and universities

require for students to receive disability services at their institutions of higher education (Shaw, Dukes, & Madaus, 2012).

The IDEA requires local educational agencies to develop a statement describing the student's academic achievement and functional performance at the time of graduation. This statement, referred to as the summary of performance (SOP), must include recommendations to help the student reach their postsecondary education goals. Use of the SOP needs to be a collaborative effort between the student involved, their family, teachers, and any other agencies involved with the student's education. The goal of the summary of performance tool is to ensure a successful transition to postsecondary education or employment through best practices and the needs of the student (Shaw, Dukes, & Madaus, 2012).

A well-constructed summary of performance statement will assist the student in accessing postsecondary resources and accommodations based on the provisions of the ADA and Section 504 of the Rehabilitation Act (Shaw, Dukes, & Madaus, 2012). Ideally, the statement provides postsecondary agencies with current, comprehensive, and meaningful information about the student. It needs to be concise, clear and understandable to be used in postsecondary education institutions or by employers. A focus on strengths and skills the student possesses, as well as any needs the student has, and the necessity for any accommodations are helpful. The statement must thoroughly explain what supports and accommodations the student has used effectively within their educational experiences, because at the postsecondary level the student is responsible for

self-disclosing their disability and asking for accommodations (Shaw, Dukes, & Madaus, 2012).

The summary of performance statement includes demographic information about the student, their identified disability and date of diagnosis, and the most recent evaluation report should also be attached. In addition, information regarding the student's postsecondary educational goals and information about their academic, cognitive, and functional skills is included. Finally, the student must communicate the information in the summary of performance to the postsecondary agency to receive disability services (Shaw, Dukes, & Madaus, 2012).

The transition of two students with learning disabilities from high school to post-secondary education was studied (Wilson, Bialk, Freeze, and Luttfiya, 2012). Through information gathered in a round table story telling method, two people with diagnosed learning disabilities told their stories of living with a learning disability from elementary school into post-secondary education. Both people explained how perseverance and hard work are essential for success in the university setting. Both of the participants attended college through a College Life program through the University of Manitoba that allows adults with learning disabilities to attend college as a part-time auditing student, not degree seeking. Both participants had different goals for attending the university and taking classes and both also faced challenges.

The participants talked about how their time at the university helped them grow into adults (Wilson, Bialk, Freeze, & Luttfiya, 2012). One participant explained how the

university often pushed her beyond her comfort zone allowing her to succeed at tasks she found daunting, such as public speaking and time management. The other participant explained how his experience made him become more of a self-advocate and develop enriching friendships through extracurricular activities. Both participants related they benefited from their experiences in the areas of knowledge and skills gained within their academic areas, more general knowledge and expanded vocabularies, more personal relationships and strengthened personal identities, increase of self-determination, more employment opportunities, and an increase in self-awareness, self-esteem and self-respect (Wilson, Bialk, Freeze, & Luttfiya, 2012).

The participants listed recommendations for other students with learning disabilities transitioning to post-secondary education (Wilson, Bialk, Freeze, & Luttfiya, 2012). Self-advocacy was seen as important in order to know how to speak up and fight for fair rights of all people. Parental support was also seen as important; although it was recognized self-advocacy became more important for the students to learn to stand up for their selves. A strong work ethic with self-discipline is needed to overcome low expectations of others especially in the academic areas. Exploring new ideas and challenges is necessary to learn new things one is interested in and good at.

Both participants explained the special education programs and services they received during high school were beneficial at that time. Although, being labeled as a special education student also has a cost including bullying and academic exclusion (Wilson, Bialk, Freeze, & Luttfiya, 2012). The challenges from transitioning to a

university from high school included not only the academic requirements of the university, but also the expense, lack of scholarships, and lack of role models with learning disabilities. Even with all the challenges both participants explained they enjoyed their academic journeys (Wilson, Bialk, Freeze, & Luttfiya, 2012). The limitations of the study included a small sample size, such as many qualitative studies. In addition, the participants were from the same institution, and in a non-degree seeking program, unlike most other students in higher education.

In order to help a student with a learning disability transition into a post-secondary education institution, a detailed summary of performance tool is completed with the student and their support people, such as parents, teachers, and counselors (Shaw, Dukes, & Madaus, 2012). The SOP tool should be a collaborative effort and worked on throughout the student's high school career so it is up-to-date and can be used effectively by the student after high school. This supports what Wilson et al. (2012) found in their round-table story telling study. Wilson et al. (2012) found that although the students found the services they received in high school to be beneficial; when they transitioned to college the label associated with the services followed them. Wilson et al. (2012) identified self-advocacy as the most effective tool in transitioning to post-secondary education. If during high school, the student is actively involved in creating the SOP, they may find the process of completing the tool increases their confidence and ability to be their own self-advocate.

Many students who receive accommodations or disability services in high school do not receive the same services in post-secondary education. In fact, only one in four students who received special education services in high school actually consider themselves as having a disability in college (NCLD, 2014). In high school 94% of students with learning disabilities receive special services, but in college only 17% of students receive any form of accommodations or special services (NCLD, 2014). A study was conducted looking at the self-disclosure decisions of students with learning disabilities in a post-secondary education institution (Cole, Cawthon, & Austin, 2015). The purpose of the study was to investigate differences in psychological attitudes and factors between students with learning disabilities who disclose and those who do not disclose their disability. The study used a mixed methods design and gathered data through a quantitative survey sent by email, and semi-structured interviews. The sample consisted of 31 undergraduate students with learning disabilities, including 16 females and 15 males. All participants completed the emailed quantitative surveys and 15 of the participants were interviewed (Cole, Cawthon, & Austin, 2015).

Students with learning disabilities who decided not to disclose their disability made that decision because they wanted to be seen as a “typical student” and did not want negative reactions from peers because of their disability (Cole, Cawthon, & Austin, 2015). The students who did not disclose their disability also had a more negative attitude regarding their disability compared to the students who disclosed. Students who did not disclose had less knowledge of the type of accommodations they could receive and the

process to go through to get accommodations. These students also felt they did not want accommodations, and if they had them believed they would use it as a crutch.

Students who made the decision to disclose their learning disability had a more positive attitude about their disability (Cole, Cawthon, & Austin, 2015). Many disclosed because of the need for formal accommodations from the institution. These students believed they were not any different and their learning disability was not an issue.

Students who disclosed through a letter from disability support services and an in-person conversation with their instructors described more positive experiences, compared to students who disclosed only through the letter. Students who disclosed had negative experiences with instructors but seemed to have more positive than negative experiences. The students explained how their instructors were often willing to help, understanding and kind.

Two commonalities were noted between students who disclosed and those who did not. All of the students with learning disabilities in the study described academic difficulties and the use of compensating mechanisms, such as a support system and time management skills (Cole, Cawthon, & Austin, 2015). The use of compensating mechanisms by all was an interesting finding as the quantitative data revealed students who did not disclose had lower levels of self-determination compared to those who disclosed. The qualitative data, however, revealed how all students used self-determination in regards to compensating mechanisms. Limitations of the study included



a small sample size for the quantitative surveys and a convenience sample for the semi-structured interviews.

Students with learning disabilities in post-secondary institutions of higher education face challenges when making the decision to disclose or not. In addition to disclosure, students with disabilities can face additional challenges and barriers; some of the barriers come from beliefs of the student and others come from the educational system and beliefs of others. The following section will discuss some of the barriers students with learning disabilities may face when transitioning into post-secondary education and while attending a post-secondary institution of education

### **Barriers**

The barriers students with learning disabilities faced in higher education identified through this literature review were classified into two categories; internal and external. Internal barriers were challenges students faced related to their learning disability. Internal barriers included such things as being misunderstood, difficulties with reading and written work, lack of support, and issues developing social relationships (Denhart, 2008; Fuller, Healey, Bradley, and Hall, 2004; Wilson, Bialk, Freeze, & Luttfiya, 2012; and Orr & Goodman, 2010). External barriers were things students with learning disabilities had to overcome related to the education system and diagnosis, different learning environments, and stereotypes and attitudes of others related to learning disabilities (Habib et al., 2012; Weis, Sykes, & Unadkat, 2012; May & Stone, 2010).

**Internal Barriers.** Internal barriers were challenges students believed were caused by having a learning disability. The following section will provide an overview of internal barriers. A phenomenological study to investigate barriers students with learning disabilities faced in higher education revealed themes of; (a) being misunderstood, (b) needing to work harder than those without a learning disability, and (c) seeking out strategies for success (Denhart, 2008). Barriers students with learning disabilities faced in higher education included; (a) organization of concepts in reading and writing, (b) oral and written comprehension, (c) verbal communication, and (d) having a different way of thinking (Denhart, 2008). The first theme, being misunderstood, described students with learning disabilities being seen by others as intellectually inferior, incompetent, lacking effort, and attempting to cheat the system. Being misunderstood led to students not requesting the accommodations they needed because of a fear they would be seen as given an unfair advantage. The second theme of needing to work harder described students working to exhaustion and physical ailments, not wanting to ask for accommodations in fear of being labeled as lazy or not trying hard enough. The third theme of seeking out strategies involved students asking for accommodations. However, this could be difficult in higher education as the student must be diagnosed with a learning disability, and this meant going through an assessment process (Denhart, 2008). Within the study, students who were allowed accommodations all were hesitant to ask for them, not wanting to feel inferior. Most students said they preferred a lower grade than accept accommodations (Denhart, 2008).

Denhart (2008) interviewed eleven students with learning disabilities in higher education, and found students with learning disabilities felt they do work harder than their peers without a disability, but their hard work was unrecognized, and the products they produced did not match their efforts. Although Denhart's (2008) study was conducted in a scientific manner, could be replicated, and data was validated with participant quotes, there were limitations. The sample was not representative of the population with learning disabilities. Of the eleven participants ten were from a private college and came from advantaged educational backgrounds. Only one of the participants represented the community college population and received special education services before attending college.

Students with learning disabilities reported barriers in the academic setting related to their disability. Barriers were identified in the classroom lecture setting, access to learning resources such as the library, informational technology services, and evaluation processes (Fuller, Healey, Bradley & Hall, 2004). Fuller et al. (2004) conducted a study to identify and evaluate the experiences of students with disabilities in the areas of teaching, learning and assessment in a higher education institution. They collected data over 18-months using a survey with qualitative comments. Surveys with a mix of multiple choice questions and short open ended questions were sent by mail to 593 undergraduate students who had declared a disability. The response rate to the surveys was 29%.

Forty-four percent of students identified barriers to learning related to their disability (Fuller, Healey, Bradley, & Hall, 2004). Some barriers included lecturers who talked too fast, visual slides taken down too quickly, and trying to listen or watch and take notes at the same time (Fuller, Healey, Bradley, & Hall, 2004). For off-campus learning experiences 13% of students reported barriers including lack of access to the sites and not being able to take notes on the spot. Students also reported barriers related to lack of support for understanding lectures, including not allowing their lectures to be recorded; unrealistic expectations related to the amount of reading to be done in a specific amount of time; and not providing lesson handouts. One in five students also reported barriers to learning resources, such as the library because their reading abilities created challenges when browsing through materials or finding books. Other students reported difficulties accessing information technology (IT) materials or a lack of IT resources, such as voice recognition technology. Thirty-four percent of students reported difficulty with written work, the most common form of evaluation. Students also claimed difficulties with spelling and grammar for written work, and issues with anxiety and nerves for most types of evaluation, and related that asking for extra time during exams was stigmatizing (Fuller, Healey, Bradley, & Hall, 2004). These barriers identified by students were supported by Denhart (2008), who explained students with learning disabilities could have difficulties with organization of topics, and oral and written comprehension. This made it difficult for the student to listen and take notes at the same

time, as well as complete written work and assignments. A limitation of the study was the sample being from one institution.

Wilson et al. (2012) also supported the barriers found by Fuller et al. (2004) and Denhart (2008), but also added barriers related to the social aspects of higher education. Wilson et al. explained the barriers identified by the participants in their round table discussions. One of the participants explained his time at the university was fun but barriers to overcome included stress of exams, keeping up with assignments, finding accessible extracurricular activities, reflecting on personal identity and growth, and understanding how he fit into the university. The other participant explained finding her way around campus, learning how to live away from her parents, developing relationships with classmates, and training her tutor on her specific learning style as her big challenges at the university (Wilson, Bialk, Freeze, & Luttfiya, 2012).

In order to develop an understanding of the experiences of post-secondary education by students with learning disabilities, Orr and Goodman (2010) used a multiple case study design to conduct in-depth interviews with fourteen students. Data was collected through interviews regarding the transition from high school to higher education, the experiences as learners in higher education, and how relationships with faculty impacted student success. Participants had self-reported learning disabilities and were selected through purposive sampling from one Midwestern university. Data analysis revealed five themes, which included: (a) the emotional legacy of learning disability, (b) the importance of interpersonal relationships and social connectivity, (c) the student-

owned characteristics and strategies for success, (d) the barriers to success, and (e) the issues of diagnosis, disclosure and identity.

Orr and Goodman (2010) focused on the themes of the emotional legacy of learning differently, and the importance of interpersonal relationships and social connectivity. All but one of the participants talked of feeling “stupid,” “embarrassed,” and /or “ashamed” of their learning disability (Orr & Goodman, 2010, p. 217). Over half of the students got emotional and cried when talking about the experiences regarding their disability and explained these feelings started at a young age and continued into adulthood. One student talked about feelings of being a “bad kid, and lazy” (Orr & Goodman, 2010, p. 217). Another student talked about feeling “worn out, tired, and pushing the limit” (Orr & Goodman, 2010, p. 218). Several students also discussed feeling scarred because of their experiences in K-12 special education, having low self-esteem, and being self-conscious. In the same line of Denhart’s (2008) theme of being misunderstood, students were overwhelmed with fear of being a fraud or seen as an imposter if they disclosed their disability (Orr & Goodman, 2010, p. 218). Limitations of the study included all participants being from one university and participants only needed a self-report of a learning disability with no evidence of an actual diagnosis. Although a self-report of having a learning disability was seen as a limitation of the study, this is not unusual. Many college students who received special education services in high school have difficulty meeting the documentation requirements for receiving support in post-secondary education (NCLD, 2014).

The internal barriers discussed above were all identified through studies where students with disabilities were the participants. The data gathered came directly from the student and their experiences of having a learning disability. The following section discusses external barriers. The external barriers were identified from information provided by students, faculty and others who work in higher education.

**External Barriers.** External barriers were things identified through the education system, process of diagnosis, different learning environments, and faculty attitudes as causing additional challenges for students with learning disabilities. A lack of consistent diagnostic criteria and evaluation procedures to identify students with specific learning disabilities in higher education creates additional barriers for students. Whether the institutional setting might moderate the relationship between students' likelihood of meeting objective criteria for a specific learning disability (SLD) and the diagnostic decision model employed was studied (Weis, Sykes & Unadkat, 2012). Recruitment to the study focused on students who were previously diagnosed with SLD and received accommodations for their disability. The same psycho-educational tests were administered to all students to compare test scores across students and reduce measurement errors. Comprehensive achievement tests were also administered to assess areas of academic achievement described by the Individuals with Disabilities Education Improvement Act (IDEIA): basic reading skill, reading comprehension, mathematics calculation, mathematics reasoning, and written expression. The sample of students was selected from three types of post-secondary education institutions in the state of Ohio: 4-

year private liberal arts colleges, 4-year public universities, and 2-year public colleges. A total of 98 full-time undergraduate students, with a mean age of 22.02 were selected.

The participants' test scores were analyzed to determine whether he or she met criteria for a SLD using three diagnostic decision models: the discrepancy model, the *DSM-IV* model, and the comprehensive cognitive model (Weis, Sykes & Unadkat, 2012). The discrepancy model is the most common model used to identify SLD in college students and requires a score of at least 1.5 standard deviations lower than their general intellectual ability extended standard score on any of the five achievement areas. The *DSM-IV* criteria for diagnosis of a SLD included showing a significant ability-achievement discrepancy and an earned standard score less than 85, on any of the five achievement areas. The comprehensive cognitive model requires students to display low achievement, underlying cognitive processing problems, circumscribed deficits, and a self-reported history of academic difficulties. A history of academic difficulties may include repeating a grade, failing a course related to reading, math or writing difficulties, being referred for testing to rule out a learning disability, or receiving special services outside of the regular classroom.

The study showed the greatest percentages of students were classified as SLD through the discrepancy model, followed by the comprehensive model and last the *DSM-IV* (Weis, Sykes & Unadkat, 2012). The results also indicated many college students (46.9%) who were classified as having SLD did not meet any objective criteria for the disorder. This finding was concerning as it allowed for criticism of post-secondary



institutions, and an argument they were allowing an unfair advantage to students who had the means to seek out and acquire a SLD diagnosis without any objective criteria supporting the diagnosis. When the SLD diagnosis is made solely on subjective criteria, without support of objective data, the SLD diagnosis loses its reliability, which affects professional communications, interventions and evidence based research.

The study revealed students who attended 4-year private institutions and 2-year public colleges were more likely to meet the criteria of SLD than those who attended a 4-year public institution (Weis, Sykes & Unadkat, 2012). Using the discrepancy model, 64% of students tested attending a private liberal arts college met the objective criteria for SLD, but only 12.1% of these students met the criteria of the *DSM-IV*. Furthermore, only 3% met the comprehensive cognitive model criteria. These students' average achievement scores were within the normal range, indicating no normative impairment, and the average cognitive ability scores were in the high normal range indicating well-developed cognitive skills. Many of these students met the criteria for a diagnosis of gifted and learning disabled, although this is not accepted as an official diagnosis. These students often were not identified until the academic demands of college exceeded the student's ability to compensate (Weis, Sykes & Unadkat, 2012).

The *DSM-IV* model has been found to be the most consistent among the three models and is least influenced by a student's cognitive ability (Weis, Sykes & Unadkat, 2012). The discrepancy model was most favorable to students with higher cognitive functioning and the comprehensive cognitive model was more favorable to students with

lower cognitive functioning for a SLD diagnosis. Although the *DSM-IV* was shown to be the most consistent, many professionals consider it to be too conservative; in fact about 80% of the students in the study would not meet the criteria of SLD or receive accommodations under the *DSM-IV* (Weis, Sykes & Unadkat, 2012).

The diagnosis and criteria of a SLD could become more consistent among institutions of post-secondary education if a definition of SLD in college level students was universally adopted and accepted by all institutions (Weis, Sykes & Unadkat, 2012). A consistent definition would assist professionals in post-secondary education to determine what services and accommodations were appropriate for the student. Limitations of the study included the relatively small sample size. The post-secondary institutions were all in Ohio. Another limitation was the lack of a control group to compare the results of students with learning disabilities against students without disabilities (Weis, Sykes & Unadkat, 2012).

The barriers students with learning disabilities encountered could be impacted by the different types of learning environments. Virtual learning environments (VLE), also referred to as learning management systems, online learning environments, or course management systems, add additional challenges students with dyslexia had to overcome. A qualitative study was conducted on the use of VLEs by students with dyslexia (Habib et al., 2012). Data was collected through semi-structured interviews of 12 students with a formal diagnosis of dyslexia, who were either enrolled in college or graduated within the last year. Demographic information was also collected through a questionnaire. Questions

were asked about the topics of general digital proficiency, experience with VLEs, use of assistive technology, and psychological issues. The overall findings revealed students with dyslexia using VLEs in higher education experienced barriers related to information overload, imperfect word processing tools, inadequate search functions, and having to use more than one VLE system at a time (Habib et al., 2012).

Participants had different views on their digital proficiency. Those who were diagnosed early in their education years felt more confident as they were able to use computers more to compensate for their disability. The majority of participants believed their computer skills to be average to below average (Habib et al., 2012). The participants expressed difficulties with reading text from a screen, were easily distracted by pictures, and having to use a scroll bar. Most of the participants related difficulties with writing, and some had more troubles writing with a computer because they were not able to use their own handwriting, making it hard to recognize the written text. Others felt computers saved them time because of spellcheck and grammar checks. All of the participants said they saw VLEs as chaotic or confusing. In addition, students in the VLEs experienced many of the same attitudinal barriers students in the traditional classroom experienced. The participants revealed their special needs were often ignored or disregarded, and they were concerned about being labeled or branded. This information may indicate educators did not have the knowledge they needed about students with dyslexia (Habib et al., 2012).

All students entering an institution of higher education face challenges related to the transition and a new education environment. Students with disabilities had many of the same concerns as students without disabilities, plus additional concerns to deal with related to their disability (Fuller, Healey, Bradley, & Hall, 2004). Students with learning disabilities also had to overcome barriers related to other peoples' negative attitudes and stereotypes of people with disabilities.

Faculty attitudes and their knowledge about students with disabilities were studied in an online anonymous survey (Sniatecki, Perry, & Snell, 2015). The survey was sent to 604 faculty from one public liberal arts university in upstate New York, with 123 completing the survey. The results revealed faculty generally had positive attitudes toward students with physical disabilities. Faculty had less favorable attitudes towards students with learning disabilities and mental health disparities. The faculty believed students with learning disabilities and mental health disparities were less likely to be successful or compete academically with other students without disabilities. Some faculty continued to have negative attitudes about the use of accommodations and felt they provided an unfair advantage. The study revealed faculty could benefit from professional development opportunities regarding disabilities, especially about accommodations, disability dos and don'ts, and best practices for working with students with learning disabilities and mental health disparities. A limitation of the study was all participants were from one institution, and the results cannot be generalized (Sniatecki et al., 2015).

Stereotypes of students with learning disabilities and reasons for low self-identification rates of undergraduate students with learning disabilities emerged from a mixed methods study (May & Stone, 2010). The study sample consisted of 38 students with learning disabilities and 100 students without disabilities from two public universities. Data was collected through questionnaires consisting of both open-ended questions and a Likert-type scale. Data gathered from open-ended questions regarding perceptions of learning disabilities were placed within six different categories: (a) low intelligence, (b) compensation possible, (c) process deficit, (d) nonspecific insurmountable condition, (e) working the system, and (f) other, those responses that did not fit into the other categories. The Likert type questions concerning conceptions of intelligence were averaged to result in one score (May & Stone, 2010).

The purpose of May and Stone's (2010) study was to obtain contemporary information regarding the stereotypes about learning disabilities from post-secondary students with and without learning disabilities. The most frequent stereotype, in both the students with and without learning disabilities groups, was a general low ability. Both groups of students from both universities believed others had the same assumptions that people with learning disabilities had, a low potential for learning. The data gathered during the study showed 53% of students with disabilities, and 38% of students without disabilities believed that the general population felt individuals with learning disabilities were less intelligent than those without a disability. In addition, 17% of the sample population indicated people with learning disabilities were an insurmountable problem,

and 7% indicated individuals with learning disabilities work the system (May & Stone, 2010).

The intelligence of students with learning disabilities was categorized into entity, incremental or neither view. Within the sample 71 participants viewed intelligence as incremental, 44 participants viewed it from an entity view, and 23 participants as neither. An incremental view saw learning disabilities as the ability to change with effort and/or experience (May & Stone, 2010). An entity view saw learning disabilities as a fixed trait that responds to negative feedback with a lack of effort or low motivation.

An interesting finding in the study was students with learning disabilities were more likely to report people with learning disabilities as being less intelligent. Although they were less likely to report people with learning disabilities as having an insurmountable problem, they were twice as likely to report people with learning disabilities as working the system. A limitation of the above study was the small sample size of students with learning disabilities in relation to the sample of students without learning disabilities. In addition to the sample size, the recruitment of students from only two universities limits the generalizability of the study findings. Strengths of the study included both authors scoring the participant responses and agreeing 81% of the time, and any disagreements were resolved through discussions.

A misperception some had of students with learning disabilities having a low ability, identified in May and Stone's (2010) study needs to be challenged. While students with learning disabilities face multiple challenges within education settings

including the above discussed barriers and stereotypes, the opportunity for success exists. The following section will discuss success strategies students with learning disabilities may benefit from.

### **Success Strategies**

Success strategies identified through the literature review indicated students with learning disabilities utilized a variety of different methods to be successful. The strategies were organized into three different categories; personal characteristics, use of services, and faculty support. Personal characteristics included persistence and a want to succeed (McCleary-Jones, 2008). Use of services involved those offered by the educational institution such as a coach, and disability services accommodations (Parker & Boutelle, 2009; Ofiesh, Moniz, & Bisagno, 2015). The category of faculty support included being sensitive to the students' needs and open to accommodations (Carney et al., 2007). A final category of collaborative efforts was also identified where the student, faculty and the educational institution work together for the students' success (Heiman & Precel, 2003; National Center for Learning Disabilities, 2015).

**Personal Characteristics.** Experiences of students with learning disabilities in community colleges were studied by McCleary-Jones (2008) using a mixed methods study. The study had a non-random sample of ten students with learning disabilities and two support counselors from two different community colleges. The study involved two questionnaires and focus group interviews. The questionnaires used were the Learning Disability Student and Disability Services questionnaires, designed to obtain information

regarding experiences of students with learning disabilities. The tools used to gather data were examined for clarity and validity by faculty at the University of Oklahoma. The data gathered from the focus groups revealed four themes: (a) desire to succeed and accomplish goals, (b) perseverance, (c) desire for understanding, and (d) sense of personal accountability.

McCleary-Jones (2008) explained how a student with a learning disability does not “want to be another statistic” and will do what he/she can to succeed. A student in the study stated she would do “whatever it takes” to reach her goal. One student talked about the support she received from her grandparents making sure she was able to get to classes every day. Other students in McCleary-Jones’s study, discussed barriers they faced connected to faculty perceptions, about going to the testing center as being cheating, and having instructors be harder on them because of their disability. The students discussed some of the comments they received from classmates about going to the testing center and not being with the rest of the class (2008).

Although the study described some barriers, similar to the previous section, a focus of the article was the positive factors and recommendations that helped students succeed. Some of the positive factors included recognizing the importance of student persistence and external support to a student’s success. Recommendations included increasing services offered for registration and testing, providing a positive and supportive learning environment by addressing unwilling educators, follow up surveys on student satisfaction with disability support services, and the early warning system for at



risk students. The limitations of the study included a small sample that was not random (McCleary-Jones, 2008).

**Use of Services.** An institution of higher education can improve the success rates of students with learning disabilities by offering the student a variety of support systems. Executive function coaching was a service offered at one institution that provided support for development of skills, strategies, and beliefs needed to manage executive function challenges (Parker & Boutelle, 2009). Coaches used questions to model reflective thinking and cue students' ability to plan and carry out their goals. Coaching was unique in that it focused on a student's capacity to take action on life goals. The coach focused on supporting the student to develop their own system of strategies to effectively engage in their academic programs and maximize their performance (Parker & Boutelle, 2009).

Parker and Boutelle (2009) explored students' insights about their experiences with coaching and how they believed this model helped them achieve academic success. A phenomenological method was used and data was collected through semi-structured interviews. The study took place at a 2-year postsecondary institution designed to assist students with ADHD and learning disabilities. Executive function coaching was available to all students at this college as part of their tuition and fees. Students were able to meet with their coaches up to one hour each week including Facetime, email, or phone calls. Students developed coaching goals during their first three sessions related to what they wanted to focus on, which was often organization, time management, work completion, stress management, and life balance.

The sample consisted of 54 students out of a possible 187 receiving coaching services. The first phase of the study involved collecting demographic data for comparison of self-determination levels among participants. Next, a purposeful sample of seven students was selected to ensure diversity (Parker & Boutelle, 2009). Findings revealed (a) the initial reasons to start coaching were to develop greater academic proficiency, (b) they had positive views of coaching, and (c) it was included with their tuition. Students also expressed time management skills as where they wanted to see the biggest improvement. Students stated their reason for continuing coaching was the achievement of meaningful goals, and it helped them create positive emotional experiences. Some reasons why students stopped using coaching included they had started to coach themselves, had better self-regulation skills, and were able to plan and carry out goal related behaviors.

Students described the coaching they received as a personalized, self-directed service that promoted their self-determination (Parker & Boutelle, 2009). The students explained coaching as a non-judgmental model where they could feel free to try out new organizational or academic techniques. One student stated, "...my coach doesn't treat you like you have a disability..." (p. 209). The relationship students had with their coaches was described as collaborative where they worked together as equal partners to determine goals and outcomes. Through this relationship students discussed the development of "self-talk" where they started to coach themselves (Parker & Boutelle, 2009).

The three main themes that emerged from the study were: (a) student participants described coaching as an equal partnership that required them to think and act in new ways different from what they were used to in utilizing campus services, (b) students believed through working with a coach they were able to develop essential competencies necessary to work towards their goals of being more self-determined, and (c) coaching was seen as a transformational process that enhanced the students well-being and allowed them to see a positive future (Parker & Boutelle, 2009). This study found coaching could play a significant role in academic success for students with learning disabilities and increase student retention in post-secondary institutions (Parker & Boutelle, 2009). A limitation of the study was the findings could not be generalized, the information was self-reported by the students, and no data was collected from other resources (coaches, disability support personnel, etc.).

To better meet the needs of students with learning disabilities it is important to understand their needs while studying and during tests. A study was conducted to identify methods and instruments disability support services could use to support decisions about test accommodations for students with ADHD (Ofiesh et al., 2015). Data was gathered through focus groups involving 17 university students with ADHD (10 female and 7 male). Two of the 17 students had diagnosis of a specific learning disability in addition to ADHD. Themes that emerged from the study were the impact of ADHD on test-taking, study strategies, use of extended time on tests, and medication issues for ADHD. The main concerns discussed about test taking were attention and focus, problems with

distractibility, needing to move or be active, and worried about time management. A positive study strategy identified was the use of scheduled breaks. Using scheduled breaks effectively required practice with time management before the student found the breaks to be beneficial. In addition to breaks, frequent movement was also seen as a positive study strategy. Some students used their breaks for movement. Extended time was also used by some of the participants as a test taking accommodation. Students with ADHD used extended time more for breaks and movement, where students with a specific learning disability used their extra time to compensate for such things as slower reading. The use of a private room was another accommodation used for test taking to be able to move around and take breaks, in addition to reduced distractions.

Not only is it important to offer students with learning disabilities services, such as coaching and accommodations, to help them develop academic skills, it is also important to identify when a student is struggling or having difficulties in the classroom. Students with learning disabilities often struggle and do not receive needed services when educators and educational systems wait for the student to fail before interventions are implemented. Faculty support is needed for students to disclose their disability and receive appropriate services.

**Faculty Support.** Another component important to the success of students with learning disabilities is faculty perceptions and training. How one university met the needs of students with disabilities was studied (Carney et al., 2007). Data was gathered through surveys sent to students with disabilities and special educators, and through in-depth

interviews of both groups. Of the faculty participants, 84% had worked with students with learning disabilities, and only 17% reported any training on best practices of educating students with disabilities. Of the faculty participants, 77% reported an interest in learning more about best practices, and accommodations to best support students with disabilities. The faculty interviews revealed two main themes regarding students with disabilities. The first was a conventional view, disability is contained within a person, and students with special needs are separate and different from other learners. Faculty with this point of view believed they did not have the knowledge to teach students with special needs. The second was an interactionist or social constructivist view where faculty believed learning success or failure did not lie within the student. The faculty with this view indicated they would do whatever the person needed, indicating they do for students with disabilities the same as they do for other students (Carney et al., 2007).

The student interviews revealed 15 of the 39 interviewed reported a learning disability, seven reported a physical disability, four had hearing or vision deficits and nine reported other disabilities (Carney et al., 2007). Of the student participants, 63% reported their disability to the faculty at the start of the semester, and, of those, 45% reported negative responses from the faculty after their disclosure. Only 46% of student participants believed faculty was sensitive to and aware of their rights as students with disabilities and 44% felt faculty had provided appropriate accommodations. Limitations of the study were a low response rate of 19% on the survey, and only one institution was studied (Carney et al., 2007).

**Collaborative Strategies.** The success of students with learning disabilities is a collaborative effort not only within the institution of higher education, but the student also needs to take responsibility for their own success. Heiman and Preceel (2003) compared college students with and without learning disabilities, and looked at academic difficulties, learning strategies, functioning during examinations, and students' perception of factors that helped or impeded their academic success, through a mixed methods study. Data was gathered using questionnaires with qualitative and quantitative responses, and collected information about demographics, difficulties, strategies, and coping techniques during academic work. The randomly selected sample consisted of 191 students with learning disabilities out of a possible 715, and 190 students without a learning disability out of a possible 600 students. The qualitative data were analyzed using a comparative method of coding and categorizing between the author and a graduate student familiar with the methodology. Interrater reliability of the study was found to be between 98.2% and 98.8%. Although, all participants were selected from the Open University of Israel, a distance university with many self-study options, the generalizability of the results to other areas and academic settings was limited.

The results of the study by Heiman and Preceel (2003) indicated there were no significant differences in grade point average (GPA), number of courses taken, and family status between students with and without a learning disability. In their academic work, students with learning disabilities reported having more problems with attention that caused difficulties with reading and writing. Students with learning disabilities

reported using more “tricks” such as chants or sketches as learning strategies. All students, those with and without a learning disability, explained they understood material better, if they reread the text, highlight, and rephrased information. The difference was students with a disability preferred oral and visual materials with explanations and students without a learning disability preferred more written information.

Students with learning disabilities had more concerns with the amount of time they had to finish an exam and more problems with concentrating during the exam. Ways to reduce stress were viewed differently between those with and without a learning disability. Students with a learning disability believed test accommodations would reduce their levels of stress, whereas students without a learning disability said mastery of the materials and experience helped with their stress levels (Heiman & Precel, 2003).

The success of students with learning disabilities was determined by multiple factors. Most students with learning disabilities did whatever it took to be successful, but their success could be impacted, if they were not supported. Institutions of higher education have a responsibility to provide all students with the same opportunity for success. Orr and Goodman (2010) identified through their study the importance of close connections with friends, family and teachers to the students’ success. They also found participation in extracurricular activities gave students with learning disabilities a sense of accomplishment and belonging. Other opportunities could include support in the form of coaching, early interventions and/or accommodations, and faculty training on learning disabilities.

The National Center for Learning Disabilities (2015) conducted a study about young adults with learning and attention issues. The study was completed to build a deeper understanding of young adults with learning and attention issues during the postsecondary transition period. Data was collected in two phases. Phase one involved 29 one-on-one in-depth interviews with students and young-adults between the ages of 16-24. Phase two data was collected through an online survey of 1,221 young adults between the ages of 18-21, and from 344 parents of young adult children with learning and attention issues. The study found the young adults who thrived during the postsecondary transition phase had the following three things in common; supportive home life, strong sense of self-confidence, and strong connection to friends and community. These findings were supported by the studies above. McCleary-Jones (2008) discussed the importance of family support on a student's success. Parker and Boutelle (2009) explained how executive function coaching promoted a student's self-determination and competence in goal accomplishment, and Orr and Goodman (2010) explained the importance of friends and extracurricular activities for students with learning disabilities.

Students with learning disabilities can be successful in postsecondary education. Many of their needs are the same as students without learning disabilities, and the need for a support system is essential to their success. Institutions of higher education are required to provide all students with an opportunity for success, but the student also needs to take responsibility. Students with learning disabilities need to become self-



confident, to let others know what their education needs are, to give them the best opportunity for success to overcome any challenges.

Heiman and Preceel (2003) acknowledged the possibility students studying different subject areas may face different challenges. Nursing education has been found to be challenging for students with learning disabilities because of the demanding schedule and hierarchical nature of the curriculum (Ijiri & Kudzma, 2000). The following sections will focus on students with learning disabilities in nursing education and discuss faculty perceptions, student perceptions, remediation and accommodations of students with learning disabilities.

### **Nurse Educators and Learning Disabilities**

The attitudes of nurse educators towards students with learning disabilities are varied. A study in 1990 revealed nurse educators had unfavorable attitudes towards nursing students with disabilities (Brillhart, Jay, & Wyers, 1990). A study in 2004 revealed nurse educators believed students with learning disabilities would be better nurses than nursing students. As discussed in a previous section, a 2015 study continued to reveal faculty in higher education have less favorable attitudes towards students with learning disabilities and mental health disparities, as compared to students with physical disabilities (Sniatecki et al., 2015). The following section will further discuss the varied attitudes towards nursing students with learning disabilities.

Attitudes of nurse educators, graduating student nurses, beginning student nurses, registered nurses, and people with disabilities towards people with disabilities were

studied (Brillhart, Jay, & Wyers, 1990). Data was gathered using a demographic form and a survey with a Likert format. The survey form used, as cited in the article, was developed by Yuker, Block and Youngg in 1973, and was determined to be their most valid and reliable tool. The reliability equivalent ranged from +0.66 to +0.89, the split-half equivalent reliability ranged from +.75 to +.85, and construct validity was established by factor analysis (Brillhart, Jay, & Wyers, 1990). The sample consisted of 92 beginning nursing students, 36 graduating nursing students, 62 registered nurse students, 31 BSN faculty members, and 143 adult students with disabilities. The nursing students and faculty were from a baccalaureate nursing program in northern Texas and the students with disabilities were from three urban universities/colleges in northern Texas. Although the overall sample size of the study was moderate, the results cannot be generalized because of all participants coming from schools in northern Texas.

The study revealed that students coming into a nursing education program had attitudes more positive towards people with disabilities in comparison to graduating nursing students (Brillhart, Jay, & Wyers, 1990). In fact, the study revealed nurse educators had the least favorable attitudes towards people with disabilities, and those living with a disability had the most favorable attitudes. With nurse educators having the knowledge and expertise, as well as a responsibility to promote a positive attitude towards people with disabilities, they also have the opportunity to influence and prepare nurses to meet the needs of people with disabilities.

Eighty-eight nurse educators were surveyed on their perceptions, knowledge, and concerns about nursing students with learning disabilities (Sowers & Smith, 2004). Sowers and Smith sent 244 surveys to nurse educators from eight nursing programs with 88 surveys being returned. The authors found nurse educators believed a student with a learning disability was more likely to be a successful nurse, than successfully complete their nursing program related to the program requirements. The biggest concern regarding having students with learning disabilities in their classrooms was the time requirement to accommodate the student's disability and needs (Sowers & Smith, 2004). In addition, Sowers and Smith reported nurse educators rated their knowledge of disability issues as fairly low and acknowledged the need and benefit of education on disabilities. The study also identified nurse educators had more positive attitudes to students who were deaf or in a wheelchair compared to those with "hidden" disabilities, such as learning disabilities (Sowers & Smith 2004). This may be because physical disabilities required little time from the educators, whereas, learning disabilities usually required behavioral changes, which take more time.

The study was part of a Health Science Faculty Education Project and funded by the US Department of Education (Sowers & Smith 2004). The project had two key implementation sites including the health science programs at a university and community college both in Oregon, and two secondary implementation sites on the East coast. Although the study occurred at different academic institutions, the results were

limited as not generalizable to the whole population. Also, the authors did not discuss the data collection tool's reliability or if it was a standard tool.

Nurse educators have had and continue to have concerns about students with learning disabilities in nursing education. Some of the concerns revolved around accommodations and the time it took to make changes. Many nurse educators have not had any training related to students with learning disabilities and how to include them in their classrooms. The following section will discuss nurse educator observations and additional concerns with including students with learning disabilities in nursing education.

### **Expert Nurse Educator Observations**

The responsibility of nurse educators is to help students maximize their strengths (Shuler, 1990). Nurse educators' awareness and understanding of issues involved with having a learning disability is important for student success, as is faculty members' knowledge of interventions or accommodations available to help the students succeed (Selekman, 2002). Selekman, a professor of nursing, explained nurse educators often had many concerns regarding students with learning disabilities in their courses including: (a) the safety of patients, (b) fairness of accommodations, (c) increased monitoring in clinical, (d) workload adjustments of students, (e) increased time required by the faculty, and (f) legal and ethical implications, as discussed earlier in this chapter.

**Concerns of Safety.** There are concerns that nursing students with disabilities may provide unsafe care. Some have expressed this argument over the rights of an

individual compared to the rights of a society to receive safe care (Carroll, 2004). However, the study by Sowers and Smith (2004) noted no studies have been found indicating students or nurses with disabilities had increased incidences of causing harm or providing care that was substandard to patients. No research studies have documented a relationship between disability status and medication errors or patient safety (Marks, 2007). No current evidence suggests nursing students with learning disabilities were not able to provide safe competent care. Nursing students with dyslexia expressed the need to show respect for the wellbeing of others, and acknowledged their responsibilities to provide safe care (Ridley, 2011). Nursing students with dyslexia explained they take more care not to make mistakes with things like drug calculations, and have them double checked. The students were aware of their difficulties and took extra safeguards to make sure they provided appropriate and safe care (Ridley, 2011).

The negative feelings students with disabilities reported related to their disabilities were some of the same feelings health care professionals have shared. A mixed methods study looking at the tensions between higher education and placement providers in the health care environment was conducted in the United Kingdom (Walker, Dearnley, Hargreaves, Education, & Walker, 2013). Data was collected through semi-structured interviews of students with disabilities (N=9) and health professionals with disabilities (N=6); in addition, a survey (N=96) collected data on knowledge, skills, and attitudes of professional staff members in regards to students with disabilities. The study referred to as the Managing Impairments in Practice Placement Settings (MIPPS) study was

conducted at several National Health Service (NHS) sites and two universities. The research questions that guided the study included: (a) What does reasonable adjustments mean in relation to NHS practice placements?; (b) What is the perception of disabled students and staff in the NHS?; (c) How can we help disabled students and prepare them to cope in practice?; and (d) How can a balance be found between the demands of professional health care practice and the rights of disabled students and staff? (Walker et al., 2013).

Quantitative data gathered from the survey found 20% of the respondents identified themselves as having a disability, 80% knew of someone who had a disability, and 50% had assisted a person with a disability during their career (Walker et al., 2013). The data revealed four themes: (a) attitudes and beliefs around disability, (b) disclosure and support, (c) primacy of the patient, and (d) education. Supporting the first theme, when asked what people in Britain thought of a person with a disability, 83% said they were seen as “getting in the way,” and 99% said a person with a disability “needed to be cared for” (Walker et al., 2013, p. 50). Interestingly, 66% of respondents said people with disabilities were “the same as everyone else” (Walker et al., 2013, p. 50). A question similar to the one above found 80% of respondents thought a person with a disability needed to be cared for, and 21% said a person with a disability had “discomfort or awkwardness” (Walker et al., 2013, p. 50). There continues to be negative attitudes towards people with disabilities in healthcare. These negative attitudes have made it

difficult for people with disabilities to have careers in healthcare because of the fears and concerns regarding their abilities to safely care for others.

The second theme of disclosure and support found people with disabilities may face barriers as a direct result of their disability. Students believed any disclosure would cause them to be treated differently and their ability to perform effectively would be questioned. The idea of reasonable accommodations was seen as receiving special treatment and having lower expectations for clinical competencies. Nursing staff was hesitant to mentor a student with a disability because of the perceived extra time it would take to train them. Primacy of the patient was the belief of both students and health care professionals. Patient care was seen as the central concern for all involved. The theme of education explained supporting students with disabilities was a main concern but only 35% were aware of ever having any contact with a student with a disability. Over half of the respondents revealed they did not know enough about disabilities, and 50% explained they did not know enough about reasonable adjustments. The study found most would benefit from more education regarding disabilities and disability awareness (Walker et al., 2013)

Throughout the data analysis Walker et al. (2013) identified many comments related to safety and fitness to practice. Although there were many concerns, no evidence was found to indicate an increased risk working with students or practitioners with a disability. With that being said, Walker et al. (2013) felt that with all the research dedicated to the risk of health care professionals with disabilities in caring for patients,

they needed to describe it as a perceived risk. They felt this was appropriate because a health care professional with a disability was often going to be perceived as a risk in health care settings, even with appropriate support and accommodations or adjustments to the environment.

Nurse educators need to “challenge outmoded perceptions that nursing students with disabilities pose an inherent risk to the public that is distinctly different from that posed by any other student” (Marks, 2007, p.73). According to Marks (2007), the preoccupation of some nurse educators with the issue of safety and students with disabilities appears to be an attempt to prevent the progression of students with disabilities in nursing education. This literature review also revealed no studies associating disabilities with adverse outcomes of patient safety.

**Accommodations.** The role of nurse educators in teaching students with learning disabilities is to acknowledge their strengths and to provide remediation or accommodations for any weak areas (Shuler, 1990). Remediation focuses on building the student’s strengths whereas accommodations involve a change in something outside of the person (Shuler, 1990). Accommodations put in place for students with learning disabilities need to be reasonable and not a burden to the institution. The student should also be held to the same performance expectations as those without a disability (Helms, et. al, 2006).

Accommodations are not standard and must be looked at with each individual student. There are three categories of accommodations: (a) those related to classroom



instruction, (b) accommodations related to testing or assessment of students, and (c) institutional accommodations related to completion of a program. Instructional accommodations can include books on tape, note takers, sitting up front in the classroom or large print text; testing accommodations can include extended time, separate testing area from rest of class, test readers, or alternate forms of testing; and, institutional accommodations include extended time to complete a program, substitutions for course requirements, or late withdrawal (Ijiri & Kudzma, 2000).

Providing a student with the opportunity for remediation lets them not only improve on weaker areas but also allows them to see the areas in which they are strong. For students with learning disabilities, the focus needs to be on what the student does well, and to use that strength to improve on their weaknesses (Shuler, 1990). Students with learning disabilities often do not want to accept accommodations except as a last resort (Kolanko, 2003). Ijiri and Kudzma (2000) explained nurse educators need to be actively involved with students who have disabilities to determine what accommodations, if any, are needed for the student to successfully complete their course.

The ADA (1990) defines a reasonable accommodation as any modification or adjustment to a job or the work environment that will enable a qualified applicant or employee with a disability to participate in the application process or to perform essential job functions. Reasonable accommodation also includes adjustments to assure that a qualified individual with a disability has the rights and privileges in employment equal to those of employees without disabilities. This definition also applies to students in the

education environment where the ADA requires institutions to provide access to services and opportunities through reasonable accommodations for students with disabilities. This allows students with disabilities to compete in institutions of education on an equal basis as students without disabilities.

Accommodations are changes in instructions or assessment practices that reduce the impact of an individual's disability (Ketterlin-Geller & Johnstone, 2006). To receive accommodations from the educational institution, the student must be identified as having a disability that limits at least one major life activity. All individuals with disabilities are not qualified to receive accommodations. If an individual does not have the qualities needed to be successful, without considering their disability, or if the disability or impairment does not limit the person beyond that of the average person the institution is not required to provide them with accommodations (Ketterlin-Geller & Johnstone, 2006). In addition, if a student is able to self-accommodate their disability by doing things they have learned over time, or take medications to alleviate or lessen the effects of their disability the institution of education may not be required to provide additional accommodations (Ketterlin-Geller & Johnstone, 2006; Ranseen & Parks, 2005).

***NCLEX Accommodations.*** A concern for nursing education programs is what information regarding the student's disability can be released to licensing agencies. Nursing programs prepare students to be nurses, and to be a nurse, all students must pass a licensing exam. Another concern is about accommodations being utilized during their licensure exam (Helms, et. al, 2006). The NCLEX exam is set-up so that, if the graduate

nurse is consistently achieving above passing standards, they will receive fewer questions on the exam. For a student with a learning disability, this can create issues because consistency may be lacking. As a student is answering questions on the NCLEX examination the computer is estimating the student's ability, and chooses questions the student should have a 50% chance of answering correctly. If the student gets some of the easier questions wrong, they will get more questions to answer on the NCLEX. That is the way the process is designed to work. More questions on the exam will mean more time, so some students may need time extensions or other accommodations for the NCLEX examination (Ijiri & Kudzma, 2000).

The NCLEX is a computerized adaptive test that responds to the student candidate's ability. If a candidate is consistently answering questions right they will get more difficult questions, until they answer one incorrectly, and at that point they will get a question slightly less difficult than the previous. Every time a candidate answers a question the computer evaluates their ability and adjusts the exam, so a high performing candidate won't get questions that are too easy, and a lower performer won't get all difficult questions. The exam therefore measures the candidate's most accurate ability to safely and effectively provide nursing care. To pass the NCLEX the candidate will answer the minimum number of questions (75) and achieve a competency level significantly above the passing standard, by answering the maximum number of questions (265) with a competency level above the standard, or answer the least number of questions (75) and runs out of time (6 hours), but has a consistent competency level

above the passing standard. If a candidate fails, it means they did not achieve the passing competency level by answering the maximum number of questions, or they ran out of time and did not answer the minimum number of questions (Nursing Explorer, 2014).

The National Council of State Boards of Nursing (NCSBN, 2014) is the agency responsible for the NCLEX examination. The NCLEX is designed to test the knowledge, skills and abilities needed to safely and effectively practice nursing. The NCLEX, a timed assessment, is only offered in a computer format and consists of mostly multiple choice, but also includes multiple response, ordered response, fill-in-the-blank, or hot spot questions. Accommodations on the NCLEX examination can only be allowed under the authorization of an individual's state board of nursing. An individual wanting accommodations on the NCLEX needs to contact the board of nursing prior to registering for the examination, and make a written request for accommodations. The NCLEX date should not be scheduled until the individual receives written confirmation of the accommodations, and the authorization to test states accommodations granted. An individual who requests accommodations on the NCLEX cannot cancel their request at the time of their appointment to take the examination (NCSBN, 2014).

According to the North Dakota Board of Nursing (NDBON) (personal communications with NDBON representative on December 15, 2014) about 500 people sit for the NCLEX-RN each year and they average about two people per year requesting accommodations. In 2013, three people requested accommodations. Since 2008, thirty-five people have requested accommodations on the NCLEX examination although, many

rescind their request after they find out the documentation required to receive accommodations. Since 2008, of the 35 who have requested accommodations 6 have not passed the NCLEX. No data is available before 2004 on people who requested accommodations, and accommodations were not allowed on the NCLEX examination when it was a paper and pencil test.

The first step in requesting accommodations for the NCLEX examination is to contact the state's board of nursing to get information on what requirements are needed. A student requesting accommodations for the NCLEX exam needs current documentation stating what their actual diagnosis is, and how it affects their ability to test. Other supporting documents may also be needed and can include a statement from the director of the nursing program stating what accommodations were used in nursing school. Each request for accommodations is determined on a case-by-case basis (Pearson Vue, 2016).

Nurse educators need to plan for accommodations in both the classroom and in clinical; delegation of a task can be seen as an accommodation, such as delegating the transfer of a patient to another nurse or assistive personnel (Arndt, 2004). The use of accommodations does not mean the content or curriculum of a nursing program needs to be altered, as students with disabilities are held to the same expectations regarding content as other students (Arndt, 2004). Also, the idea of fairness needs to be thought of as giving each person what they need to succeed and not as treating everyone the same (Arndt, 2004; Bohne, 2004).

**Increased Monitoring.** Health care professionals including students, experience barriers in practice settings. There is a noticeable difference between the academic setting and clinical placements (Walker et al., 2013). Students with disabilities explained they had to overcome barriers and negative attitudes from qualified staff and educators in the clinical setting. Clinical staff believed they had valid concerns and expressed providing support for students with disabilities was not without problems in the clinical setting. The information needed, such as policy related to practice, in regards to health care professionals with disabilities is lacking. Because of a lack of information, educational institutions and their clinical partners are trying to meet the needs of students with disabilities with very little guidance. Working in reasonable accommodations or adjustments to the clinical environment was seen as difficult with unclear guidance (Walker et al., 2013).

Educational institutions including universities are required to make reasonable accommodations or adjustments for students with disabilities. The use of reasonable accommodations is clearer in the academic environment than in clinical placements. Concerns have been raised about the ability of students with disabilities to be able to meet program requirements. A framework for a six-phase tripartite model was developed to support nursing students with disabilities in clinical practice environments (Griffiths, Worth, Scullard, & Gilbert, 2010). The aims of the model included: (a) extend support provided for students with disabilities to encompass practice, (b) design a tripartite working arrangement between the university, practice partners and students, (c) establish

a working policy for practice that incorporates the identification of appropriate support for students with disabilities, and (d) develop a valid and reliable system to plan, implement and evaluate practice support provided for students with disabilities. A case study method, using one case, was used to show how the model works. The case was chosen from Buckinghamshire New University in Northern West London.

For the model to work a collaborative approach of three groups of people were needed: the practice team; the lead for practice learning; and disability services (Griffiths et al., 2010). The model was based on integrating services, reviewing them, and making modifications as needed through all stages of the nursing program. The idea was reasonable adjustments and support in the clinical placement settings should be comparable to that provided in the academic setting. The model had disability support personnel go into the clinical placement settings to see first the complexity and difficulties at hand, and to be informed at future discussions regarding placements and reasonable adjustments for students with disabilities. The model was intended to be individualized but the phases of the model were appropriate to all students with disabilities.

The single case was a 20 year old female nursing student (Helen) with a disclosed disability, myalgic encephalopathy. Helen explained she had good and bad days, with the bad days having fatigue, problems with concentration, pain and headaches. There were six phases to the model. Phase one involved disclosure and identifying and assessing needs. After Helen disclosed her disability she had a physical assessment to determine

her fitness to practice nursing and participated in a nursing skills session. After phase one Helen was offered a position in the nursing program. Phase two, establishing support systems and processes in practice, depends on the student, their disability and specific needs. Initially, the disability services advisor met with Helen to see if she wanted support and, after that was determined, disability support personnel met with the practice team to discuss Helen's needs in clinical placements. During Helen's clinical placements she was provided with the following reasonable adjustments: regular breaks, advised not to work long hours, and not to work more than three shifts in a row. This also required Helen to disclose her disability to clinical mentors, and the mentors were then given an advice sheet prepared by disability services on Helen's clinical placement.

Phase three involved a mid-placement review and an opportunity to determine any alternative strategies to meet the student's needs. Helen's review was positive and no adjustments were needed (Griffiths et al., 2010). Phase four involved the development of detailed plans and models of support, and the process of developing a critical information base. Helen's student pathway was analyzed collaboratively by the three groups beginning with pre-enrollment to the nursing program through graduation. This allowed for the development of a detailed action plan that may be applied to different student situations. Phase five was the end of placement review and evaluation. Helen's evaluation was positive and she found her practice placements less difficult than anticipated, and was confident in her abilities to complete the program with the coping strategies put in place. The final phase was a review of support strategies evaluating if the supports put in



place were flexible enough to meet the changing needs during the program. Helen required only small alterations to time arrangements throughout the program. She became active in developing her coping strategies, and therefore became less dependent on external sources of support. The main limitation of this study was only one case was used. The strength of the study would improve, if more than one case was used and if the cases had different disabilities to see the amount of time and monitoring students with a variety of disabilities need during their clinical placements.

Another limitation was the study was conducted in the United Kingdom (UK) where student nurses were not trained as generalists but instead received focused training in special areas. The fields of focus for nursing curricula in the UK and Ireland are adult, child, learning disability, and mental health nursing (Hemingway, Stephenson, Roberts, & McCann, 2014). Although the nursing curricula are different between the UK and the United States, many of the same concerns exist related to students with learning disabilities in nursing education.

A study conducted in Japan (Ikematsu, Mizutani, Tozaka, Mori, Egawa, Endo, & Yokouchi, 2014) proposed the tripartite model, as discussed in the Griffiths et al. (2010) article, be used for early identification and an individualized approach in teaching students with special education needs. Ikematsu et al. mailed surveys to 833 nursing programs in Japan, with a 47.5% response rate, to determine the prevalence of nursing students with special education needs. The data revealed, two percent of nursing students had extreme difficulties in studying nursing, and half of those students had special

education needs. In a class of 100 students that was one student per class with special needs. Ikematsu et al. (2014) explained having one student in the classroom with special needs is not a problem, but one student with special needs in a clinical setting can have a significant impact. The data revealed the most difficult part of having students with “special education” needs was “patient care at clinical practicum” (p. 677).

Ikematsu et al. (2014) described the most common special education need for nursing students was social interaction/restricted interests. This was most evident in students with Asperger’s syndrome as they can have difficulties in recognizing non-verbal communication, facial expressions and variances in voice tones. Teachers and clinical instructors also reported listening, inattentiveness, and speaking as obstacles for students with special education needs in the clinical setting.

Nurse educators explained the most difficult learning situations for students with special education needs were nursing care and communication in the clinical setting. Their main concerns were for patient safety and the possibility of serious medical errors. The educators had anxiety about the added responsibility of identifying students with special needs, and providing extra training or job guidance to prevent any medical errors. Although the tripartite approach to assist students was discussed within the article, it was also noted that just above 10% of the nursing programs in Japan have any form of student support services.

A limitation of the Ikematsu et al. (2014) study was that it was conducted in Japan. Although there are differences in nursing education between Japan and the United

States the article still has value. The authors of the article encouraged nurse educators to look for the strengths of students with special education needs and consider those strengths when making decisions about the student's workforce plans.

**Workload Adjustments of Students.** All students in nursing education are expected to meet the same objectives, and all students will experience challenges while in nursing school. Programs are responsible to make their education accessible to all students, including those with disabilities, ensuring the most opportunity to the benefits of a college education. Both Section 504 and the ADA are designed to ensure equal opportunity, not merely equal treatment. Schools cannot provide a student with a disability with opportunities of unequal benefit over students without disabilities. This reinforces only students who are otherwise qualified and able to meet the requirements for admission and program progression are protected by the ADA and Section 504 (Nott & Zafft, 2006). Schools are also not required to modify their curriculum or educational programs, lower their standards, or provide students with modifications that are not reasonable to the institution (Nott & Zafft, 2006).

The curriculum and demands of nursing education create extra challenges for students with learning disabilities. Although nursing education can be difficult for students with learning disabilities they are still expected to meet the same academic requirements as their peers without a disability (Shuler, 1990). The difference may be how the student is allowed to show their competence in meeting program outcomes.

**Increased Time of Faculty.** To look at the adjustments and support strategies utilized to enable nursing students with disabilities success in nursing programs, Tee et al. (2010) conducted a study using an evaluative case study design. Acknowledging the challenges and possible lack of support regarding students with disabilities, an innovative intervention using student practice learning advisors (SPLA) was implemented in one institution of higher education in the United Kingdom. The purpose of the study was to evaluate the impact of SPLA for students with disabilities. Data was collected through three methods including quantitative data collection to obtain background information on the students utilizing the SPLA. Qualitative information was collected through case summaries; in addition, the SPLA's (N=4) provided descriptive narratives of their personal experiences of supporting students with disabilities in nursing education. The data revealed students with disabilities on average required 20% more contact time when compared to students without disabilities (Tee et al., 2010). If additional support personnel were not in place, this extra time was often the responsibility of the course faculty.

Students with disabilities in nursing education have both learning and practice needs. Some needs identified for a student with dyslexia included ways of structuring data for common tasks by using acronyms or cue cards, and the use of learning contracts (Tee et al., 2010). Students with dyspraxia may need supervised practice, a notebook or handover sheets to plan cares, and practice with prioritization. Dyspraxia is a brain based condition that can affect a person's ability to plan and coordinate movements, develop

appropriate social skills, and the ability to form and pronounce words correctly (Patino, 2014).

For all students with disabilities, it is important to follow the recommendations of disability support personnel, and provide individualized recommendations for each student acknowledging their strengths and weaknesses. Tee et al. (2010) identified the need for effective and coordinated support for students with disabilities, and explained the need for more support may require more time on the part of the education system. The study presented data to show the use of SPLA's did improve students with disabilities success and progression in nursing education, although the voice of the student was missing from the study.

Although not specific to nursing, Tinklin, Riddell, and Wilson (2004) also identified the concerns of educators related to the extra time students with disabilities may require for success. Tinklin, Riddell, and Wilson (2004) discussed how educators related difficulty in providing extra support for students with disabilities with added pressures and increased workloads. Providing adjustments, such as electronic lecture notes, were viewed as requiring a substantial change in practice and extra work. In addition, the institutions were concerned about lowering their standards by providing extra support and viewed equality as treating everyone in exactly the same way, which represented barriers for students with disabilities.

## **Nurse Educator Attitudes**

Nurse educators may hold onto historical attitudes, values, and practices that exclude students with disabilities from being admitted or disclosing they have a disability (Marks, 2007). Christensen (1998) found most nurse educators preferred to be able to evaluate the student's disability and accommodation needs prior to making an admission decision. Maheady (1999) also discovered in a qualitative study attitudes were one of the biggest barriers people with disabilities faced. In fact, nursing students often report facing more attitudinal barriers than physical barriers associated with their disability (Maheady, 1999).

Students with disabilities explained it is often the reactions of other people that were more difficult than their disability itself (Marks, 2007). The attitudes they perceived from people who were not appropriately educated on disabilities create the greatest barrier for students with disabilities. The attitudes and barriers people with disabilities faced often came from health care professionals who viewed them as abnormal or deficient and in need of prevention or correction (Marks, 2007).

Brillhart, Jay, and Wyers (1990) found nurse educators had the least positive attitudes toward people with disabilities when compared to nursing students, registered nurses and people with disabilities. Resentment was an attitude students with disabilities faced. Other students without disabilities and educators felt the student with a disability was receiving some accommodations that give them advantages (Colon, 1997). Students with disabilities often felt as if they were being watched, and this prevented the student

from being able to focus on learning instead of always having to prove themselves (Carroll, 2004).

The experience a student with learning disabilities had while in nursing education was impacted by the identity given to them by their nurse educators. Evans (2014) conducted an exploratory discursive study looking at how identities were socially constructed for students with dyslexia in nursing education. The purposive sample consisted of 12 nurse lecturers from two institutions of higher education from the Republic of Ireland. Data was collected through narrative interviewing, and a semi-structured interview schedule and vignettes were utilized.

The data revealed two main themes including “getting the work done” and the severe dyslexic student (Evans, 2014). Getting the work done described students who failed to get the work done for any reason was seen as problematic. Students who required support were disapproved of because getting the work done was most important, and needing extra support was viewed as needing to be babysat. The data indicated getting the work done was more important than any right to support the student may be entitled to, and nursing was only for those who were able to get it done.

The theme of the severe dyslexic student described how a mild dyslexic identity needs minimal support or accommodations (Evans, 2014). A student identified as a severe dyslexic student was seen as not acquiring appropriate competencies, having patient safety issues, and as needing academic reader accommodations. Eight of the twelve nurse lecturers interviewed explained students with severe dyslexia should be

screened before or during the program to see if they would be able to progress in the course or program, and the student should be encouraged to leave the program early. A limitation of the study was missing information from other professionals in the nursing program such as clinical instructors, preceptors and administration. Also missing was the voice of students and their opinions of how the identity given to them impacts their education. Another possible limitation was the applicability of UK and Irish studies to US populations and nursing programs.

The attitudes nurse educators hold on to related to students with learning disabilities can impact the experiences students have in their nursing education programs. The attitudinal barriers students with learning disabilities face can be more challenging than their actual disability. The attitudes students with learning disabilities face in nursing education may impact the numbers of students who disclose their learning disability in nursing education. Nurse educators need to be accepting of students with learning disabilities as they can be successful in nursing education.

### **Success for Nursing Students with Learning Disabilities**

Nursing students with learning disabilities used many of the same success strategies as other students in higher education as discussed in a previous section. Through the literature review it was identified early disclosure of their disability could lead to higher levels of success, as well as being their own self-advocate and asking for support (Wray, Aspland, Taghzout, Pace, & Harrison, 2012). One institution used simulation as a way to determine a student's strengths and weaknesses, and the support



they would need prior to starting the nursing program (Azzopardi et al., 2013). A few studies identified teaching students study skills and other accommodations improved success rates in the clinical and classroom (Colon, 1997; Wray, Aspland, Taghzouit, & Pace, 2013; Howlin, Halligan, & O'Toole, 2014a-b). These success strategies will be further explained below.

Students with learning disabilities who view their disability as part of their identity and who receive appropriate support have higher levels of success (Ijiri & Kudzma, 2000). However, many students with learning disabilities enter college with poor self-concepts, poor socialization skills, fear of failure, and a misconception of other people upon entering college. Ijiri and Kudzma (2000) described a metacognitive perspective intended to assist nurse educators in raising the success rates of students with learning disabilities. Metacognition is a person's knowledge or self-awareness of their own cognitive processes. A student with a learning disability may have a weakened metacognition in which he/she is not able to adequately plan, monitor, regulate or execute learning behaviors. Learning strategies focusing on metacognitive skills assist students in becoming active participants in their learning process, and provide them with tools for life-long learning. Ijiri and Kudzma (2000) explained students need to be encouraged to discuss with their teachers their strengths and weaknesses of learning, which will assist in creating the most positive learning experience.

Early identification of a learning disability or a disclosure of disability by a student can have an impact on their progression and success in nursing education. A

study looking at the impact of screening nursing students for learning disabilities at entry into the nursing program, and added support for at risk students was conducted using a multiple method approach (Wray, Aspland, Taghzouit, Pace, & Harrison, 2012). The sample consisted of 242 students who completed the Adult Dyslexia Checklist. Any student scoring higher than a seven on the checklist was identified as at risk and invited to attend study skills sessions. Sixty-nine or 28.5% of participants had a score of seven or higher. A total of 27 out of the 69 identified as at risk were diagnosed as having a learning disability, or 11% of the total cohort (cohort A).

The data from cohort A was compared to cohort B that did not have any pre-screening of its students or the addition of study skill sessions. Cohort B had 12.3% of its students diagnosed as having a learning disability. The difference between the cohorts was progression rates. In year two of the nursing program, cohort A had 54% of its students' progress, but cohort B had only 41% of its students' progress (Wray et al., 2012). A limitation of the study was 48% of students who scored a seven or higher did not go on for further evaluation or support, and this missing information may have impacted the study results. After a student is diagnosed with a learning disability their success is dependent on collaborative efforts by themselves as individuals, and the availability of accommodations and support by the institution of higher education (Wray et al., 2012).

A discursive research study was done to promote simulation as a learning strategy to support nursing students with disabilities (Azzopardi et al., 2013). All levels

of fidelity simulations were analyzed and their application to support students with disabilities was assessed. During the simulation both academic staff and disability services personnel worked together to determine the student's disability and the impact the disability had on learning and clinical practice, in order to implement appropriate adjustments to the student's academic environments. The study included five students. Each student received a satisfactory clinical performance outcome during the simulation experience. The use of simulation in this way allowed for the embracing of advances in technology within learning, was used as a strategy to ensure safety of all people involved, and gave students an opportunity to make informed decisions regarding entry into a course and progression throughout their education. The study highlighted the importance of understanding the adjustments made to accommodate the student's needs had to be individualized, as one way does not work for all students. Limitations of this study include only one institution being studied. Little description of how data was collected and what type of tool was used to gather and record the data were reported (Azzopardi et al., 2013).

Embedding study skills into the mainstream curriculum benefitted students with learning disabilities through earlier contact with support services, and increased progression rates in one institution of higher education in the North of England (Wray, Aspland, Taghzouit, & Pace, 2013). Data was collected using descriptive and evaluative designs, plus a comparative analysis of retrospective data. The sample consisted of 384 pre-registration nursing students. Participants (n=300) completed a questionnaire on the

study skills sessions; data from disability services was analyzed for length of time from registration to first contact with disability services; and student progression data was obtained from the institution's academic information system (Wray et al., 2013).

The study skills embedded into the curriculum included; (a) study skills in transitions to higher education, (b) learning techniques, (c) reflection, (d) personal and professional development planning, (e) essay writing, (f) referencing and plagiarism, (g) numeracy skills, (h) IT/technology, and (i) revision (Wray et al., 2013). Participants explained the sessions on essay writing, reflection and learning techniques to be the most beneficial, and the IT session received the most negative feedback. The data revealed the study skills to be a positive addition to the nursing curriculum, improving progression of students with learning disabilities. The study skills also reduced the amount of time it took for students with disabilities to contact disability services from 12.6 weeks to as low as 6.95 weeks. The main limitation of the study was the use of only one institution in northern England. In addition, no discussion was evident on the possible other factors that could have led to improved progression rates of students with learning disabilities (Wray et al., 2013).

In 1997, Colon studied the purpose of identifying to what extent nursing programs admit, identify and graduate nursing students with learning disabilities, and to identify accommodations provided to promote success for students with learning disabilities. This was a descriptive study with data gathered through the use of a survey questionnaire sent to nursing programs in the state of North Carolina, 54 surveys were sent to a combination

of BSN and ADN programs with a response rate of 83% (n=45). More than one-third of the respondents indicated having experience with nursing students who have a diagnosed learning disability. The study revealed students with learning disabilities can be successful with a combination of faculty support and the use of accommodations. The key to success for nursing students was identified as education provided in an environment sensitive to student needs, and the awareness of resources and accommodations available for students with learning disabilities.

A limitation to the Colon (1997) study was a mismatch between method and theoretical framework. The author identified Leininger's cultural care theory was the framework for the study with the goal of nurse educators providing culturally congruent care for learners. Leininger has also said her theory can be used in education to promote effective interactions with students. Although the author said the theory could be used, no elaboration was done on how the theory supported the study. The method of quantitative surveys also is not consistent with Leininger's theory and no discussion was evident on shared values between the students and educators. Another limitation was the scope of the sample coming only from the state of North Carolina.

The impact of a clinical needs assessment (CNA) to support nursing and midwifery students with disabilities in clinical practice was shown to promote equality, inclusion and a level playing field (Howlin, Halligan, & O'Toole, 2014a). The CNA was developed to identify reasonable accommodations and supports students with disabilities can use in clinical practice. The needs assessment was competency based and clearly

identified the core skills or elements of practice the student must possess to become proficient and competent. There were five domains of competence the clinical needs framework was built around, which included: (a) professional/ethical practice, (b) interpersonal relationships, (c) holistic approaches to care and the integration of knowledge, (d) organization and management of care, and (e) personal and professional development. The development of the clinical needs assessment took place in three phases. Phase one included a review of literature, which reinforced the importance of being proactive in identifying and supporting students with disabilities. Phase two reviewed the competency standards for the professions of nursing and midwifery in Ireland and the United Kingdom. These competencies were the basis of the CNA. Phase three involved discussions and consultations with experts related to students with disabilities. This phase also included collaboration between academic and clinical staff, as well as the student (Howlin et al., 2014a).

The final clinical needs assessment (CNA) involved four parts (Howlin et al., 2014a). Part one presented background information on the development of the CNA and a review of the competency domains. Part two involved a questionnaire to gather history on the student's disability and the impact on their life, education and work. Part three (a) recorded the presence or absence of factors that may aggravate the student's disability, and a list of reasonable accommodations for the student, academic institution and clinical placements. Part three (b) allowed the student to provide consent or dissent to release the information in part three (a) to academic and clinical staff. Part four enabled the student

and their academic and clinical professionals and preceptors to evaluate the effectiveness of the accommodations listed in part three (a). The development of a CNA was individualized and based on strategies the student had found to be successful in the past.

A qualitative study was conducted to evaluate the CNA and the experiences of students with disabilities in clinical practice (Howlin, Halligan, & O'Toole, 2014b). The purposive sample consisted of four, first year undergraduate students with specific learning disabilities (n=3) and a mental health issue (n=1). Data was collected through semi-structured interviews and the question, "Tell me about your experience of support received in relation to your disability while on clinical placement?" (Howlin et al., 2014b, p. 2). The data revealed two main themes: students' experiences of disclosure and receiving support.

All the participants had disclosed their disability on at least one occasion but the method of disclosure varied (Howlin et al., 2014b). The participants expressed difficulty disclosing their disability to clinical staff related to staff attitudes, environmental issues (frequent changes in clinical staff and preceptors) or personal factors (not feeling confident). One participant explained she disclosed her disability because she wanted the staff to be aware in case something ever happened. Another student explained that even though she disclosed her disability the preceptor seemed unaware of her needs and did not have enough knowledge to offer appropriate support. The response one participant received when she disclosed her disability to a clinical staff person was "yes you have a disability but don't become a victim about it" (Howlin et al., 2014b. p. 4). The

participants said they anticipated their preceptor would know about their disability because the clinical contact person, identified in the CNA, was going to provide a list of accommodations to clinical staff. This pointed out an area of poor communication between staff and the healthcare institution, and highlighted a need for further education of staff.

The participants described both positive and negative experiences of receiving accommodations (Howlin et al., 2014b). The clinical placement coordinators (CPC) were seen as a positive support for students having difficulty during a clinical placement. The CPC would come to the clinical site and go through things with the student, including clinical issues. The participants also explained the importance of support from other students going through similar experiences as them. Several comments by the participants indicated the clinical staff did not have an understanding of the challenges students with disabilities experienced in the clinical setting, including slower processing speeds, reduced working memory, and problems with terminology, abbreviations and long sets of instructions. Although there were challenges identified in the use of a CNA in clinical placements for students of nursing and midwifery, it was also determined the CNA helps to close the gap of student support between the academic institution and healthcare faculty. Limitations of the study included its sample size being small and coming from one cohort of students, and all were female. An additional limitation was the applicability of UK and Irish studies to US populations and nursing programs.



Students with learning disabilities in nursing education have additional challenges to overcome, but can be successful. Factors that can impact success include a positive learning environment where the student is accepted, and the use of innovative approaches to meeting course or program outcomes, such as the use of simulation. In addition, students need to be active participants throughout their nursing education. They need to be aware of resources available, and their own strengths and weaknesses. The following section will discuss nursing students' perceptions of having a learning disability.

### **Student Perceptions**

Maheady (1999) conducted a qualitative multiple-case study using three data collection techniques: interviewing, observations and document analysis. The study included ten nursing students with either an auditory, visual, chronic illness or physical disability. The study also included 61 nursing faculty, staff nurses, patients and fellow students. The purpose of the study was to describe the experiences of nursing students with disabilities, and also look at how nursing students and nurses with disabilities can be supported with reasonable accommodations. The results of the study showed students with disabilities dealt with more barriers created by attitudes of faculty, staff, patients and other students than they did with physical barriers associated with their disability (Maheady, 1999). Several of the students voiced they felt they had to “jump through hoops” to stay in the nursing program or “walked on eggshells” fearing, if it was found out they had a disability, they would be dismissed from the program (Maheady, 1999, p. 165). This is similar to what Carroll (2004) found, students with disabilities felt as if they

were being watched and someone was waiting for them to make a mistake. The study also revealed nurse educators were not prepared to teach students with learning disabilities because of lack of education about learning disabilities (Maheady, 1999).

Six themes emerged from Maheady's (1999) study including nursing students with disabilities: (a) are supported in diverse ways, (b) encounter more attitudinal barriers than physical barriers, (c) "jump through hoops" to succeed in nursing programs, (d) "walk on eggshells" because of the fear of the consequences of disclosure of their disability, (e) have personal experiences that benefit themselves and patients by "turning the tables," and (f) "put their pants on" generally the same as their peers.

"Are supported in diverse ways" described variability in sources of support. Some of the students discussed the support they received from family and friends. Another common support was from faculty who offered to tutor students or made special arrangements for assignments and clinical experiences (Maheady, 1999). "Encounter more attitudinal barriers" described circumstances students faced, such as feeling as if they were being set-up to fail, told they were taking spots away from students without disabilities, and made to feel as if they were receiving special treatment. Students expressed how the attitudinal barriers added to their stress and anxiety and affected their self-esteem and confidence. "Jump through hoops" identified how students with disabilities went above and beyond to keep up with their schooling. Persistence and determination were evident in students with disabilities and what they would do to continue on in their educational programs. "Walk on eggshells" explained how students

with disabilities were in a state of fear that their disability would be known and they may be dismissed from the nursing program. “Turning the tables” described how students with disabilities felt they had a better insight to their patients’ needs and how their own experiences made them better nurses. Finally, “put their pants on” described how students with disabilities wanted to be treated and accepted like any typical student (Maheady, 1999). Although Maheady’s study is dated, the themes and barriers described are still relevant to today’s student as evidenced by similar themes found in the following study by Kolanko (2003) and in a previous study discussed by McCleary-Jones (2008).

Kolanko (2003) conducted a collective case study interviewing seven nursing students with learning disabilities. Kolanko (2003) asked, “What does it mean to be a nursing student with a learning disability?” (p. 252). The answer to this question was *struggle*. The students in the study felt they worked harder with less positive results, so they were in danger of being dismissed from the nursing program. Other struggles the students felt included frustration and anxieties, and acceptance and autonomy. Students stated disclosing their disability and accepting accommodations was a last resort and what they really wanted was to maintain their sense of autonomy (Kolanko, 2003).

Another question Kolanko (2003) asked was, “How does a baccalaureate nursing student with learning disabilities experience various aspects of the nursing program?” (p. 253). Each student with a learning disability found they were unique and must learn how to learn with his/her disability. Most students explained what learning styles worked best for them, the need for direct instruction, and the teaching strategies that supported

their learning in the classroom and clinical. All participants described kinesthetic/tactile learning as their preferred learning style, and many had combined learning preferences such as visual and kinetic or auditory and kinetic. Some students explained how their learning disability affected their abilities to conceptualize details and to make the connections between memory and things to be learned at a later time (Kolanko, 2003).

Students also described difficulties in adapting to change, such as in clinical settings or testing schedules, and the need for more time to process information. Some students also showed tendencies of “giving up” on activities, if success did not come quickly (Kolanko, 2003). Of the seven students who participated only one graduated in the typical four-years of college and several needed to retake failed courses. A big issue in learning was time; students said block classes that met for longer periods of time for less number of days were especially difficult, and that morning classes usually went better than afternoon classes. Social support was important to those with learning disabilities and most described their families as their main support. Some participants expressed feeling social isolation from faculty and their classmates, whereas others did not experience this (Kolanko, 2003).

The final question Kolanko (2003) asked was “How do the students’ disabilities and previous educational and personal experiences influence the meaning that the students give to their nursing educational experiences?” (p. 255). Themes that emerged from this question included learning disabilities within families, long-term academic problems, and co-existing health problems. Of the seven participants, four had other

immediate family members with learning disabilities, and all participants described problems with learning in earlier education. Two of the participants had co-existing problems of attention deficit disorder (ADD), which they described as being distracted by their external environments, and having problems with getting assignments completed on time and keeping appointments (Kolanko, 2003).

In 2011, a qualitative research study, utilizing semi-structured interviews, was conducted to explore the experiences of pre-registration nursing students with dyslexia at one university in the United Kingdom (Ridley, 2011). Seven students with a diagnosis of dyslexia were interviewed revealing four global themes: (a) dyslexia as a defined disability; (b) dyslexia as a professional issue; (c) living with dyslexia; and (d) support for dyslexia. The research questions asked for students to describe experiences related to their diagnosis, disclosure, difficulties and strengths, support and achievement with dyslexia.

The first theme of dyslexia as a defined disability included the requirements of higher education, and the processes, diagnosis and individuality of dyslexia (Ridley, 2011). Participants had mixed feelings about the diagnosis process. Some felt the process was interesting and supportive, where others felt it was a formality and not because the university cared about them as a student. The second theme of dyslexia as a professional issue involved issues with professionalism and the influence and effect of environment. The participants were aware of their responsibility to be accountable and provide safe cares, but also explained the need for respect for the wellbeing of themselves as future

nurses and their patients. Much like Kolanko (2003) and Maheady (1999), Ridley (2011) also found some students were hesitant to disclose their disability related to the reactions of others. One participant explained he/she was surprised about the negative view associated with dyslexia in such a caring business, such as nursing. Several of the participants discussed they disclose their dyslexia on a “need-to-know basis” related to the negative reactions they have seen towards other students (Ridley, 2011, p. 38).

The third theme of living with dyslexia, involved knowing oneself as well as thoughts and feelings. Nursing students with dyslexia were able to competently perform nursing responsibilities, and often had strong interpersonal skills, spatial awareness and creativity; despite being told throughout their life they were stupid and lazy (Ridley, 2011). Participants described being good at the practical side of courses, being more imaginative and creative, and being able to talk to anyone. The majority of the participants also did not see themselves as disabled, instead referred to dyslexia as a difference (Ridley, 2011).

The fourth theme of support for dyslexia included struggles for success, and relationships. Both Maheady (1999) and Kolanko (2003) discussed the need for a strong support system for students with disabilities, and this need persists today. Ridley (2011) found support mechanisms such as relationships (family, peers, mentors, and teachers) were important to a student’s success. If these support mechanisms were missing, students struggled more with intellectual, physical and emotional disturbances.

Limitations of the Ridley (2011) article included limited information about the interview

questions and data analysis methods. A limitation of the study was all participants came from one institution and participants were only interviewed one time.

The attitudes and experiences a student with a disability encounters has an impact on the identity with which they associate. Evans (2013) conducted a narrative study looking at how nursing students with dyslexia constructed their dyslexic identity. Data was collected through interviews of 12 nursing students with dyslexia (purposive sample) from two institutions of higher education in the Republic of Ireland. The data revealed students with dyslexia identify as one of three positions: embracer, passive engager, or resister. The embracer (n=4) was publically open about their dyslexia throughout their nursing education and disclosed their dyslexia when an opportunity arose. They also were organized, assessed supports and were proactive in managing the challenges they faced with dyslexia. The resister (n=3) opposed the idea of having a dyslexic identity. The comments included “being dyslexic is of little, if any, significance” and “...no matter if dyslexic or not dyslexic, I am still going to have to look after my patients” (Evans, 2013, p. 365). The passive engagers (n=5) held back disclosing their dyslexia but described difficulties they had with support staff. Regardless of how the student identified themselves, a common theme was a lack of understanding about dyslexia among support staff. Those who made the decision not to disclose did so for a variety of reasons including not identifying themselves as dyslexic, not being understood by support staff (nurse educators, nurse preceptors, and placement coordinators), or being viewed as stupid by support staff (n=9). The majority of participants objected to dyslexia being

referred to as a disability or impairment; instead they focused on more positive aspects of their identity. Limitations of the study included only conducting one interview with each participant. The researchers made this decision based on the pressure the participants appeared to be experiencing during the first interviews.

The above articles have shown students with learning disabilities believed attitudes create more barriers for them to overcome, than their disability. The students explained they would prefer to not ask for accommodations, and, if found out they had a disability, fear being dismissed from the program. The articles also discussed the need for a strong support system from not only family and friends, but also the university. The next section will discuss two models of disability and the impact each model can have on students with a disability.

### **Innovation**

Society has two basic models of disability, a social model and medical model. The model an institution, individual or community adopts affects the way people with disabilities are accepted within that environment. Nurse educators' views of disability may impact their attitudes towards students with disabilities.

The medical model views disability as a deficiency or abnormality that requires correction, whereas the social model challenges the policies and practices that create barriers for students with disabilities (Ashcroft et al., 2008). Marks (2007) explained educators ought to consider moving away from the medical model's view of disability and move towards a more comprehensive view as in the social model. Placing more



emphasis on the social model could challenge negative perceptions. The social model shows the connection between the person and the environment and understands both need to change to create an equal opportunity for people with disabilities. The medical model views a disability as the responsibility of the person and believes the disability can be corrected by changes made by the individual alone.

The medical model of disability is often implemented by health care professionals, including nurses (Ashcroft et al., 2008). The medical model describes a disability as a deficiency or abnormality that requires correction and prevention (Ashcroft et al., 2008). This model is also what many government documents accept, which affects university policies. The medical model leads nurse educators to view students with disabilities as unable to engage successfully in nursing education, which results in the exclusion of nurses from the profession (Ashcroft et al., 2008). This attitude was evident in the article by Sowers and Smith (2004), as they explained a person with a learning disability is more likely to be a successful nurse than complete a nursing program of education. This means nursing faculty members do not think a person with a learning disability cannot be a good nurse, but that they have concerns with the person successfully meeting the nursing program outcomes.

The social model of disability takes a different view from the medical model. The social model goes beyond the localized barriers and examines and challenges policies and practices that create barriers for people with disabilities (Ashcroft et al., 2008). The social model makes a distinction between impairment and disability. Impairment focuses on the

functions of the body or mind where there is a limitation. A disability is the loss or limitation of opportunities to participate in society due to environmental and social barriers (Ashcroft et al., 2008). Marks (2007) proposed that acceptance of the social model of disability would allow faculty to see students with disabilities as people with valuable skills and talents that are needed in nursing. If nursing education programs adopted a broader definition of disability and focused on the social model, nurses may be able to identify their own attitudes, beliefs, and values about disability related issues.

“Learning reconsidered” is a way to take another look at how educators view learning (Myers, 2008). There are seven learning outcomes associated with learning reconsidered; (a) cognitive complexity, (b) knowledge acquisition, integration, and application, (c) humanitarianism, (d) civic engagement, (e) interpersonal and intrapersonal competence, (f) practical competence, and (g) persistence and academic achievement. Within learning reconsidered, learning was defined as, “a comprehensive, holistic, transformative activity that integrates academic learning and student development, processes that have often been considered separate, and even independent of each other” (Myers, 2008, pp. 3 & 18). Myers discussed shared responsibility of faculty, staff, and students to work together to improve access and inclusion for college students with disabilities. Colleges cannot assume students with disabilities belong to disability services. Students with disabilities, like all students, belong to the entire campus with everyone being responsible for students’ learning and development. Myers exhorts faculty and staff need to ask themselves what they can do to enhance learning of

students and remove barriers for students with disabilities. The ADA defines disability as a physical or mental impairment that substantially limits a major life activity. Learning reconsidered shifts away from this medical paradigm definition, which focuses on a deficit, to a social model of disability. The social model of disability refocuses the responsibility on society rather than the individual to accommodate disabilities (Myers, 2008).

The increase of students with disabilities on college campuses has changed how learning occurs in postsecondary education. Educators need to be able to modify traditional ways of teaching and learning to meet a more diverse student population. Campuses need to provide disability education to students with and without disabilities; and faculty need the resources and knowledge to support disability education to help students find their identity (Myers, 2008).

Ashcroft et al. (2008) described the goal of nursing education as “preparing graduates who are able to provide safe, competent, nursing care consistent with entry-level competencies” (p. 1). Many nursing programs focus on a technical standards model, which is process based and suggests there is only one way to perform a task (Carroll, 2004). A creative access model acknowledges there is more than one process that can be used to reach the end or accomplish a goal (Carroll, 2004). The creative access model allows for accommodations so people with disabilities will be able to perform the task using a method not thought of as traditional, but still achieving the same end result (Carroll, 2004). Accommodations in the clinical setting may be harder to accomplish, but

can be done using an outcomes-based creative access model. Within a creative access model it is understood there may be more than one way to accomplish the same objectives and end result or goal (Ashcroft et al., 2008). Using a creative access model in nursing education opens the door for the integration of people with disabilities into the nursing profession (Carroll, 2004).

Universal design within education can involve a creative access model. Universal design develops products and spaces to be able to be used by the widest variety of people, including those with disabilities (<http://www.universaldesign.com/about-universal-design.html>). It acknowledges the wide scope of human ability and diversity. The idea of a universal design is more functional and user friendly for all people despite their size and shape, or cognitive and physical abilities. A universal design in education allows for inclusion of all students, and may decrease the need for individualized accommodations (Lombardi & Murray, 2011).

The pursuit of a Universal Design for Learning (UDL) gives an opportunity for all students to access, participate in, and progress successfully through a general education curriculum (Ralabate, 2011). Many students with disabilities are in the general education classroom where the curriculum is provided in a specific format that does not meet different learner needs. A UDL framework improves the education and outcomes for all students, not just those with a disability. UDL has a goal of creating expert learners who are able to assess their own learning needs, evaluate their own progress, and maintain an interest and persistence with learning. UDL values the diversity among learners and

reduces barriers to academic success. The implementation of a UDL involves defining appropriate goals, assessment of diverse learner needs, and evaluation of barriers within the curriculum (Ralabate, 2011).

Universal design for assessments strives for all students to be able to demonstrate their knowledge and skills in a format without barriers that does not change the focus of the assessment (Ketterlin-Geller & Johnstone, 2006). When all students are given the flexibility of different options to complete an assessment success rates increase. With technology all students have the opportunity to request options such as tests read out loud and text-to-speech for an assessment. Incorporating universal design for assessments can reduce the numbers of students needing reasonable accommodations (Ketterlin-Geller & Johnstone, 2006).

A two day intensive workshop on universal design for instruction was held for 20 instructors, 16 were part-time adjunct and four were full time instructors (Rodesiler & McGuire, 2015). The workshop reviewed the nine principles of universal design for instruction, in addition to discussing opportunities to improve the instruction for all students, and hands on experience with course planning using universal design for instruction. The nine principles were 1) equitable use, 2) flexibility in use, 3) simple and intuitive, 4) perceptible information, 5) tolerance for error, 6) low physical effort, 7) size and space for approach and use, 8) a community of learners, and 9) instructional climate. The instruction methods using universal design discussed included developmental writing, reading and mathematics activities. A writing activity included an audience

response system that allows students to submit answers to questions asked by the instructor in a variety of formats, such as by text message, online or writing their response. Students were able to use the methods they were most comfortable with, and their answers were anonymous. This activity incorporated three of the nine principles. The participants of the workshop discussed how they try to incorporate at least one of the nine principles in each of their lessons. One explained how they use principle three, simple and intuitive, in their lessons by breaking steps down into simple language, and using terminology they are familiar with to connect prior knowledge to what they are learning.

The instructors who participated in the workshop were committed to using universal design, but a challenge encountered by the administrators of the workshop included turnover of the instructors (Rodesiler & McGuire, 2015). One year after the workshop only 60% of the participants remained in the same position at their college. Other barriers to implementing universal design within institutions include limited resources for faculty and staff training, cost of the needed technology, and other institutional priorities (Raue & Lewis, 2011).

Inclusive education is intended to meet the needs of all students, and not just those with a disability (Mancussi & de Fatima Gusmai, 2013). With inclusive education, students with disabilities would no longer have to adapt to the pace of the institution, but instead the institution would make adaptations to meet the students' needs. Students with disabilities may require changes in access such as modifications to architecture and

curriculum and teaching resources, which can be hard to accomplish. Things that can impact the inclusion of students with disabilities include unprepared faculty and staff who are not aware of how to manage prejudices and bias towards students with disabilities (Mancussi & de Fatima Gusmai, 2013). For inclusive education to occur changes are needed within educational systems leading to changing attitudes, and respect and acceptance of students with disabilities.

Mancussi and de Fatima Gusmai's study (2013) identified 61.4% of the participants had a visual impairment with the majority using glasses for a reading source. Hearing impairment was reported by 1.61% of the sample population with no hearing aid use being reported. But no students reported any difficulties or limitations. The study used exploratory, descriptive and cross-sectional designs in a quantitative approach. The sample consisted of 83 students enrolled in an undergraduate nursing program in Sao Paulo, Brazil. Data was gathered through a questionnaire with both open and closed ended questions.

Questions were asked of the student participants what teaching resources they found important for people with disabilities. The responses included the construction of ramps, adaptable desks for wheelchairs, elevators, widened doors, adaptations in the cafeteria and restrooms, handrails, microphones in classrooms, and wider library aisles. Teaching resources the participants discussed regarding students with disabilities included reading assistants, Braille books, sign language interpreter, and an increase in letter size for slide shows. The participants also mentioned tutoring and training of

employees, teacher training on students with disabilities, and monitoring of student teaching to ensure inclusion of students with special needs (Mancussi & de Fatima Gusmai, 2013).

A major limitation of the study was the sample did not include any students with disabilities. The participants in the study reported visual deficits corrected by glasses, and one participant reported a hearing deficit, but did not require any hearing devices. Instead, people without disabilities, or those with impairments in vision or hearing, were speaking for those with disabilities saying what they would need and would want in an educational setting. The authors, although, thought the participants had a broad knowledge base of what was necessary for a person with special needs to attend an educational institution and complete a course of study.

With the increase of students with learning disabilities in postsecondary education instructors need to be alert to students who show signs of having a learning disability. Instructors also need to be prepared for students informing them of their learning disability and learning differences that need to be respected. The following section will discuss the identification of students with learning disabilities.

**Identifying Students with Learning Disabilities.** Learning disabilities are lifelong, do not go away with age, and impact the way a person takes in, retains and understands what they learn (Ijiri & Kudzma, 2000; Shuler, 1990; Selekman, 2002). Shuler (1990) described “red flags” that may alert an instructor that one of their students may have a learning disability which included: (a) disparity between classroom and



clinical performance, (b) history of reading difficulty, (c) spelling problems, (d) poor math skills, (e) borderline SAT scores or disparity between math and verbal scores, (f) difficulty concentrating or easily distracted, (g) disorganization, or difficulty meeting deadlines, (h) history of school performance problems, (i) poor handwriting, (j) difficulty following directions, and (k) high anxiety or low self-esteem.

Although it is the responsibility of students to disclose their disability, many do not, because of a fear of losing their spot in the program (Wright & Eathorne, 2003). Students don't want to be seen as a problem or hindrance or be rejected and discriminated against because of their disability (Wright & Eathorne, 2003). Students need to feel comfortable in disclosing their disability and asking for assistance, and feel they are being supported (Wright & Eathorne, 2003).

If a student is suspected or identified as having a learning disability, a referral can be made to support services. Educators are usually aware that their campus offers support services, but do not know what services are needed (Kolanko, 2003). At the start of every semester faculty can inform their students of available services and how to access them, and also explain they are responsible for informing the instructor of any disability and accommodations (Ashcroft et al., 2008). Bohne (2004) acknowledged as nurse educators place value on the differences among their students and adapt their curricula to meet their students' needs, they will enhance their own skills and more teachable moments will occur (Bohne, 2004).

Helms et al. (2006) explained nursing programs would benefit by employing a faculty/staff member to keep track of all students with disabilities in their program and the accommodations they require. This faculty/staff member would also help faculty provide accommodations without making changes to curriculum and to ensure any questions or concerns were answered (Helms et al., 2006).

Nurse educator perceptions of students with learning disabilities have an effect on their learning experience. The themes identified by both Maheady (1999) and McCleary-Jones (2008) indicated students want to be treated as individuals and don't want to be treated differently because of their disability. The studies presented indicate students with learning disabilities can be successful, if given the proper support from faculty, support personnel, as well as, family and friends.

### **Gaps in the Literature**

Students with disabilities who are successful in post-secondary education often attribute their success to professors or instructors who are willing and able to meet their needs (Magilvy & Mitchell, 1995). The limitations a student with a disability faces can be minimized with reasonable accommodations and creative access, and the realization can be made that the limitation is not a reflection on the person's character or intellectual functioning (Carroll, 2004). What can students with disabilities teach higher education about enhancing the ways all students are taught and learn?

There is a lack of current literature about nursing education of students with learning disabilities for the past 15 years. Historically, the voices of people with

disabilities have been unheard in practice and policy (Denhart, 2008). More research needs to be done on the inclusion and experiences of students with learning disabilities from the students' perceptions. This will allow academia to gain a greater understanding of the challenges people with disabilities face and what things contribute to the challenges.

Both Maheady (1999) and Kolanko (2003), as discussed above, conducted studies looking at the experiences of students with disabilities in nursing education. The two studies were conducted over 12 years ago and before the passage of the ADA Amendments Act in 2008. Maheady (1999) used a multiple case study design and gathered data through interviews, observations, and document analysis. The sample consisted of 10 student nurses or recent graduates with visual, physical or auditory impairments, and 61 nursing faculty members, staff nurses, patients, and fellow students. Kolanko (2003) also used a case study methodology and interviewed seven nursing students with learning disabilities about their nursing school experiences. Kolanko (2003) did her study as interpretative research, and looked for the meaning of being a nursing student with a learning disability. Whereas, this study was conducted using descriptive phenomenology with a goal of developing an understanding of the student experiences, but not an interpretation of them. This study sample included nursing students with learning disabilities and not those with visual and auditory impairments as in Maheady's (1999) study, and only students with learning disabilities were interviewed.

Two landmark studies within 15 years of the passage of the ADA (1990) constitute most of what we know about nursing students with learning disabilities (Kolanko, 2003; Maheady, 1999). It has been 25 years since the original passage of the ADA and it is now important to look at experiences of students with learning disabilities who grew up under the provisions of the ADA, and are now functioning adults in society. It is also important to identify any changes in their experiences before and after the amendments act of 2008.

### **Summary**

Nursing education and technology have changed in the last 25 years. Beginning in the 1990's, after passing of the ADA higher education has seen a rise in the numbers of students with disabilities. Nursing education has also been impacted with seeing an increase in the numbers of students with disabilities. Both the ADA and Section 504 of the Rehabilitation Act ensure equal access to higher education for students with disabilities. With the increase of students with disabilities in higher education nurse educators were faced with the challenge of how to deal with the students and meet their educational needs.

In the early 2000s, students with learning disabilities continued to face added challenges and barriers related to their disabilities. Nurse educators have concerns with having students with learning disabilities in nursing education. Some of these concerns include the added time that may be required to teach a student with a learning disability, fairness to students without learning disabilities, concerns of safety in the clinical

environment, and making changes to the course curriculum. These concerns remain even though research has shown students with disabilities pose no extra safety risk to patients (Marks, 2007; Ridley, 2011; Sowers & Smith, 2004). Also, programs are not required to make changes to their curriculum for a student with a disability; instead the student is expected to meet program outcomes despite their disability.

In 2008, Congress created an ADA amendment act (ADAAA) to broaden the scope of coverage under not only the ADA but also Section 504 of the Rehabilitation Act. The new ADAAA is focused more on the educational institutions efforts to accommodate a student with a disability and to offer them reasonable services, than it is focused on the student proving they have a disability. The amendments act was developed to bring back the original intent of the ADA, which was to prevent discrimination of any person with a disability from fully participating in society.

The way an institution views disability can impact the education a student receives. Many institutions of higher education see disability from a medical perspective. From this stance people with disabilities are seen as defective and in need of correction. It is believed the disability is the person's problem and can be dealt with on a personal level. A social model of disability takes a collaborative approach to insure equal opportunity. From a social perspective a person is made disabled by the environment. In this view it is believed both the person and the environment need to make changes or provide accommodations to create an equal opportunity.

More is known about people with disabilities in higher education overall, than is known specifically about students with learning disabilities in nursing education. In addition, more is known about students with disabilities in other countries in comparison to the United States. Studies from the UK and Ireland present more of a compare and contrast perspective of students with disabilities in comparison to those without. The issue with the studies from other countries is their nursing curriculum is different from ours. Their programs have a specialty focus rather than a comprehensive generalist approach. It has been eight years since the passage of the ADAAA (2008) and very few studies have been done in the United States looking at the impact of the amendments act in higher education.

## CHAPTER III

### RESEARCH STRATEGY AND METHODOLOGY

Developing an understanding of the experiences of an undergraduate nursing student with a learning disability from the student's perspective can assist in identifying and eliminating barriers students with disabilities face in nursing education. The research question addressed in this study was "How is nursing education experienced by undergraduate students with learning disabilities?" The overall purpose of the study was to develop an understanding of the lived experience of nursing education from the perspective of students with learning disabilities, and delineating the essence of the phenomenon. Specific aims included (a) to describe, through the experiences of students with learning disabilities, how having a learning disability is part of their nursing education experience, (b) to describe factors which help them succeed and progress in their nursing education programs and (c) to describe factors that have made success and progression difficult in their nursing education programs. A descriptive phenomenological study with in-depth interviews was conducted. The study will assist in understanding the lived experience of students with learning disabilities in nursing education by asking the participant (interviewee) to describe their experiences. The study was guided by the methods of reflective lifeworld research (Dahlberg, Drew & Nystrom, 2001).

This chapter describes the methodology used to conduct the study. To begin, a general discussion of phenomenology will occur. Next, translation of philosophy to method via lifeworld research will be defined along with the role of the researcher, followed by the rationale and assumptions of the methodology. The sample will be described including the study setting, sample size, inclusion and exclusion criteria, recruitment and retention strategies of participants, and a timeline for completion of the study. The data collection will be described as well as data analysis methods, and how trustworthiness was maintained.

### **Philosophy**

Philosopher Edmund Husserl (1859-1938) is considered the founder of phenomenology. Husserl's phenomenology is an analysis of everything given to our knowledge (Velarde-Mayol, 2000). His need for certainty and clarity drove Husserl throughout his life and through the growth of his phenomenology. Phenomenology deals with the essences, the ideas and universals of the phenomena. In Husserl's phenomenology he tried to describe what is constant and essential in the data. Husserl encouraged scientists to go back "to the things themselves." When going "to the things themselves" the researcher is able to do full justice to the everyday experience of the lived experience (Dahlberg, Dahlberg & Nystrom, 2008, p. 32). "Going to the thing themselves" is important for the researcher to be able to approach the world as it is experienced in all its variety (Dahlberg, Dahlberg & Nystrom, 2008, p. 32). This means when going "to the things themselves" the researcher needs to put him or herself in a



position where the phenomenon can show itself, therefore being understood as the phenomenon (Dahlberg, Dahlberg & Nystrom, 2008, p. 32). The concept of phenomenon means “to show itself” (Dahlberg, Drew & Nystrom, 2001, p. 45). The goal is to approach the world as it is experienced with all its variety, giving full attention to the everyday lived experience (Dahlberg, Dahlberg & Nystrom, 2008).

Husserl’s main objective was to establish the foundation for a radical and universal knowledge in confrontation with the growing skepticism with scientific positivism. Husserl tried to make human knowledge immune to skepticism. He developed a philosophy, called phenomenology, which is a study of what shows itself in acts of knowledge (Dahlberg, Dahlberg & Nystrom, 2008). Husserl wanted to put everyday human experiences into science (Dahlberg, Dahlberg & Nystrom, 2008). To improve scientific thinking and objectivity, Husserl valued the relationship researchers have with their research projects and took the relationship into account during the research; in contrast to positivism, where the researcher separates him or herself from the research project and believes there is only one objective truth.

A main tenant of Husserl’s phenomenology is epistemology. Epistemology is “theory of knowledge” (Dahlberg, Dahlberg, Nystrom, 2008, p. 23). Husserl’s phenomenology is epistemological in nature, meaning we come to know the world, and a phenomenon within our own lifeworld, through personal experiences. An epistemological philosophy is concerned with the nature of knowledge, including the possibilities, scope and general basis of knowing. Epistemology within human science research places a

question of meaning as primary importance as it seeks to understand meanings in everyday experiences, often considered implicit (Dahlberg, Drew & Nystrom, 2001).

Husserl's phenomenology is purely descriptive in nature and he believed what is given to our knowledge is an appearance of something. He explained that we are only subjects of the world, experiencing it and giving it purpose. As living humans we are in a constant perceptual field giving meaning to things as they exist and are experienced through all senses. During his time, Husserl talked of a transcendental philosophy, which has a meaning derived from reflections and conscious subjectivity. Transcendental philosophy recognized the need of developing a mental approach to the world. We must take time to look back at things we take for granted because these unforgottens are often the epistemological basis for our successes (Husserl, 1970).

### **Philosophical Concepts**

The philosophical concepts of phenomenology include the natural attitude, epoche, reduction, intentionality and intersubjectivity. The concepts are used to bring clarity and meaning to a person's life and the world they live in. Each concept will be discussed below.

**Natural Attitude.** Within phenomenology we talk about the natural attitude, which is an assumption that others experience their world the same as we do. Within our natural attitude we do not reflect on our actions or responses, instead we just are (Dahlberg, Dahlberg & Nystrom, 2008). Natural attitude is the "everyday immersion in one's existence and experience in which we take for granted that the world is as we

perceive it, and that others experience the world as we do” (Dahlberg, Drew & Nystrom, 2001, pp. 45-46). “In the natural attitude we do not critically reflect on our immediate action and response to the world, but we just do it, we just *are*” (Dahlberg, Drew & Nystrom, 2001, p. 46). It is the everydayness of life that we take for granted. Natural attitude leads into the life world, which involves the experiences of which we are conscious. All knowledge is based from and develops from our lifeworld (Dahlberg, Drew & Nystrom, 2001). Each of our lifeworlds interacts and overlaps with others’ lifeworlds.

The idea of the natural attitude is weak for scientific purposes as when we are in our natural attitude we do not think or analyze our experiences. Within a scientific inquiry it is necessary to analyze what is already known. For these purposes Husserl described a person’s lifeworld. The lifeworld is how things are experienced through all senses by a specific person making them cognitively aware of their experiences. The lifeworld is viewed as the world for all of which can be commonly talked about between people (Husserl, 1970). Husserl described the ability to go beyond the natural attitude as transcendental (Dahlberg, Drew & Nystrom, 2001).

**Epoche and Reduction.** The philosophical concept of epoche can be seen as “standing aside from one’s subjective experience in order to observe the world or a particular phenomenon from a pure epistemological and totally objective perspective” (Dahlberg, Dahlberg & Nystrom, 2008, p. 53). Epoche is a form of reduction. The reduction focuses on the essence and approaching the world by focusing on the essential

components of a phenomenon. This focus is directed to the continuity of a phenomenon rather than the changes (Dahlberg, Dahlberg & Nystrom, 2008). The purpose of epoche is not to give up the natural attitude, but instead is to question the natural attitude not taking it for granted (Dahlberg, Dahlberg & Nystrom, 2008). Husserl's epoche was a way of bracketing in which we consciously "put out of action" any biases or previous experiences and assumptions, and this allows us to stay open to the phenomenon (Dahlberg, Dahlberg & Nystrom, 2008, p. 54)

The phenomenological reduction is the way our knowledge is reduced to a phenomenon for our consciousness (Velarde-Mayol, 2000). This reduction is essential to the concept of "to go to the things themselves" (Dahlberg, Dahlberg & Nystrom, 2008). The phenomenological reduction is the reducing of everything down to its simple phenomena. What one sees, perceives and understands is his/her phenomena regardless of how the same thing exists to another person. Nobody can question what is seen or understood by another because it is not their phenomena. A phenomenological attitude is a pre-reflective explanation of things as they are given to one's consciousness (Velarde-Mayol, 2000). This involves going "back to the things themselves" to find the true meaning of the phenomena.

**Intentionality.** Intentionality describes our sense of being because when we are, we are intentional (Dahlberg, Dahlberg & Nystrom, 2008). Intentionality means you cannot think without thinking of something and you cannot see without seeing something (Velarde-Mayol, 2000). We have an intentional relationship with the things that make up

our everyday lives (Dahlberg, Dahlberg & Nystrom, 2008). Husserl used the term apperceptions to help understand the intentional relationships we have with people and objects (Dahlberg, Dahlberg & Nystrom, 2008). When we look at something, although we only see a part of it we are aware of its whole. For example, if we look out our window and see only part of our neighbor's house, we are aware of the whole house and its meaning. Our conscious gives meaning to the things and people within our lives making experiences complete and into a full picture (Dahlberg, Drew & Nystrom, 2001; Dahlberg, Dahlberg & Nystrom, 2008).

**Intersubjectivity.** The phenomenological concept of intersubjectivity looks at how we are in the world with others (Dahlberg, Drew & Nystrom, 2001). To be human, and to be in the world, means to be with others (Dahlberg, Dahlberg & Nystrom, 2008). Although we are not able to experience exactly as another person does, we are able to come to an understanding of what that experience means to another person through their descriptions (Dahlberg, Dahlberg & Nystrom, 2008).

Intersubjectivity looks at how we are in the world with others which can affect openness. When the appearance of another person presents itself to our conscious it presents as a whole living person. When we meet with another person, we observe them and see their behaviors as things we do too (Dahlberg, Drew & Nystrom, 2001). During these meetings our lifeworlds intersect with those of others and commonalities are identified. Although the commonalities of people and their experiences emerge, the uniqueness of the individual remains as well. Phenomenology is concerned with the

sameness or the essence of the intersections of people and experiences, but also values the individual variations of people and their uniqueness (Dahlberg, Drew & Nystrom, 2001; Dahlberg, Dahlberg & Nystrom, 2008).

The above philosophical concepts are all focused on taking the philosopher back “to the things themselves” (Dahlberg, Drew & Nystrom, 2001, p. 44). The concepts allow for the philosopher to give full attention to the lived experiences of everyday life and to approach the world as it is experienced (Dahlberg, Drew & Nystrom, 2001). To be able to go to things themselves and allow the things to show themselves the philosopher or the researcher must remain open to the phenomenon, which is also a key concept in the research method of descriptive phenomenology.

### **Translation of Philosophy to Method**

The philosophy of phenomenology has concepts that translate into descriptive phenomenology as a research method. The choice of the research framework followed depends on the philosopher with whom the researcher resonates. A researcher who is a follower of Husserl focuses on the meaning of the phenomenon, which is determined by describing how the phenomenon has been experienced by others. Husserl described an experience or expression not from the view of a third person or the researcher but from the point of view of the person speaking (Velarde-Mayol, 2000). Phenomenology is restricted to the description of insight or intuition of what is given to our internal experience. It is simply a description of how things are given or perceived by our

consciousness. A phenomenologist accepts only what is given directly to his/her consciousness (Velarde-Mayol, 2000).

### **Lifeworld Research**

Reflective lifeworld research is built around the beliefs of Husserl (Dahlberg, Drew, & Nystrom, 2001; Dahlberg, Dahlberg, & Nystrom, 2008). Lifeworld research is concerned with how things are experienced by the person and the relationship between humans and our world (Dahlberg, Drew & Nystrom, 2001). In lifeworld research interviewers go to “the things themselves” (Dahlberg, Drew & Nystrom, 2001, p. 155). Having an interest in knowing how people experience their world is an acceptable reason for research interviews. “The overall aim of lifeworld research is to describe and elucidate the lived world in a way that expands our understanding of human beings and human experience” (Dahlberg, Dahlberg & Nystrom, 2008, p. 37). The goal of descriptive phenomenological research is to gain an understanding of the phenomenon of interest.

Within education, in order to understand teaching and learning, we must look at the student’s lifeworld or experiences, as he or she is the most important and most central person (Dahlberg, Drew & Nystrom, 2001). The purpose of lifeworld research is the scientific development of knowledge. The overall goal of lifeworld research is the “description and elucidation of the lived world in a way that expands our understanding of human experience” (Dahlberg, Drew, & Nystrom, 2001, p. 49).

The lifeworld research framework is a descriptive research method consisting of five methodological concepts; encounter, openness, uniqueness, immediacy, and meaning (Dahlberg, Drew, & Nystrom, 2001). The concepts will be discussed below. These concepts also relate back to the concepts of phenomenology as a philosophy: natural attitude, epoche, reduction, intentionality and intersubjectivity.

**Encounter.** Encounter is an intersubjective and meaningful meeting between a researcher and a participant. It looks at how we are in the world with others and relates to the philosophical concept of intersubjectivity, where the focus is on the participant's experiences and the researcher holds back sharing their own experiences (Dahlberg, Drew & Nystrom, 2001). In a phenomenological research study the goal of the encounter between researcher and participant is the development of knowledge (Dahlberg, Drew & Nystrom, 2001).

Encounter was achieved during the study by giving the participant and their experiences full attention. Throughout the interviews I showed the participant respect by asking about and listening to their experiences without interruption through a semi-structured interview format. The focus of the interview was on the participant and their experiences.

**Openness.** Openness is a primary concept for lifeworld research, meaning the inquirer has self-awareness and the ability to have an empathetic response to another person's experience. To become open, the researcher purposefully sets aside any expectations or assumptions related to the phenomena so that its meaning can show itself



(Dahlberg, Dahlberg & Nystrom, 2008). This allows the researcher to step outside of the natural attitude and set aside or exclude parts of the world from their consciousness, referred to as bracketing. In research, bracketing is done to question what we experience and not to assume something (Dahlberg, Drew & Nystrom, 2001).

The concept of openness encompasses the philosophical concept epoche. Epoche involves the phenomenological reduction or bracketing of assumptions and biases by the researcher allowing them to remain open to the phenomena of interest. Being open allows the researcher to be surprised and see the unpredictable (Dahlberg, Drew & Nystrom, 2001).

In Dahlberg, Dahlberg and Nystrom's (2008) approach to phenomenological research "bridling" is used rather than bracketing. Bridling encompasses holding back one's preunderstandings, such as personal beliefs, theories, and other assumptions related to the phenomenon. Bridling also involves the researcher being open and alert, actively waiting for the phenomenon to reveal itself. This requires patience on part of the researcher, as he/she must carefully question the road to discovery of meaning and understanding. A researcher must not understand too quickly to avoid making definite what is still indefinite (Dahlberg, Dahlberg & Nystrom, 2008). The last component of bridling is a focus on the whole understanding and leading the research forward. Whereas, bracketing focuses more on the past and keeping pre-understandings out of the research, bridling aims to maintain an open and respectful attitude allowing the phenomenon to present itself (Dahlberg, Dahlberg & Nystrom, 2008).

A phenomenological reduction requires the researcher to suspend any judgment they may have towards the experience they are researching (Kvale & Brinkmann, 2009). This reduction procedure has researchers questioning what they themselves and others experience instead of assuming it is something. The purpose of reduction is to “arrive at an unprejudiced description of the essence of the phenomena” (Kvale & Brinkmann, 2009, p. 27).

Openness is a shift from the natural attitude to a phenomenological scientific attitude (Dahlberg, Dahlberg & Nystrom, 2008). For the researcher to be open they must be available and in a constant state of alertness, allowing the phenomena to show itself and how it should be studied (Dahlberg, Dahlberg & Nystrom, 2008). Achieving transcendental and openness requires a researcher to have self-awareness and the ability to reflect on their own consciousness and perception (Dahlberg, Drew & Nystrom, 2001).

Throughout the research process the demands on the researcher vary with openness. The need for self-reflection occurs at different times when the researcher feels the need to step back and acknowledge his/her own feelings (Dahlberg, Dahlberg & Nystrom, 2008). The goal of openness is to approach the phenomenon as it presents itself instead of imposing his/her own preconceived ideas on the phenomenon (Dahlberg, Dahlberg & Nystrom, 2008).

Intersubjectivity of the researcher also affects one’s openness. In an intersubjective relationship, openness is aimed towards the phenomena and the informant,

therefore, knowledge development is based on that of the informant's experiences and not the researcher's experience (Dahlberg, Drew & Nystrom, 2001). The researcher must be able to hold back their own experiences and assumptions to remain open to the participant's experiences. The researcher will make themselves available to the phenomenon of interest, as it presents itself, allowing them to be surprised by the unexpected and unpredictable (Dahlberg, Drew & Nystrom, 2001). To be open also requires the researcher to question what they hear and see, and to have doubt about the phenomenon of interest. For the researcher to be completely open they have to be open to the research situation, research question, and to oneself (Dahlberg, Drew & Nystrom, 2001). This involves being aware of how the phenomenon of interest presents itself, carrying out the research with a methodology that fully answers the research questions but is not overly rigid, and taking into consideration one's personal style and how it affects the research process (Dahlberg, Drew & Nystrom, 2001).

Throughout the research process the researcher needs to practice reflexivity to achieve openness. Reflexivity involves the researcher critically looking at their research methods and scientific approach to their study (Dahlberg, Dahlberg & Nystrom, 2008). During all stages of the research process, the researcher needs to take a reflective stance, which allows them to distance themselves and scrutinize the phenomenon of interest, research questions, research methods and approach, interview questions, and results of the study. Taking this stance of critically thinking all processes allows the researcher to remain open by being aware of their assumptions, behaviors, actions and decisions

(Dahlberg, Dahlberg & Nystrom, 2008). Remaining open allows the researcher to come to a knowing of the phenomena through the experiences of another person. This knowing results in the development of knowledge which is the goal of research.

Openness was achieved in the study through the use of a personal reflective journal. Journaling forced me to be aware of my own biases and any preconceptions or assumptions I had regarding the phenomenon, thereby helping to restrain any pre-understandings of the phenomenon. The journal was also used to record feelings regarding each interview. Memos were made with a running list of ideas as they came up and what was going on in the research when the idea surfaced. Examples of questions I asked myself included; What happened? How did I feel about what happened? and, What did I learn from what happened? I utilized the journal prior to starting data collection, after each interview, before starting the transcribing process and after all transcripts were transcribed. In addition, I recorded my thoughts, assumptions and biases as they presented during the research process, and when moving from analyzing the data as a whole, to the parts, and back to the whole.

At times, the goal of openness left me feeling as if I was in a state of chaos. During these times I was frustrated and unsure of any relationships within the data. The chaos caused confusion and uncertainties within me. Dahlberg, Dahlberg and Nystrom (2008) explained confusion is an indication the researcher remained open to the phenomenon, because following a scripted research method can have a negative impact on the openness of a researcher. Remaining open during the research project required

immediacy. This was very demanding, requiring consistent concentration and attentiveness to be mindfully present and putting distractions to the side. By maintaining a state of openness during the research project I was able to see beyond any assumptions or preconceptions, which allowed the phenomenon to reveal itself in a way not expected (Dahlberg, Dahlberg & Nystrom, 2008).

**Uniqueness.** Uniqueness allows the researcher to accept the complexity of a situation. Uniqueness gives priority to the individuality of each participant in contrast to a representation of a larger group (Dahlberg, Dahlberg & Nystrom, 2008). Each person is unique based on their choices about how to live his or her life and the meanings they attach to their experiences (Dahlberg, Dahlberg & Nystrom, 2008). In lifeworld research it is recognized that people are both unique but the same. Humans are more the same than they are different. We are the same because we are human but made different through the choices we make (Dahlberg, Drew & Nystrom, 2001).

Within descriptive phenomenology, researchers accept the paradox of simultaneous sameness and uniqueness (Dahlberg, Drew & Nystrom, 2001). The unique description of individual experiences leads to the development of common themes among the experiences, and the phenomenon of interest. The common themes all revolve around and lead back to the essence of the phenomenon, or what is constant or the same among the experiences. So although each person has their own experiences and is unique, they are the same because they share a lifeworld (Dahlberg, Drew & Nystrom, 2001).

Uniqueness relates back to the philosophical concept of intersubjectivity where the

researcher is more concerned with the experiences of each individual over the experiences of the researcher themselves or a group.

Uniqueness was achieved during the study through recruitment of diverse participants, and asking for their individual experiences of going through nursing school with a learning disability. The reason for a diverse sample was not to obtain generalizability but instead to determine what is similar in unique experiences. The unique experiences shared by the participants led to the development of the essence, as similarities were identified.

**Essences.** The subject matter of descriptive phenomenology is seen as pure, intentional, and individual, looking at the internal attitude and the soul of the subject (Husserl, 1970). Although, phenomenology looks at individual experiences, it is also interested in what is common and universal among the phenomena. This is its essence and constituents, and how the essence presents itself within the phenomenon.

A common critique of phenomenology as a research method is the inability to generalize research findings. In descriptive phenomenology the essence of the phenomena is sought over the ability to generalize the findings. The essence of the phenomenon is found within the sameness of the descriptions of individual unique experiences (Dahlberg, Drew & Nystrom, 2001). Within phenomenology, striving for the essence of a phenomenon means looking for the universal of what is the same in each unique experience. The universal essence of a phenomenon can be found through the philosophical concept of imaginative variation, which is achieved in research through

maximum variation of experiences. Imaginative variation means data is gathered from a variety of different experiences looking for the essence of the phenomenon (Dahlberg, Drew & Nystrom, 2001).

**Immediacy.** Immediacy is being fully immersed in the world we are in at the time. During an interview, immediacy is when both the interviewee and the interviewer are present to each other, each person is concentrating on the phenomenon of interest and what is going on between the two of them (Dahlberg, Drew & Nystrom, 2001).

Immediacy relates back to the philosophical concepts of epoche and intersubjectivity.

Through the epoche and bracketing the researcher is able to put aside any biases or assumptions in order to fully focus on the phenomena and participant's experiences.

Intersubjectivity also allows the researcher to remain open to the experiences of others.

Immediacy is important for the researcher remaining open during the research process.

Through immediacy the researcher is able to keep the interview focused on the phenomenon, which leads to meaning and understanding of the phenomenon (Dahlberg, Drew & Nystrom, 2001).

Immediacy was achieved during the study by conducting the interviews in a private place where no interruptions occurred, and a trust was developed between me and the participant. This allowed for both me and the participant to be focused on the interview, and for me to keep the interview focused on the phenomenon. Immediacy was also maintained through a reflective journal where I could put aside any biases or assumptions that came up during the interviews, and fully focus on the phenomenon.

**Meaning.** Within all research encounters meaning should occur where the researcher strives to understand the meaning as another person experiences it (Dahlberg, Drew & Nystrom, 2001). The philosophical concept of intentionality involves meaning because in order to perceive an experience one must attach meaning to it. Intentionality is central to reflective lifeworld research and refers to the relationship between a person and an object or experience (Dahlberg, Dahlberg & Nystrom, 2008). The concept of intentionality is important when a researcher wants to understand the meaning of an object or experience. In phenomenological research, the researcher is interested in how the consciousness sees an object or experience as it is meant to be. In life, experiences and objects are given meaning according to the situation as they are experienced. There is always an intentional relationship with the things that make up our everyday lives. The idea of intentionality is to make experiences into a full, concrete picture, where consciousness completes the process of seeing the experience or object (Dahlberg, Drew, & Nystrom, 2001). For the full picture to occur, the researcher needs to look at the experiences as they are lived in order to understand the meaning.

Meaning occurred during the study by going to the individuals who lived the experiences and asking them to describe those experiences. Through this, meaning was given to the phenomenon. The meaning of the phenomenon was determined through the lived experience of the phenomenon.

Along with the above concepts, the researcher's role involved moving toward the unexpected, or the unknown, and unreflected, to be able to reflect on and disclose or



reveal a phenomenon and its essence. If, as the researcher, we place ourselves within the experiences we are studying, we develop a greater understanding and are able to do better justice to our subjects (Husserl, 1970).

### **Appropriateness of Phenomenology Method**

Husserl, concerned with how science had become dehumanized, aimed to reinstate the everyday human world as the foundation of science (Dahlberg, Dahlberg & Nystrom, 2008). His concerns of science losing its contact with the lifeworld and its importance to everyday people were eased with the ideas of phenomenology.

Phenomenology considers the scientist's relationships with participants of their research studies (Dahlberg, Dahlberg & Nystrom, 2008). Husserl talked about going "to the things themselves" (Dahlberg, Dahlberg & Nystrom, 2008, p. 32). Going to the things themselves allows the researcher to discover the pre-reflective meaning of the phenomena. For the researcher this means they need to remain open allowing things to show themselves, leading to an understanding of the phenomenon (Dahlberg, Dahlberg & Nystrom, 2008).

Phenomenology looks to describe the world as it is experienced by humans, avoiding reductionism (Dahlberg, Drew & Nystrom, 2001). Within qualitative research and phenomenology, researchers do not reduce humans or their experiences into separate parts to investigate but rather investigates the whole person and their experience (Munhall, 2007). Human science research, including reflective lifeworld research (descriptive phenomenology), looks to understanding of the meanings of everyday life

experiences, therefore, expanding our knowledge. More specifically, reflective lifeworld research “seeks to know how the implicit and tacit becomes explicit and can be heard, and how the assumed becomes problematized and reflected upon” (Dahlberg, Dahlberg & Nystrom, 2008, pp. 36-37). Reflective lifeworld research (descriptive phenomenology) focuses “on how the world, with its everyday phenomena, is lived, experienced, acted and described by humans” (Dahlberg, Dahlberg & Nystrom, 2008, p. 95).

The main task of descriptive phenomenology is to describe an important phenomenon of a human being in the world, and the values that are central to the human culture (Dahlberg, Drew & Nystrom, 2001). This connects with descriptive phenomenologists’ aim for a pure description of past knowledge about a phenomenon or experience. The goal of all descriptive phenomenology research is to discover, analyze, clarify, understand and describe meaning. The purpose of this study was to develop an understanding of the lived experience of nursing education from the perspective of students with learning disabilities, and delineating the essence of the phenomenon. This correlated with the descriptive phenomenology perspective, which was interested in the unique individual and their unique experiences, while at the same time, seeking the essence of the phenomenon. The research method of descriptive phenomenology provided the researcher with rich descriptions of the phenomenon, leading to an understanding of the meanings the students made of their experiences, while discovering the essence of the phenomenon. The lifeworld is consumed with the never-ending

experiencing of the daily lives of people; therefore the subject matter of phenomenological research is limitless (Dahlberg, Drew & Nystrom, 2001).

### **Researcher's Role**

Creating a trusting personal relationship with the interviewee was important to ensure open, honest, and detailed responses during the interview (Rubin & Rubin, 2012). The role of the researcher was to be a respectful listener and observer of other people's worlds (Rubin & Rubin, 2012). The researcher helped to facilitate the interview and assisted the participant in telling their story (Dahlberg, Drew & Nystrom, 2001). The interviewer followed the lead of the participant to support and encourage their self-disclosure regarding the phenomena of interest and be non-reactive to the participant responses (Dahlberg, Drew & Nystrom, 2001).

The researcher maintained openness and listened to the voice of the lifeworld in order to better understand the phenomenon. For the researcher to maintain openness they were patient and waited for the phenomenon of interest to show its own complexity (Dahlberg, Dahlberg & Nystrom, 2008). To be open, the researcher left behind any assumptions or knowledge that could influence their expectations before entering into the interviewee's world and experiences (Dahlberg, Dahlberg & Nystrom, 2008).

Researchers cannot ignore their own experiences and expectations but at the same time they should not force their expectations on those they are interviewing. Researchers need to be aware of how their expectations affect what they hear and/or see, and listen to someone whose understandings and experiences are different from their own (Rubin &

Rubin, 2012). The researcher included self-reflection on the phenomena to become aware of her own pre-understanding. Through awareness of pre-understanding the researcher was able to separate her own experiences from those of the participants.

### **Researcher Experience and Assumptions**

Since the fall of 2007, I have seen the faculty's side of education as the educator. Previously being the student, and now the educator, has opened my eyes to the challenges and differences people with disabilities face in education. As a student, school has always come pretty easily to me, from grade school and into college, so I never had considered the struggles of others. As an educator, I have witnessed students work to the point of exhaustion and tears, wanting so badly to do well on an assignment and test, only to find they had failed or needed to redo the assignment.

I have watched students work hard to get into nursing programs only to have to withdraw or fail out early in the program. I believe some of these students' situations could have been different, if more was known about their disabilities and individual needs. I also feel their situations may have been different, if I, as the educator, knew more about disabilities and the services available to them.

Two specific student experiences have impacted me greatly as an educator. The first was a student who came to me after successfully completing over half of her nursing program and told me she was going to have to withdraw from the program because she was unable to perform a certain skill because of a disability. This student thought if she had to use any type of accommodation she would be asked to leave the program. This

specific student did complete the program and became a nurse and is now in graduate school, but the added stress and anxiety she felt related to her disability was almost too much for her to progress.

The second situation was a student who had been told from her first day of nursing school she should not be there. The program ignored the student's need for testing accommodations of extra time and having the tests read, forcing the student to withdraw from the nursing program. The student reapplied to the program and was denied acceptance. I taught this student in clinical and did not see any limitation in her ability to safely care for clients. In fact, she stood out in clinical and excelled above many of her classmates without disabilities. Even though studies (Carroll, 2004; Marks, 2007; Sowers & Smith, 2004) have shown students with disabilities do not pose any additional risks to clients, this student's reapplication requests were denied based on a belief about her ability to safely care for clients.

My assumptions related to students with learning disabilities in nursing education include: a) students, regardless of their abilities and disabilities, can be successful in undergraduate nursing programs; b) students with learning disabilities feel they have more obstacles to overcome to be successful in nursing education as compared to their peers without a learning disability; and, c) students with learning disabilities feel they are treated differently than their peers without learning disabilities in nursing education. A personal reflective journal was used by the researcher, prior to starting data collection, to set aside and restrain any pre-understandings or assumptions related to the phenomenon.

In descriptive phenomenology it is important for the researcher to be aware of their own intentionality and pre-understandings related to the phenomena of interest (Dahlberg, Drew & Nystrom, 2001). The researcher must be able to suspend her own knowledge or past experiences to be completely alert and open to the subject's descriptions of the phenomena. The researcher needs to take time to step back and describe the phenomena according to the subjects' descriptions and not theirs. It is crucial when gathering data to keep the overall goal of understanding the phenomena in focus to remain open to what is presented to us by the subjects.

### **Method**

In order to understand learning, it is necessary to understand the lifeworlds of the individuals, through an understanding of their experiences of being a student. Descriptive phenomenology helped guide this study, looking at the experiences of students with learning disabilities in nursing education. The lifeworld is everything consciously experienced by a person. Our lifeworld is what all knowledge is based from and develops from. To understand our lifeworld we understand the meaning of the things that we use and that we see around us as the things and places that belong to and represent our world (Dahlberg, Drew & Nystrom, 2001). For a researcher to understand the lifeworld experiences of another person they must reflect on and analyze the experiences shared by the participants coming to understand the essence of the phenomena. This study illuminated the lifeworlds of nursing students with learning disabilities and led to a better understanding of the meaning of their experiences.

## Sample Selection

**Study Setting.** The sample consisted of undergraduate nursing students recruited from seven selected institutions within North Dakota. One state was selected based on the ability to access participants and have face-to-face interviews in an appropriate amount of time. The selected state also represented a variety of different nursing programs from public four year universities, to private 4 year institutions and community colleges offering associate degrees in nursing. The selected institutions were approved by their state board of nursing and accredited by a national accrediting agency. The institutions must have an undergraduate nursing program (associate or bachelor degree) with an on-campus mode of delivering education to students. This was to ensure the students shared the same phenomenon and were not focusing on different delivery modes of education. In addition, the selected institutions must have disability support services or department, to ensure students with learning disabilities were able to receive services and accommodations if needed.

Although seven institutions of higher education were contacted regarding participant recruitment from their institution, only four institutions communicated they would send the recruitment email to their undergraduate nursing students. Two institutions stated they did not have any students with disabilities who met the inclusion criteria, and one institution did not respond to any communications regarding this study. Even though four of the institutions indicated they would send the recruitment email, participants came from three institutions.

**Sample Size.** The sample was a purposive sample consisting of undergraduate nursing students who self-identified themselves as having a learning disability and/or were identified by their institution's disability support services as having a learning disability. The purposive sample allowed for the researcher to interview participants with learning disabilities who had experiences with nursing education, which led to interviews that provided rich details about the phenomenon. The sample size was determined by maximum variation and could not be determined prior to the start of the study, although a sample size of 12-20 was the goal. However, through multiple recruitment methods and attempts nine nursing students with a learning disability volunteered to participate in the study. Although the number of participants did not meet the goal, maximum variation was achieved through a diverse sample and the variety of experiences shared by participants. The rich descriptions the participants shared of their experiences also allowed for the essence of the phenomenon to be identified.

Within descriptive phenomenology it is not the sample size researchers are concerned with, but rather, it is the number of experiences and variation of participants (Dahlberg, Dahlberg & Nystrom, 2008). A sample is not chosen based on the ability to generalize the findings, but instead data gathering is directed by the phenomenon, and variation is sought in different participants and experiences to achieve rich variation (Dahlberg, Dahlberg & Nystrom, 2008). Maximum variation was achieved in this study by seeking out participants from different nursing programs, with different types of disabilities, and use of different accommodations.



Dahlberg, Dahlberg and Nystrom (2008) recommended an experienced researcher begin with about five participant interviews and an inexperienced researcher should begin with more. Sample size in qualitative research is a matter of judgment based on the aim of sampling, type of purposive sampling, and research method used (Sandelowski, 1995). Morse (1994) recommended phenomenologists looking for the essence of a phenomenon have at least six participants; although a beginner researcher may need more to get the data needed for the study (Sandelowski, 1995). Therefore, nine participants was an appropriate sample size for this type of study. Purposive sampling also is not focused on the person but rather is focused on an event, experience or incident. Purposive sampling is primarily used to find quality information instead of looking for a specific quantity of participants. Although, if a sample size is deemed too small the study's credibility will be impacted (Sandelowski, 1995).

**Inclusion and Exclusion Criteria.** Participants were undergraduate nursing students in the selected institutions enrolled in the traditional (not accelerated, distance or online programs) on-campus bachelor of science in nursing (BSN) degree or an associate degree program. For this study students at the BSN degree level and associate degree level were recruited to be interviewed. Participants must have completed a minimum of one semester of the nursing program, in which they have taken nursing courses, to be eligible to participate in the study. In order to gather information regarding the student's experiences as nursing students, it was essential they have had, at a minimum, one semester of their nursing program completed. Students had to speak English. Online,

distance, and BSN completion students were excluded, as the study focused on the student experiences and not different modes of education delivery. The student must have either self-identified or been identified by the institution's disability support services as having a learning disability (Appendix A). Students who self-identified were not identified by their academic institution as having a learning disability, or had not gone through the process of getting a specific diagnosis, but believed, based on issues within their academics, they had a learning disability.

**Recruitment of Subjects and Retention Strategies.** Following IRB approval, participants were recruited by the researcher contacting the institutions' disability support service (DSS) directors, Deans or Chairs of the institution's Nursing program, and institutional IRB board by USPS and/or email informing them of the study. The DSS directors were asked to contact all students who meet the inclusion criteria of the study. The disability support directors were also asked to provide any students interested in participating in the study, information regarding the study and contact information for the researcher. Contact information included e-mail and phone number for them to contact the researcher informing them of their interest in the study. The Nursing program Deans or Chairs were asked to send an email (Appendix B) to all of the students in the nursing major informing the students of the study and inclusion criteria. If a student was interested in participating in the study they were given information to contact the researcher (email and phone number). Participants were also recruited through classroom visits. Deans and Chairs of the nursing programs were contacted to gain permission to do

classroom visits. Next, the course instructors were contacted to ask permission to come into their classroom and give a brief explanation of the study and need for participants. During the classroom visits all students in the classroom were given a handout also explaining the study and need for participants (Appendix C). In addition, the Nursing Student Association of North Dakota (NSAND) was contacted and asked to send an email to their members, and/or post a message on their social media websites informing their members of the study and need for participants. No response was received from the organization in regards to the request. No recruitment of research participants occurred prior to receiving IRB approval from UND and the specific institution's review board.

Recruitment of participants proved to be a challenging component of the research process. Although seven institutions were contacted about recruitment, participants came from only three of the institutions. From the seven institutions, only four chairs or deans of the nursing programs agreed to send the recruitment email to the students in their programs. Only one disability support office agreed to provide information about the study to students who met the inclusion criteria. Two institutions said they didn't have any students with disabilities who met the inclusion criteria and did not reply to further communication attempts by the researcher. One institution did not reply to any correspondence received by electronic email or US postal service regarding the study. Three of the institutions required IRB approval from their institution prior to recruitment. IRB approval was received from two of the three; the third institution never approved or denied the IRB application so recruitment did not occur from that institution. Although

recruitment was a challenge, the participants in the study created a diverse sample, and provided a wealth of information.

Subjects were selected as participants in the study based on their firsthand experience of having a learning disability while attending nursing school. On initial contact with potential participants the researcher ensured they met all inclusion criteria by having them complete an inclusion/exclusion criteria form, in addition, she explained the study and its purpose, and explained participation in the study was voluntary. Next, they were given additional information regarding the study and their rights as participants, and asked to sign a consent form for participation in the study (Appendix D) during the first face-to-face meeting. The consent form was read out loud to each participant to ensure understanding and they were encouraged to ask questions; they were also informed their participation was voluntary and they could discontinue their participation at any time. Interviews were conducted after informed consent was obtained, and information was given to them on how to access results of the study. Each participant interviewed was given a \$10.00 gift card for a local merchant at the conclusion of the second interview.

**Timeline.** The researcher began collecting data in the fall of 2015, with all interviews completed by May of 2016. The data was analyzed in the summer of 2016 with a completion date of the study and report of results completed in the fall of 2016.

### **Data Collection**

Data collection techniques involved interviews of nursing students with learning disabilities. In addition to the semi-structured interview questions, demographic

information was collected on each participant using a tool created for the study (Appendix E). The de-identified information collected included age, gender, ethnicity, school, type of degree program, semester in nursing school, expected graduation date, and at what age they were diagnosed with a learning disability. This information was not associated with a specific participant and the participant's identifying information was not included with the data. The information collected was not used to describe individual participants, but rather was used as an aggregate to describe the sample as a whole. This information was also used to show maximum variation among study participants.

The semi-structured interview was built using main questions, follow-up questions and probes (Rubin & Rubin, 2012). It is recommended to have one to five main questions (Rubin & Rubin, 2012). This study had five main questions (see Table 1 - Interview Guide). Follow-up questions were also used to gather further depth and detail and to ask for clarifying examples, supporting any concepts or themes developing (Rubin & Rubin, 2012). The interviews also included the use of probes to help keep the interview on task and topic, gather more detail, clarify responses and fill in any missing information (Rubin & Rubin, 2012). The use of probes required active listening, and although could not be planned in advance, included such things as nodding, saying "go on," "tell me more," "that's interesting," "What happened next?," "uh-huh," and "Can you give me an example of that?".

Rubin and Rubin (2012) advised the use of an interview guide to help lower anxiety and prepare for the interviews in advance. The interview guide is a protocol that

specifies the main questions to be asked during the interview and also includes possible follow-up questions. The interview guide was a formal document given to the institutional review board. Prior to the interview the participants were sent a letter per email stating the main questions of the interview (Appendix F). This provided the participant information on what to expect during the interview. It was important for the participants to know what the interview was going to be about, but providing too much information, such as the full interview guide, could have led to the participant preparing for the interview to an extent where they were no longer spontaneous and the answers were thought out (Rubin & Rubin, 2012). In descriptive phenomenology, a phenomenological attitude is a pre-reflective explanation of things as they are given to one's consciousness (Velarde-Mayol, 2000). If the participant had already thought about all the questions and answers, there leaves little opportunity for the researcher to ask follow-up questions, and ask for more descriptions and details about experiences (Rubin & Rubin, 2012). For these reasons only the main questions were given to the participants prior to the interview.

Table 1 Interview Guide (see also Appendix G)

Specific Aim	Main Question	Follow-up Question
1-To describe, through the experiences of students with learning disabilities,	1-Tell me about a typical day for you in your nursing program.	1a-Please describe your daily routines. 1b-Please describe how you

<p>how having a learning disability is part of their nursing education experience.</p>	<p>2-Tell me about how you experience your learning disability. Please give an example.</p>	<p>prepare for class each day.</p> <p>1c-Please explain how you organize your time.</p> <p>2a-How have these experiences affected your academics? How have you learned to cope with your learning disability?</p> <p>2b-Please tell me how your learning disability affects your day to day life as a nursing student. Please give an example.</p> <p>2c-Please describe how you prepare for an exam.</p> <p>2d-Please describe your routine in doing homework and completing assignments.</p> <p>2e--Please tell me about your study habits and techniques.</p> <p>2f-Please tell me about the</p>
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	<p>3- Tell me about a time since you have been taking nursing courses, when your learning disability became a factor or issue.</p>	<p>accommodations you receive in your nursing classes.</p> <p>3a- Were your instructors involved? How did they respond?</p> <p>3b- Are your instructors aware of your learning disability? If so, how did you decide to inform them? If not, why did you choose not to inform them?</p> <p>3c- Were your classmates aware? How did they respond?</p>
<p>2- To describe factors which help them succeed and progress in their nursing education programs.</p>	<p>1- Tell me about a success you had in nursing school. Did your disability play any part?</p>	<p>1a- Tell me about another experience.</p> <p>1b- What things were involved that helped this be a success for you?</p> <p>- yourself, peers, faculty, family, college/university.</p>



3-To describe factors which have made success and progression difficult in their nursing education programs.	1. Tell me about a time when something hindered your success in nursing school.	1a- Tell me about another experience.  1b-What factors or things were related to the difficulties? - yourself, peers, faculty, family, college/university.

Qualitative interviews focus on a research question with an aim of getting deep and detailed responses to provide a rich description of the participants' experiences (Rubin & Rubin, 2012). The interviews were conducted in a private place mutually agreed upon where distractions were minimized, such as a library or conference room (Rubin & Rubin, 2012). Only the researcher and participant were present during the interview. The average length of the interviews was 44 minutes and 22 seconds, with a range of 21 minutes and 58 seconds to one hour twelve minutes and thirteen seconds. The researcher got permission from the participant to digitally record the interview. If permission was not given by the participant to record the interview, the interview would

not have been done. At that time the researcher would have thanked the participant for their time and it would have been explained to complete the data analysis process of the interview a transcript of the interview was needed, and without a recording a transcript cannot be done. Prior to meeting with the participant, it was explained the interview will be recorded and they will be asked to sign a consent giving permission for the interview to be recorded. All participants agreed to have the interviews recorded and gave permission for such.

Note taking was not expected during the interview, but when occurred was minimal, and included reminders, such as follow up questions. All efforts were taken to avoid note taking to maintain immediacy and openness during the interview. The interviews were digitally recorded with two devices in case failure occurred with one device. The digital recordings were transcribed verbatim by a transcriptionist hired by the researcher, and checked for accuracy by the researcher. The transcriptionist was required to sign a confidentiality form regarding the information in the interviews (Appendix H).

After all participants' completed the main interview, a follow-up interview was scheduled with each participant (Appendix I). The follow-up interviews averaged 34 minutes and 11 seconds, with a range of 17 minutes and 54 seconds to 52 minutes and 33 seconds. The follow-up interviews helped clarify information gathered in the main interviews. Participants were asked to share any additional information or experiences related to the phenomenon to obtain deeper descriptions, and help with identifying the

overall essence of the phenomena. The follow-up interviews were recorded and transcribed just as the first interviews.

Table 2 Interview Guide-2 (see also Appendix J)

Specific Aim	Main Question	Follow-up Question
1-To describe, through the experiences of students with learning disabilities, how having a learning disability is part of their nursing education experience.	1-Tell me about some ways you have learned to self-accommodate or work with your learning differences to get the most out of your study/class time.  2-Tell me what your learning difference/disability means to you.	1a- Describe your perfect study environment.  2a-How have these experiences affected your academics?
2- To describe factors which help them succeed and progress in their nursing education programs.	1-Tell me about a time in nursing school when you felt proud.	1a- Tell me about another experience.  1b – What do you see as your strengths?  1c – Do you believe your

		<p>exam grades and course grades reflect what you have learned? Please explain.</p> <p>1d – What area of nursing do you hope to work in? Why?</p>
<p>3-To describe factors which have made success and progression difficult in their nursing education programs.</p>	<p>1. Tell me about an experience that caused you frustration.</p>	<p>1a- Tell me about another experience.</p> <p>1b – Do you feel you spend more, less time or about the same amount of time studying and doing school work as your peers/classmates?</p> <p>1c – What do you think are your weaknesses?</p>

A pilot interview was done to give the researcher experience in conducting interviews, to improve their technique and confidence and to assist with organizing the flow of interview questions. The interview questions were piloted with one former

nursing student with a diagnosed learning disability. The participant of the pilot interview was a selected nursing alumnus familiar to the researcher. This assured no possible research participants were used for the pilot interview. The pilot student had received services through disability support at their university and identified as having a learning disability. The responses gathered during the pilot interview were not used in the data analysis of the study as the interview was done to improve the researcher's interviewing technique.

**Data Analysis.** The data analysis began once the interviews were transcribed into text. Data was analyzed using recommendations of reflective lifeworld research processes. The researcher remained as close as possible to the original data to be able to describe the phenomena and its meanings while avoiding interpretation or explanation (Dahlberg, Drew & Nystrom, 2001). The researcher remained close to the data by remaining curious and allowing oneself to be surprised by the data (Dahlberg, Drew & Nystrom, 2001). To be close to the data, the researcher approached the phenomenon as it is lived, as it is experienced, and how it shows itself to the researcher, taking nothing for granted (Dahlberg, Drew & Nystrom, 2001).

Data analysis was done with a "bridling" approach (Dahlberg, Dahlberg & Drew, 2008, p. 241). Bridling, a method of phenomenological reduction, involves the process of bracketing where the researcher restrains the pre-understandings they have evident in personal beliefs, theories, and assumptions regarding the phenomenon being researched (Dahlberg, Dahlberg & Nystrom, 2008). Bridling also involved the researcher being

patient. Being patient means the researcher will have an open and alert attitude, actively waiting for the phenomenon of interest to show itself and its meanings. The goal was to slow down the process of understanding to see the phenomenon. The road to understanding the phenomenon must be taken carefully to reach an understanding. Bridling goes beyond bracketing and restraining pre-understandings and is focused on having an open and respectful attitude allowing the phenomenon to present itself (Dahlberg, Dahlberg & Nystrom, 2008).

At the start, of the initial reading of the transcripts, the researcher made an adjustment from the natural attitude to an attitude of carefulness and reflection. Nothing within the data analysis process was taken for granted and instead everything was questioned and pondered. The researcher wanted the indefiniteness of the data to last as long as possible to elicit the most meaning (Dahlberg, Dahlberg & Drew, 2008). The act of bridling, “means paying attention to how phenomena and their meanings are made explicit” (Dahlberg, Dahlberg & Drew, 2008, p. 242).

The researcher embraced an awareness of their own involvement in the world to be able to restrain their pre-understandings during data analysis. Being able to hold back any pre-understandings and scrutinize one self, helped the researcher to remain open during the data analysis process. Remaining open allowed the researcher to be surprised by the data coming to understand what they did not know (Dahlberg, Dahlberg & Drew, 2008).

Data analysis within reflective lifeworld research moves from the whole, to the parts and back to the whole (Dahlberg, Drew & Nystrom, 2001; Dahlberg, Dahlberg & Nystrom, 2008). For data analysis to occur the researcher must understand the data in its whole and its parts (Dahlberg, Drew & Nystrom, 2001). The initial whole required the researcher to become immersed with the data, allowing for the data to reveal something to them. It wasn't until the researcher had a sense of the whole that she could start to examine parts of the data and meanings occurred. After all meanings were described, it was at this point a new whole emerged and the data was presented to the scientific community (Dahlberg, Dahlberg & Nystrom, 2008). The following paragraphs explain how the researcher analyzed data following the whole, to the parts and back to the whole.

**Whole.** The first step in the data analysis process involved all transcripts being closely reviewed and read a number of times (Dahlberg, Drew & Nystrom, 2001). This allowed the researcher to become familiar with the data and get a general understanding of the student experiences as a whole. The more the researcher is involved and familiar with the data, the less her pre-understandings will affect the analysis. When the researcher was able to describe each interview in terms of who each person was and specific experiences, it was then time to move on to the next step of data analysis (Dahlberg, Drew & Nystrom, 2001). Each transcript was read a minimum of three times and a few were read several more times to get a general understanding of each student and their experiences.

**Parts.** To gain a deeper understanding of the data, the transcripts were divided into smaller segments, or parts, called meaning units. Meaning units were developed for every change of idea noted during the analysis of the parts of the transcripts. This step required an active and intensive dialogue, including a suspension of any pre-understandings, with a purpose of understanding the text (Dahlberg, Drew & Nystrom, 2001). During this phase the researcher asked questions of the data, aiming to tell something specific about the phenomena of interest. Questions included but were not limited to: How does the participant describe the phenomenon? Does the participant express more than one understanding? Is there something that continually repeats? (Dahlberg, Drew & Nystrom, 2001). The questions asked provided answers, and meanings started to emerge from the data. The researcher started to recognize repeating themes within the interviews and began to cluster information into general themes.

At this point meaning units that seemed to belong together were clustered and coding of the data began. Naming of the codes occurred at this point of data analysis to assist the researcher with remaining open during the beginning of data analysis and to hold back any pre-understandings. The code names were determined by the data extracted from the transcripts; often key words of a quote were used to label a code. Within descriptive phenomenology the researcher stays as close to the participant's words as possible. The researcher remained close to the original data by using participant quotes to be able to describe the phenomena and its meanings, while avoiding interpretation or explanation (Dahlberg, Drew & Nystrom, 2001).



The following is an example of how meaning units were coded from one participant's quote, and how the codes were clustered and relabeled. The first code (first section of underlined text) was coded as disclosing. The second code (first section of italicized text) was coded as staying focused. The third code (second section of underlined text) was coded as feeling overwhelmed. The fourth code (second section of italicized text) was coded as anxiety. Through the process of analyzing the data as parts 508 meaning units were identified.

(1) No, I have not told any of my instructors. I've mentioned it to one of the other girls (classmates) who struggles with another problem. I told her, I know where you're coming from because I have this problem and sometimes, it leads into the same thing you're going through. But *(2) I have learned to just take a step backwards, look at the big picture, and then focus on what I need to be focusing on.* (3) So, sometimes when you're looking at the big picture, it gets so overwhelming. Someone is saying, in two weeks, I got this paper due, I'm like, I'm not going to worry about two weeks, I'm focusing on this week. I can't think about what's going to happen in two weeks because that's just too much for me. I need to just keep my little box right here. That tends to be a big problem for me at nursing school. *(4) If I try to look at everything that's due for the whole semester, I'm like, no, let's just bring it back down to size here, because that's just too much. And then I start having, I can't breathe, oh my gosh, am I going to be able to get this done? Okay, let's just worry about this week. And then I'll worry about next.*

After the meaning units were identified they were clustered together based on similarities. There were 48 clustered meanings that came out of the data analysis as patterns began to emerge. The clustered meanings were labeled using the participant words as much as possible. The different meaning units and clusters were reviewed and looked at multiple times to bring a sense of understanding to the participants' experiences and what made them unique and similar at the same time.

The data analysis was completed manually by the researcher. NVivo, a data analysis software program for qualitative data, was used to analyze the pilot interview. The researcher made the decision to perform a manual analysis, without the use of a computer software program, because she was more comfortable manually analyzing the data. As transcripts were being reviewed, notes were taken to start developing some ideas related to the meaning of the experiences shared by the participants. Notes were written down on the transcripts of the interviews so the researcher was able to identify thoughts and possible meanings as they were immersed in the data. After the transcripts were reviewed, information was identified that is similar between participants and main topics/themes were identified, while at the same time maintaining the uniqueness of each student's experience. The similarities between experiences were identified to highlight any patterns and increase the understanding of how things appeared to others. It was important for the researcher to spend time getting to know the data and finding her way through the information to extract meaning from the data (Dahlberg, Dahlberg & Drew, 2008).

The process of data management was organized by giving each participant a color of text and a letter. As a meaning unit was identified the text of that meaning unit was given that participant's color, letter and numbered. For example, the following quote (meaning unit) was coded, "who I am," the text was colored red and labeled A1.

A1 -"At this point I'm just really used to it, it's who I am. . ."

After all meaning units were identified clustering of the data began. The coded data for A1 (red) was clustered with other meaning units under “Just who I am, It’s just life.” The clustering of meaning units resulted in 48 patterns, with “Just who I am, It’s just life.” being one of them. After the patterns were identified the data was read and re-read multiple times. Similar patterns were grouped together looking for themes among the data. Once it was felt all similarities among the patterns were grouped the data was then analyzed as a whole to discover the common themes, constituents and essence of the phenomenon.

**Whole.** After the transcripts were carefully analyzed and all similarities and differences identified, transformation from the natural attitude of the participants into a general language occurred in order to ultimately be shared with others within the nursing education discipline (Dahlberg, Drew & Nystrom, 2001). The data/transcripts were again read in their entirety to get a sense of their wholeness and develop meanings that bind the experiences together. At this point the data was transformed from the voices of the participants to a form where the meanings from the data can be expressed from a scientific perspective (Dahlberg, Drew & Nystrom, 2001).

A vital component of data analysis in descriptive phenomenology is to find the essence of the phenomena. The essence is what is universally present in all the participant experiences and within the phenomenon. The essence is the structure of meanings describing the phenomena of focus (Dahlberg, Dahlberg & Nystrom, 2008). It is what

binds all experiences into one phenomenon and all themes identified in the data emerge from the essence.

The essence is what makes something what it is. Dahlberg (2006) explained the essence of a horse is what makes it a horse regardless of the variations or differences among horses; a horse is still a horse. To look for the essence of the phenomena of this study, the meanings that presented themselves from the descriptions were analyzed. The meanings were analyzed for patterns of similarities along with any differences to find the essence of the experiences of nursing students with disabilities. This involved the researcher asking questions of the transcripts, coming to discover the essence of the phenomena among the pattern of meanings. Questions included:

How does the interviewee describe the phenomenon? What does he/she really tell? How do the different utterances fit with each other within the framework of a single person's narrative? Does the interviewee describe more than one understanding? Is something continually repeated? Are there opposing statements? (Dahlberg, Dahlberg & Nystrom, 2008, p. 253).

In addition, the researcher questioned the assumptions of what is taken for granted as we often assume what we see and believe is the same as others see and believe (Dahlberg, 2006).

Describing essence is a clarification of meaning (Dahlberg, 2006). As an experience or phenomena emerges over time, the meanings, and therefore, the essence of the phenomena also emerges and changes (Dahlberg, 2006). When looking for the

essence of a phenomenon, it will come to be found that an essence cannot be present without a phenomenon, and the phenomena cannot exist without the essence, one goes with the other (Dahlberg, 2006).

Once the essence of the phenomenon has been identified, all themes established need to show a relationship with each other. It is the combination and relationship between the themes and of the essence that make up the essential structure of the phenomenon. The essence is what highlights the essential characteristics of a phenomenon (Dahlberg, Dahlberg & Nystrom, 2008). The researcher does not add the essence to a phenomenon but instead the essence has always been there and the researcher discovers or illuminates it. The goal of this study was for the researcher to put into words and make meaning of the experience of students with learning disabilities in nursing education, and along the way find the essence.

### **Human Subjects Protection**

Participants in the study were provided informed consent (Appendix D) prior to the start of data collection. Informed consent included title and purpose of the study along with explanation of the research and procedures (Munhall, 2007). Within the informed consent the risks and benefits of participating were also clearly spelled out. There were no known risks to participants who participated in the study. A potential risk included emotional upset or stress related to the topic of learning disabilities. The researcher was available to assist any participant working through any stress they experienced related to the interview. The researcher also had available contact information for counseling

services at the student's education institution in the rare event a participant had a strong emotional response to the interview and needed follow-up care. One participant became teary eyed when talking about their successes and how proud they will feel when they finish school. The participant was allowed to express their emotions and the researcher was there for emotional support. The participant was able to continue with the interview and made the decision to continue. The participant did not need to be referred for counseling services.

The participants were also told they only needed to answer questions they felt comfortable answering. No participant refused to answer any questions during the interviews. In addition, it was explained to the participant that participation in the study was voluntary and they could withdraw at any time without penalty. No participant withdrew from the study. The benefit of participating in the study was the opportunity for the participant to tell their story and possibly reflect on their experiences, and develop a deeper understanding or knowledge of their experiences in nursing school.

All efforts were made to maintain confidentiality of participants. Digital recordings and transcripts of the interviews were heard/seen by the transcriptionist, who was required to sign a confidentiality statement, and the researcher. In addition, parts of the digital recordings and transcripts may have been listened to/seen by the researcher's dissertation chair or committee members to assist and/or verify the data analysis process. Transcripts, demographic questionnaires, and any notes or other paperwork associated with the study did not include any names or identifying information. To organize data

each participant were given a code; participant A1cbj, participant B2adm, etc. Each participant was given a letter, a number to indicate the interview, and letters to indicate the institution they were from. Digital recordings and transcripts of the interviews are kept in a locked file cabinet designated for this study. The file cabinet will be kept in the researcher's personal private office and only the researcher will have access to the cabinet. Electronic files were password protected on the researcher's computer, as well as, backed up on an external hard drive. Electronic transcripts will be in a password protected account available to the researcher and transcriptionist. Only the researcher and members of the dissertation committee had access to the electronic files. Informed consent signatures and contact information for participants were filed in a second separate locked file in the researcher's personal office, with a different lock and key. An additional third locked file cabinet was used to store the participant codes to ensure no contact, or identifying information was stored together with information gathered during the interviews or through the demographic form. Only the researcher will have the ability to access the locked file cabinets and electronic files of the study. Digital recordings will be destroyed at the completion of the research study and report of findings by deleting the files permanently from the researcher's computer. Interview transcripts will be kept in a secure location for a minimum of three years, and a maximum of five years, following the study, for possible future studies or analysis.

All efforts were made to have the same transcriptionist transcribe all interviews to ensure all interviews were transcribed in the same format (Kvale & Brinkman, 2009).

After signing a confidentiality form, the professional transcriptionist was given written instructions for how to transcribe the interviews. Interviews were transcribed verbatim. This included leaving white space in the margins for the researcher, to add any non-verbal communication of the participant. In addition, the transcriptionist was instructed to leave blanks, if uncertain what was said, and to leave room in the margins for notes. Upon completion of the transcripts, the researcher reviewed the transcripts for accuracy, by reading the transcripts as she was listening to the recordings (Rubin & Rubin, 2012). Anonymity of participants was maintained by labeling transcripts and no names were used. Transcripts were labeled as “Participant A,” “Participant B” and so on for all transcripts. The interview recordings and transcripts were kept in a secure location (hard copy in a locked file cabinet and electronic copy password protected) throughout the research study.

Participant quotes were used to remain as close to the data as possible and validate the study findings. No identifying information was associated with the quotes used in the study findings. In addition, participants were informed their quotes may be used but they would not be identified in the quote. Participants gave permission for the researcher to use their quotes on the informed consent form.

To reduce any conflict of interest and risk to the participants, current students of the researcher were not recruited or selected for the research study. Although, students the researcher has had in the past were recruited for the pilot interview and study. The



students who participated in the pilot interviews and study were assured anonymity and all information gathered will remain confidential.

### **Rigor**

For phenomenology to be considered a research method, and be regarded as scientific research, the research process must be methodological (Englander, 2012).

Research that follows Husserl's phenomenology must ensure that both the data collection and analysis follow the philosophical tenets of descriptive phenomenology to be rigorous. Research must be carried out so the data collection and analysis is part of a single, unified process within the same theory of science (Englander, 2012). For a study to have rigor, consistency must be present between the method and theory behind the study. This study used reflective lifeworld research as a framework for data collection and analysis, which is guided by Husserl's descriptive phenomenology.

The following methods were taken to ensure trustworthiness of the research process, data collection and analysis processes. Quality of the research study was not only ensured during the interviews but also during all stages of the research study through the report of findings (Kvale & Brinkmann, 2009). The researcher kept the research question, "How is nursing education experienced by undergraduate students with learning disabilities?" in focus at all times to ensure the study was researching what it was intended to (Kvale & Brinkmann, 2009). At the time of data analysis and reporting the findings, the researcher became her worst critic and challenged the results looking for inconsistency of the data. This included looking for researcher bias or effects within the

data and ensuring anything unexpected was followed up on during the follow-up interview (Kvale & Brinkmann, 2009).

**Objectivity.** The researcher took steps to increase objectivity of the data collection and study results. A reflective journal was kept for the researcher to have a place to put any biases, prejudices or assumptions she may have regarding the phenomena of interest. The researcher utilized the journal prior to starting data collection, after each interview, before starting the transcribing process and after all transcripts were transcribed. In addition, the researcher journaled her thoughts, assumptions and biases as they presented during the research process, and when moving from analyzing the data as a whole, to the parts, and back to the whole in preparing for presentation of the results and essence of the phenomenon. This allowed the researcher to see the participants for who they were without imposing any of her own biases on them or their experiences (Kvale & Brinkmann, 2009).

In addition, participants were given the opportunity to reveal themselves and their stories or experiences in their own way, during the interview. During this time the researcher may experience feelings of frustration or confusion when the participant reveals something that goes against her own preconceived ideas regarding the phenomena (Kvale & Brinkmann, 2009). Objectivity was also sought with maximum variation of participants. As stated earlier, the researcher strived for participants who had different experiences.

The researcher remained open, by acknowledging any preconceived assumptions or biases and being patient during the data collection and analysis process. Remaining open helped avoid any generalizations related to pre-understanding or biases from pre-existing knowledge regarding the phenomenon.

**Quality.** Several steps were taken to ensure a quality product was produced with credible and accurate findings (Rubin & Rubin, 2012). Efforts were taken to achieve variation among participants and their experiences through purposive sampling, as stated earlier. Credibility was met by selecting and interviewing participants who have firsthand real-life experience of living with a learning disability and attending nursing school. It was also verified that study participants were or were entitled to receive services from the disability support personnel at their institution, or self-identified themselves as having a learning disability. In addition, conducting a second interview with participants was done to get deeper descriptions and allow for follow-up of the first interview, which also contributes to the quality of the study and results.

Research questions were asked in an open question format asking for the participant's experiences and thoughts instead of a closed answer format. This type of question format encouraged the participant to respond based on their experiences and not what they think the researcher wanted to hear. Asking for the students to describe their experiences, instead of their perception of their experiences, also added to the quality of the data collected. The researcher also avoided the use of leading questions to ensure reliability of the interview responses (Kvale & Brinkmann, 2009). The students'

experiences led to and supported the themes and conclusions of the study results. The act of note taking was avoided during the actual interview to maintain immediacy and openness. Following the interviews the researcher took time to jot down any notes or thoughts in a post-interview note, on the interview guide. Any anticipated thoughts or ideas were followed up on by asking additional questions either during the initial or follow-up interview (Rubin & Rubin, 2012). In addition, any possible themes identified were followed up on by asking for additional examples to support the theme during the follow-up interview (Rubin & Rubin, 2012).

All interviews were digitally recorded and transcribed into text. The researcher had a prolonged engagement with the data and ensured accurate recording and transcriptions. In addition, the researcher spent an extended amount of time with each transcript to come to know its richness and nuance (Rubin & Rubin, 2012). During this time the researcher identified themes and discovered the essence of the phenomena.

The transcripts were read again at the time the findings and conclusions were being written to ensure the essence of the phenomena was clear and understandable (Rubin & Rubin, 2012). Through a thorough literature review, any knowledge gaps were identified in the area of students with learning disabilities. The researcher attempted to narrow these gaps with information discovered during the interviews and data analysis process (Rubin & Rubin, 2012).

**Auditability.** The researcher was also transparent during the research process and when reporting the findings. Being transparent means the researcher kept memos of the

data collection and analysis process, and a reflective journal included any biases she felt during these times. All interview notes, audio recordings and transcripts, along with how interviews were transcribed will be kept during the research process through the report of findings in case someone wants to check the accuracy of the results. Records were also kept of the data analysis process and how themes were identified, for recording analysis decisions throughout the research process (Rubin & Rubin, 2012). The reflective journal was utilized frequently throughout the research study as indicated earlier. The journal included dates and times as well as thoughts, assumptions, biases, possible themes, or anything the researcher felt needed to be journaled.

An audit trail was maintained through documentation and organization of data. Interview transcripts, interview notes and researcher reflections were kept throughout the study and maintained in their original form. Researcher bias was addressed through researcher reflections in a journal before, during and after the data collection process.

## **CHAPTER IV**

### **FINDINGS**

This chapter will discuss the findings of the study. First, the participants will be described according to the demographic information collected. In addition, each study aim will be discussed. The majority of the chapter is identifying the themes, subthemes, constituents and essence that emerged through the data.

#### **Participants**

Nine student nurses with learning disabilities participated in the study. Participants were from three different institutions of higher education within a Midwestern US state. Six participants were students from a public four-year university with an approximate enrollment of 3,500. Two participants were students from a private liberal arts university with an approximate enrollment of 1,000. One participant was from a public research university with an approximate enrollment of 15,000. The sample consisted of eight females (88.9%) and one male (11.1%). To help ensure anonymity of the one male participant, student participants are referred to as they, instead of he or she during data analysis and the report of findings. Table 2 below provides information about the participants obtained from the demographic form each participant filled out.

Table 3: Demographic Data

Age: (Range 21-55) → Mean: 31.777 → Median: 25	Race/Ethnicity: → all white/caucasian
Gender: → Female: 8 (88.9%) → Male: 1 (11.1%)	Type of School: → Bachelors: 9 (100%) → Associate: 0
Semester in Nursing School: → 2/5: 3 (33.3%) → 3/5: 3 (33.3%) → 4/5: 2 (22.2%) → 5/5: 1 (11.1%)	Expect to graduate on time: → Yes: 8 (88.9%) → No: 1 (11.1%)
Age of Diagnosis: → Mean: 19 → Range: 7-33 → No age given: 1	Identified by institutions DSS: → Yes: 6 (66.7%) → No: 3 (33.3%)
Type of learning disability: → ADHD: 2 (22.2%) → Anxiety: 1 (11.1%) → Aspergers: 1 (11.1%) → Dyslexia: 2 (22.2%) → Dysgraphia: 1 (11.1%) → Irlen/Erlinson: 2 (22.2%) → Math: 1 (11.1%) → Reading: 1 (11.1%) → Not specific: 1 (11.1%) (2 participants reported 2 or more learning disabilities)	Accommodations Received: → Different color exam paper (blue, purple, etc.): 2 (22.2%) → Extra training/Summer School: 1 (11.1%) → Medications: 1 (11.1%) → No scantrons: 2 (22.2%) → Private exam/testing room: 1 (11.1%) → Self-training: 1 (11.1%) → None: 4 (44.4%)
Receive Accommodations in nursing courses: → Yes (nursing courses):3 (33.3%) → No (nursing courses):6 (66.7%)	Receive Accommodations in non-nursing courses: → Yes (non-nursing courses):2 (22.2%) → No (non-nursing courses):7 (77.8%)

All participants but one expected to complete their nursing program/degree on time. The one who reported not finishing on time explained during the interview they had started a program at a different institution but had failed out. However, the participant further explained they were expected to complete the nursing program they were currently in on time and get their nursing degree.

The data presented in Table 2 is what was self-reported by the participants when completing the demographic form. However, it should be noted that what was reported in the area of accommodations received on the demographic form did not always reflect what was later reported during the interviews. Only one reported the use of medications to help with learning on the demographic form, but during the interviews three participants discussed the use of medications. One participant reported using a private room for testing, although during the interviews three participants discussed using a private room for tests or exams.

In addition, on the demographic form two students reported Irlen Syndrome as a learning disability, and during the interviews another student talked about having Irlen Syndrome. Based on the data from both the demographic form and interviews three of the nine participants had Irlen Syndrome. Irlen Syndrome is a visual processing problem that manifests itself differently for each person (Australian Association of Irlen Consultants Inc., 2013). A person with Irlen Syndrome can have difficulties with reading, poor hand writing and depth perception, light sensitivity, underachievement, and headaches. Individuals with autism and Asperger's syndrome often also have a diagnosis of Irlen Syndrome. Some people with Irlen Syndrome are misdiagnosed with an attention deficit disorder because many of the signs and symptoms are similar such as inattentiveness, daydreaming, and rushing through work (Australian Association of Irlen Consultants Inc., 2013).



## Specific Aims

The first specific aim was to describe, through the experiences of students with learning disabilities, how having a learning disability is part of their nursing education experience. The findings of this specific aim make up the majority of chapter four, and are found within the essence, constituents, themes and subthemes of the phenomenon.

The second specific aim was to describe factors that helped the students succeed and progress in their nursing education programs. The students described the things that have worked for each of them as they were finding their way through nursing school. The majority of this information can be found in constituent three, *use of accommodations*, but additional related information can also be found throughout constituent one, *identify as having a learning disability*.

The third and final specific aim was to describe factors that have made success and progression difficult in their nursing education programs. Students discussed many different things that had created challenges for them both in the clinical and classroom setting. This information can be found in constituent two, *“just another hump to get over.”*

### The Essence of the Phenomenon:

#### **“Developing Adaptive Pathways on the way to Becoming a Good Nurse”**

The phenomenon of interest investigated in this current study was nursing education as experienced by students with learning disabilities, and as described through the lived experiences of nursing students with learning disabilities. The essence of the

phenomenon that emerged through the participant experiences was “*developing adaptive pathways on the way to becoming a good nurse.*” All students discussed the things that they have done to be successful in nursing school. “*Developing adaptive pathways on the way to becoming a good nurse*” meant that the students had to do things their way to learn best and be successful. Students were able to describe the learning strategies that worked best for them and how they used them in their nursing classes. As one student explained, “You kind of develop adaptive pathways or you develop these things that work for you.” Throughout the course of the interviews each participant described their pathway through nursing school. Each student’s pathway was unique and individual to them, but the existence of a pathway was repeatedly found throughout all of the students’ experiences.

Each student provided descriptions of their experiences of needing to accept they had a learning disability and to *identify as having a learning disability* to a variety of different people. Along the pathway of identifying as having a learning disability the students became more aware of what their learning disability meant to them and how it impacted their learning. Identifying as having a learning disability was an important step in recognizing the challenges or barriers they as students had to learn to overcome to successfully complete nursing school. Just as unique as each student’s pathway was the challenges each student faced as they worked and progressed through nursing school. As the students’ identified their challenges they also discussed the things they do to learn best. A variety of different accommodations were described along with the effect they

had on the student's learning to assist them in continuing on their pathway through nursing school.

Student participants explained how over time they had figured out what worked best for them to overcome any challenges and be able to learn. The students described the specific routines they had in studying, and knowing they needed to have things a certain way to learn most effectively. Some students identified how they learned at a younger age what works best for them, and others determined their best learning strategies after entering college.

The essence of "*developing adaptive pathways on the way to becoming a good nurse*" came to light as each student described their unique experience of nursing school. It was identified that each student was unique in their type of learning disability, how they identify to others, the challenges and barriers they faced, and how they learned to accommodate or overcome the barriers. Through all the individuality of the experiences the sameness of the student's experiences of nursing school was also clear. Each student knew what they had to do to be successful, and developed a plan for the path they would take to progress through and successfully complete nursing school.

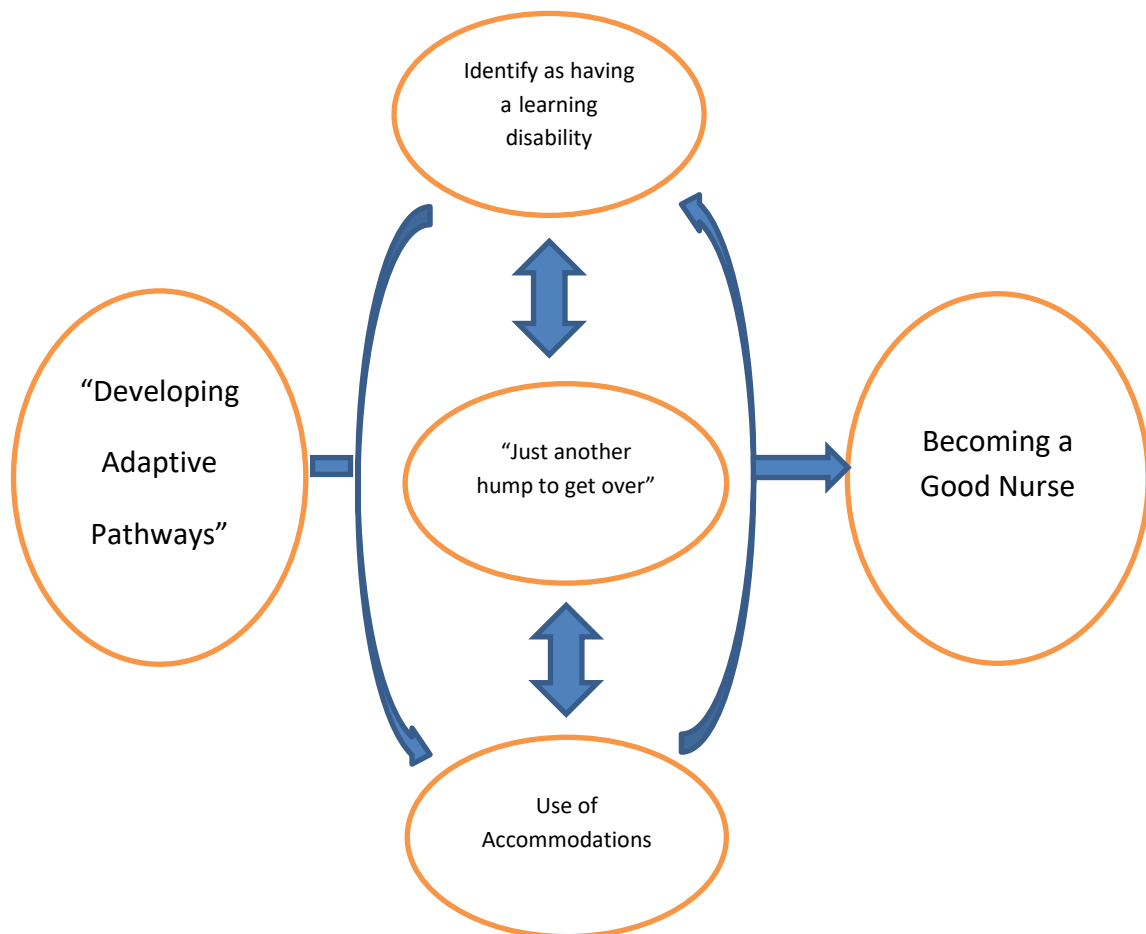
### **The Constituents of the Essence**

The essence of "*developing adaptive pathways on the way to becoming a good nurse*" displayed itself through the three constituents of: *identify as having a learning disability*, "*just another hump to get over,*" and *use of accommodations*. Each one of the constituents is a necessary component of the essence as a nursing student with a learning

disability is developing their path to become a good nurse. If one of the constituents is not present, it is not possible for the nursing student with a learning disability to “develop adaptive pathways” on the way to becoming a good nurse during their time and experience with nursing school.

Figure 1 visually depicts the essence of the phenomenon and the constituents that make up the essence. A detailed description follows that more thoroughly explains each constituent of the essence, along with themes and subthemes of each constituent.

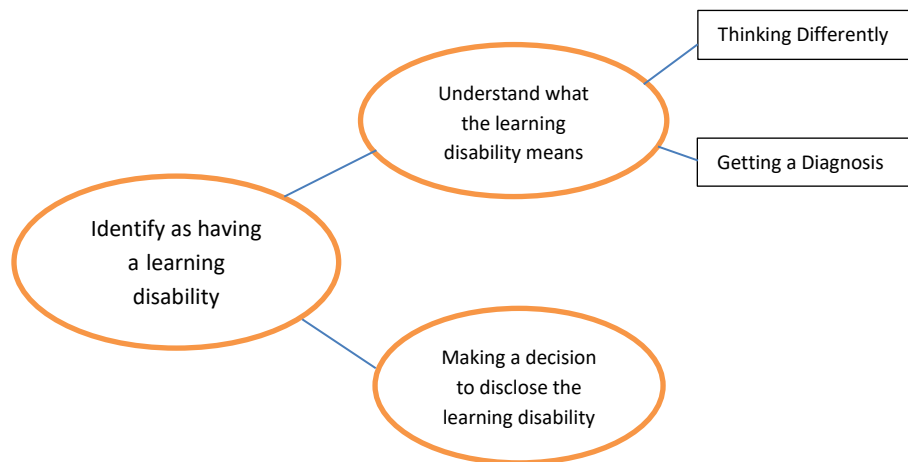
Figure 1 – Developing Adaptive Pathways on the way to Becoming a Good Nurse



## First Constituent: Identify as having a Learning Disability (LD)

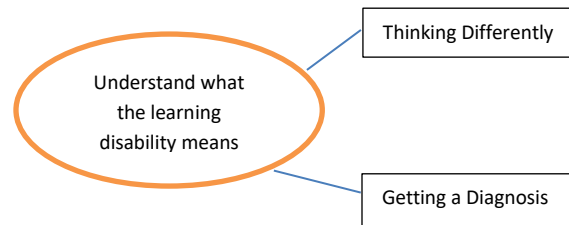
In order for a student to develop their pathway through nursing school they need to *identify as having a learning disability*. The following themes supported the need to identify as having a learning disability: *understand what the learning disability means* and *making a decision to disclose the learning disability*. For some students to *identify as having a learning disability* and to understand what it means for them, a diagnosis was needed. Others sought out information on their own looking for explanations for their learning difficulties and differences. *Understand what the learning disability means* has subthemes of *thinking differently* and *getting a diagnosis*. All students talked about *making a decision to disclose the learning disability*. Some students were very private, whereas others were more open and told more people about their learning disability to get the help they felt they needed to learn (see Figure 2).

Figure 2: Identify as having a learning disability



## Understand what the Learning Disability means.

Figure 3: Understand what the learning disability means



Part of the process of nursing students with learning disabilities “*developing adaptive pathways on the way to becoming a good nurse*” is to *identify as having a learning disability* or difference, and to understand what that means to them (see figure 3). Each student had a different description of what their learning disability meant to them. However, while each individual experience was unique, there were still commonalities within those experiences that are incorporated within the subthemes, *thinking differently*, and *getting a diagnosis*. In order to develop adaptive pathways, students came to understand that their thought processes worked in different ways from that of their peers who did not have a learning disability. For some students the process of beginning to understand their learning disability came through a diagnosis of a learning disability, while for others they came to a better understanding through research of their own on their specific learning differences.

***Thinking Differently.*** Students with learning disabilities did not want to be treated differently or appear to be different, compared to their peers. The words “be

different” were frequently spoken but in several different contexts. This student described what it is like to think differently from other people.

I think nursing school definitely made it [being different] more apparent to me. I’ve always kind of known I was – I think it’s hard because I think all of us seek to be different on some level. None of us want to admit that we’re average. So I think to some degree all of us believe that we’re different and we are. But I’ve always felt like the way I pursued life was different than my peers. . . I see information and understand information in a very different way than I guess your maybe typical student. I’m in a nursing department. Granted if I was in an arts department, I’d probably fit in very nicely; but I’m not I’m in nursing. . . So I guess for me it just means I view things differently. I think about things differently. That’s very apparent to my nursing class.

The classroom environment was one place where all of the students felt they were different from their peers. They had difficulties learning in the classroom and needed to spend extra time outside of the classroom doing things their own way to learn the content. Students explained the difficulties they often had with completing homework assignments because they didn’t think of things the same way as their classmates without learning disabilities. For example, one student told about a time they understood the directions of an assignment differently from the rest of the class. Once they realized they understood the directions differently, they quickly changed their already completed assignment before handing it in, in order to blend in with the rest of the class.

We had to do a timeline of our short term and long term goals. So, I went to do my timeline and I don’t think of things like a line. So without even thinking I drew this picture with my short term goal as a picture of a road with a stop sign. Along the road were my different goals with the stop sign being like the ultimate goal, what I was working towards. For my long term goals I drew a separate picture. When I got to class they [classmates] were like, “Why did you draw a picture?” I said, “It’s like a time line.” They said, “It should be a line of what your goals are and your plan to meet them.” So I quickly went on the back of my

drawings and drew a normal timeline. It was just not really something I even thought about. A picture made so much more sense in my head, because it seems silly to make life into a line. Life isn't linear. It was so weird to me that it didn't even cross my mind to make a line. I just decided to simply draw a picture.

Although all the students discussed feeling different from their peers without learning disabilities in the classroom, most students did not experience these same feelings in the clinical environment. In fact most students felt comfortable in clinicals, and were able to show more of what they knew during clinical times. The following quote from one student is representative of that feeling.

No, I do not feel different in clinical, not really at all, because I think patients enjoy the light hearted fun. I'm still able to get my work done, get all my charting done, all that. I feel like I blend in much easier since we're not in an academic setting. No one has to know what you're like in the classroom when you're behind the desk, or moving around, and talking to patients.

***Getting a Diagnosis.*** For some, accepting their learning disability came through a diagnosis. Although the majority of students went through some type of testing process to get a diagnosis or to receive accommodations at their institution, their experiences varied; some were positive and others had negative experiences. Students explained, when they got diagnosed as having a learning disability, it provided some explanation for questions they had related to their learning. For others being diagnosed as having a learning disability helped them to not be so hard on their self, and accept their learning differences. The following quote is one student's experience of being diagnosed with a learning disability.



I break myself less about not getting stuff. Because it used to be whenever I wouldn't get something I would be really harsh on myself about the fact that I didn't get it. . . So having a diagnosed learning disability tells me okay, I'm allowed to not get things. I just have to try a different way or try harder. So it has helped actually knowing that it's an actual documented one and it's not just that I'm not getting it. There's a reason why, and since there's a reason why there's an easier way, or different way that I can work at it versus just you're not going to get it, because you're not.

A few students had difficulties with *getting a diagnosis*. Difficulties included not knowing who to go see to get tested for a learning disability, and feeling like they weren't taken seriously about their learning concerns. For example, the following student's experience with trying to obtain a diagnosis was perceived as quite negative.

I actually tried at my community college before I transferred to this college, to get diagnosed and the counselor was, excuse my language, a total bitch and she made me feel really self-conscious and insecure, so I just left. It didn't help...She didn't seem like she really wanted to help me. She was just sitting there doing her job, I don't know. I just felt like it was for nothing. She didn't respond to anything. She just sat there and had a binder. It didn't seem like there was a point and I thought maybe I needed like medication to help me focus or something and that wasn't even an option. It was kind of like you are here to just talk basically. I was like what is the point of this.

The majority of the students were diagnosed or learned about their learning disability after they entered college. However, one student was diagnosed and received accommodations for their learning needs beginning in elementary school. Another student explained how they were not diagnosed as having a learning disability, but always needed summer school and extra help with math and reading since elementary school. Regardless of the time of diagnosis or acceptance of their learning difference, all the students were interested in their learning disability and wanted to learn as much as

they could about how it impacted their learning. In the course of the interviews many of the students explained what their learning disability was and how it affected their learning.

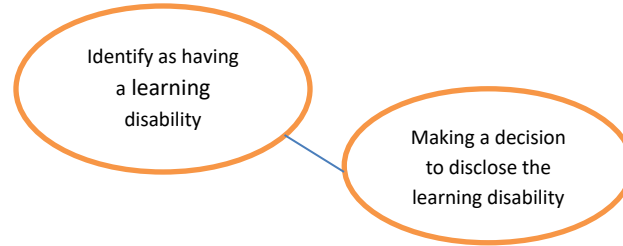
Some students did not initially accept that they had a learning disability. However, as time went on, and more information became available to them, they spoke about how they came to accept their learning disability. This student explained the unique process of learning about and accepting their learning disability.

Well, I honestly didn't realize I had an issue. Actually, my mom, due to worry about stigmas and everything, didn't get me diagnosed when I was a kid. But she set out immediately trying to train me to be normal. . . I didn't know what was going on when I was 15 mom tried telling me that I had Asperger's and that was in 1994. I would go to the library at my school to look up Asperger's. It's an encyclopedia probably from the 80s, and what it says about it in there, I am like, 'No way, I don't have it. They are insane. Mom is a nut.' And totally dismissed it, didn't even pay attention to it. . . And then in 2009 this movie came out entitled Adam, A-D-A-M just Adam. So she [Mom] tells me, 'You have really got to watch this movie, and really pay attention to it.' . . I was like, 'Alright mom.' I am thinking she was a nut a number of years ago; she is still a nut now. I pop the movie in and from the very first scene I am like, 'Oh my god that's me.' All through the movie I kept going, 'Oh my god, that's me.' So then I was like, 'Alright, let's get on Medscape.' . . and I was, 'Okay, yeah alright, mom is right, okay she is.'

Much like the student above, several other students looked at their diagnosis as a positive. Getting a diagnosis was a relief, and it provided an explanation for many questions they had over the years. How a student accepted having a learning disability affected the way in which they disclosed their disability to different people. The following section will describe the students' experiences of disclosing their learning disability to others.

## **Making a Decision to Disclose the Learning Disability.**

*Figure 4: Making a Decision to Disclose the Learning Disability*



All of the students talked about their experiences with disclosing their learning disability to others. Students explained the reactions of their family, peers and instructors to hearing about their learning disability. All students explained their reasoning for disclosing their learning disability to others, and why they didn't always disclose their learning disability. Some students disclosed their learning disability to instructors to ask for assistance or to receive accommodations to help with their learning. The main reason students gave for not disclosing their learning disability was they did not want to be seen as or treated differently from the rest of their peers.

Some students were very open and shared they had a learning disability freely to their classmates/peers. Others would tell their classmates, if they felt it was needed, or if it came up in conversation. The students who made the decision to disclose their learning disability to their peers had positive experiences. The classmates had a non-judgmental response and were supportive. The students' classmates were very receptive to their different learning needs and open to doing things to help them learn. The students experienced a sense of relief as they explained how their classmates responded to hearing about their learning disability, as the following experience illustrates.

My partner [in lab class] was great. She didn't really say anything. She doesn't treat me any different. So I'm sure she didn't really, I don't want to say she didn't care, she just didn't really think much of it... What I have is I care what people think. So, it really didn't entirely surprise her I guess. This made me feel more comfortable around her. To this day she is still one of my go to people. I still adore her, she is very non-judgmental. I felt not judged. I felt it kind of brought her relationship points up.

A few of the students did not tell any of their classmates and did not want them to know due to fears of being treated differently. Most of the students tried not to make a big issue of their learning disability. They wanted to be seen as the same by their peers and not treated differently. A few students explained that they knew their peers were aware of their learning disability because of accommodations they received, such as different colored exams or leaving to test in a different room. Although they knew their peers were aware of their learning disability, they did not know how much they knew or understood because they did not talk to them about it. The following student explained their experience of why they did not tell all their peers about their learning disability.

Only one other person in the class knows that I have this problem because I don't like everybody catering to me. Because life will not cater to me, and I don't want anybody else making accommodations, so they don't need to know. . .

Overall the reactions of the students' classmates/peers to learning about them having a learning disability were positive. The students' explained they did not feel judged or shunned by their classmates. Although the majority of the students' experiences were positive some students did not tell their classmates because of concerns

about what their classmates' reactions would be, based upon how other students with learning disabilities were treated. For example,

I stopped testing outside of the room and part of that is another student does it, and I know it's ridiculous, but I look and a lot of other students talk about it and make comments. I know it's ridiculous and immature but I just feel like I don't want that stigma, I don't really want to make my learning disability a handicap. . .

Although students did not experience negative reactions when they disclosed to their classmates, the reaction of the students' instructors wasn't always as favorable. The majority of students with learning disabilities who disclosed to their instructors did so to receive accommodations for their course. Some instructors were surprised but with a little explanation were accepting of the student's differences, without judging the student. The following student described how their instructor was surprised by them needing accommodations, but also receptive to the accommodations.

Now this semester, I just kind of touched base with her [instructor] on taking the test over at the testing center, which she was really surprised by. As she said, "Oh really" and she was very receptive to it, but almost at the same time, seemed like she was surprised that I would have to go over there and do that.

The response of instructors to being informed of a student's learning disability varied. Some instructors responded positively and accepted the student's learning differences, while others saw the learning disability as primarily an excuse. Students who had positive responses from their instructors felt more comfortable in disclosing their learning disability to other instructors, although the reaction wasn't always the same. The following is an example of a positive experience a student had with telling an instructor about their learning disability.

There was one time in my freshman year where I had written something in an email to a teacher. I realized when all she responded back with was “wow,” that I probably was really rude. So I went back and read it, and then I wrote an apology letter and said, “I am so sorry, not to try to use an excuse but I have Asperger’s and I didn’t mean to word it inappropriately. I was just stating facts and everything.” She responded, “Oh, okay I have a friend that has Asperger’s. I totally understand, thank you for informing me” and so I was like, “alright, good, that was a good experience.”

Sometimes, disclosing their learning disability to an instructor resulted in acceptance and/or making requested accommodations. However, this was not always the case. Sometimes, the student who disclosed a learning disability was not received very well and the student did not get their requested accommodations. The response that a student received from an individual instructor influenced the likelihood of them pursuing accommodations in the future, as one student explained:

In my first semester [of the nursing program] I immediately asked my professors about getting different accommodations, and I tried to make it like I didn’t want people to know. First my professors kind of shut it down and so I was like, “okay I am not going to pursue this anymore. I don’t want to be an outcast. I don’t want to be seen as unintelligent or be labeled with a disability by my peers.” The professors were very skeptical, like, “you want to take a test in a different classroom, I don’t know if we could do that.” The professor said they would look into it, and I explained, “I had talked to this person [disability support services], they have my information, they know what’s going on, and I was able to get these accommodations before.” The instructor said, “I don’t know we will think about it.” Then after that conversation it’s not really worth it for me to pursue. I didn’t want to be identified as that [having a disability] by my peers. I don’t want to be seen less than them.

Some of the students explained they felt judged after disclosing to their instructors about their learning disability. They believed the instructor thought they were using their

learning disability as an excuse to get an advantage in the course. One student explained their negative experience of disclosing their disability.

. . . I explained the Asperger's to an instructor and that actually made things worse. She was not pleasant toward me. I went in for a face-to-face meeting and she jumped on me about how Asperger's was a cop out. She did a Mafioso style threat of, "you know I teach other nursing classes in this program." I thought, "why is that a problem, of course you teach other classes." So I was confused when I left there. So it [learning disability] does run into some stigmas. An entire year later, she [the instructor] filed against me that I was aggressive or threatening towards her. I thought that was weird, that she filed against me. That's when my advisor recommended that I actually go get my Asperger's documented so that I can use that to protect me, in case she tries anything in the future to stigmatize me due to the Asperger's.

Most students with learning disabilities did not want to share with their instructors that they had a learning disability. Some students explained their clinical instructors were not aware of their learning disability, because it was not relevant to tell them; their learning disability was not an issue in clinical. Most students explained they didn't disclose their learning disability to others because they didn't want to be seen as different, be singled out, or because they felt some embarrassment related to their learning disability. One student said they didn't tell people because they didn't have a diagnosis, and they didn't think they needed extra help. The student stated, "I think I just need to get my shit together." This student, along with others, didn't want any extra help and saw no benefit in disclosing their learning disability. Others didn't disclose their learning disability because they did not want the extra help and/or because they didn't think their instructors would understand. This experience was explained by one student;

...I don't want to [disclose disability]. Again mental illness isn't there yet so it's kind of embarrassing to say I have anxiety. I don't think they would take it very seriously. I think that they make accommodations for people who have like dyslexia or something, I don't think they really view anxiety as a learning disability.

Students further explained why they would not ask for accommodations or identify as having a learning disability to their instructors. Students didn't want to be seen as different or "taking the easy way out." Even if the institution's disability support office was aware of the student's learning disability, they still were not always comfortable disclosing it to their instructors. Several students would not disclose their disability or ask for accommodations because they did not get or need special accommodations in everyday life. This student explained why they would not disclose their learning disability;

The lady at student development has all my paperwork, and she asked me if I wanted a different room or a different environment. I told her that I did not. I don't want that. I feel like that's the easy way out. It's not what everybody else is doing. I always want to be the tough guy. I don't want to be the one that takes the easy way out. . . So I never wanted to do that. . . I don't really tell people. I've never considered myself to have a learning disability. I hate that. I will never speak that over myself. I will never do that. I know that I struggle and that's not a strong suit of mine, but I know I have many others. . .

Nursing students with learning disabilities need to "*develop adaptive pathways*" *on the way to becoming a good nurse*. The first step in this process is to *identify as having a learning disability*. As just discussed in the previous section this requires the student to *understand what the learning disability means* to them, and *making a decision to disclose the learning disability*. The next step is to acknowledge what their challenges



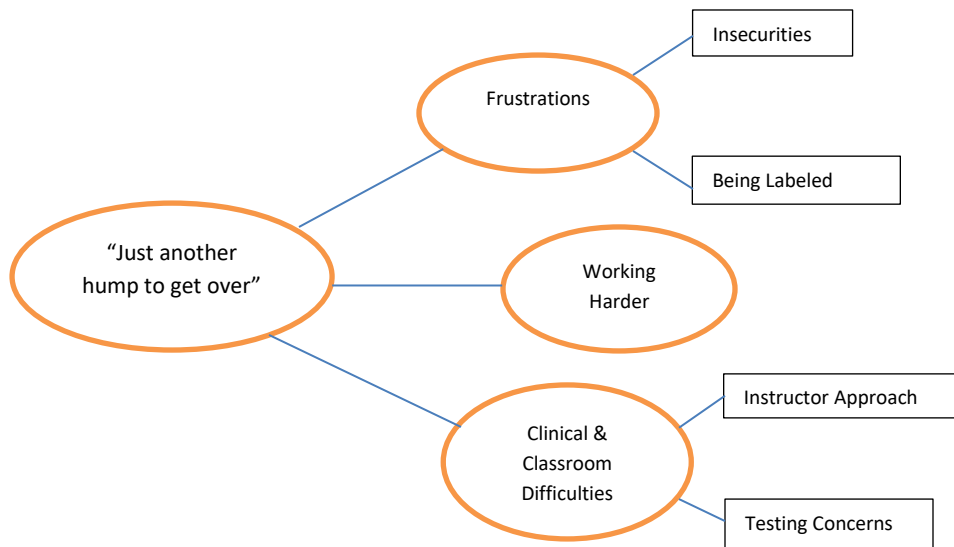
are and view them as “*just another hump to get over.*” The next section will describe the different humps to overcome.

**Second Constituent: “Just another hump to get over”**

All of the student nurses with learning disabilities described “humps,” or challenges they have had to get over as they find their path through nursing school. Students experienced challenges in all areas of nursing school, including the classroom and clinical settings. Some of the humps were caused by the expectations the student put on themselves and others were caused by expectations of an instructor or course. As illustrated in Figure 5, the themes of *frustrations, clinical and classroom difficulties,* and *working harder* described the humps students had to overcome. One student explained.

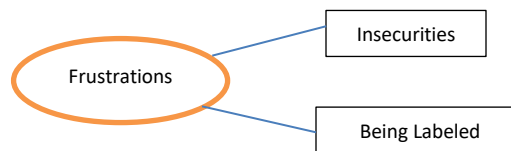
To me it’s [LD] just another hump to get over. The way I experience it is the better I manage it, the less it’s there. So if I take my medication every day I don’t even feel it. If I don’t, it’s chaos. I’m not as productive, I’m mean. I’m more hostile I guess. I don’t talk to a lot of people, I’m not social. So it’s a barrier, but I found ways to deal with it. It’s just a matter of following through.

Figure 5: *Just another hump to get over*



**Frustrations.** Students experienced multiple frustrations they had to cope with, learn to overcome, or work around in their nursing education. Several students had frustrations with homework and assignments they felt were not beneficial to them, but instead took up valuable time when they could have been preparing for other things, such as the NCLEX or studying for a test. Other students had frustrations with the examinations in nursing school and the types of test questions. They would have liked to have had a different option in the way that they were tested. All students had insecurities related to their learning disability and learning needs. Some of their insecurities involved fears of not passing a class and not being able to finish their program. Many students also had experiences that left them feeling misunderstood or labeled because of their learning disability. As depicted in Figure 6, the theme of *frustrations* was supported with the subthemes of *insecurities* and *being labeled*, which will be discussed below.

*Figure 6: Frustrations*



**Insecurities.** All students had experiences that caused insecurities when they felt self-conscious, embarrassed, or inferior to others because of their learning disability. For many students insecurities they had about their learning needs led to fears of not passing and failing out of their nursing program. Several students disliked group work, where they were expected to work on a project with others or type in front of others, as these experiences caused insecurities. One student explained their insecurities with group work.

. . . Group projects and stuff that can become an area of feeling self-conscious of...so, okay you want me to type out this PowerPoint slide and you guys are all watching me. Whenever I spell something wrong or I get my letters messed up or my numbers I feel a bit self-conscious about that.

Several students' insecurities were made worse by their fears of failure, and their lack of confidence. Students had fears of not passing a test or class. The fear caused anxiety and caused them to second guess themselves. Some students experienced constant fear and anxiety as added weight they carried and had to overcome. Sometimes the fear was due to a lack of confidence. Some students explained needing to push past their comfort zone, or go into a situation where they were not comfortable, where they experienced fear and anxiety. One student talked about knowing they had to push through and overcome their fears.

You just have to do it. You are afraid of it but you just have to push it. If you don't push yourself out of your comfort zone, you are never going to grow. I think that's because of my family always pushing me, and teaching me, and training me as a kid. If they hadn't pushed so hard I wouldn't probably push myself so hard now, because I have seen in the past that if I push myself I can get it done. I don't like to do it if it's going to make me uncomfortable, but I could, you know, I can make it through it.

Although the majority of students had fears of failure and lack of confidence in the classroom, one student discussed the fears they had related to the clinical environment. The student was fearful of causing harm to a patient and looked for approval and reassurance from faculty and peers. The student explained how working with a classmate helped to alleviate some fears and made them feel more confident.

. . . When I'm in the clinical setting, I'm afraid of making mistakes. I'm afraid of hurting somebody or doing something wrong that's going to cause damage. I just don't feel confident enough yet, to be on my own. So, as long as I have someone

else there, who maybe doesn't know more than me, but we can bounce ideas off of each other, and then make a decision together which direction to go. Then, I don't feel so bad. I'm a little more confident that way. . .

All students experienced insecurities, but what they were most insecure about differed from student to student. One student talked about how they worried about being a distraction to others in class because of some of the self-accommodations they have used to help stay focused. This student has handled their insecurities through humor.

I crack a lot of jokes during class and I doodle a lot, I move around a lot and just shifting, and always moving my legs. So, yeah, I would say that those are distractions. . . I much more have to make a joke. I'm a person who hides behind humor. It's easier to make a joke and act like you don't care than show, expose yourself as you're vulnerable.

Some students had concerns about things that they have done that could have revealed they had a learning disability and caused them embarrassment. The students, sometimes without realizing it, tried to cover things up or hide from others to avoid having to provide an explanation. Some students would highlight as they read or wrote notes in their books. The students wouldn't let others use their books because they were embarrassed of all the highlighting and notes they used to help them learn. One student explained how they tried to hide their learning disability from others.

I used to work with a girl who had dyslexia, and she would laugh because she saw me one day, I was working with numbers, and I had my hand like this because I didn't want anybody else to see what I was doing, I was like pointing to each and trying to get the numbers straight because that was a big thing. And she looked at me, "You're dyslexic too?" I said, "yeah." She says, "Oh my gosh, do you ever just like," I can't remember what she said, but she laughed like oh my gosh, I never even realized that was part of being dyslexic. It had something to do with thinking backwards, but not only backwards, but you have your own pattern of doing things. Most people have like a straight line, and sometimes you like curve,

and you come back and then you go back and it's like a little loop and you go back, and she's like, "I do that all the time."

Some students had experiences when they felt inferior. Many of these times were caused by comments others made and when the student compared themselves to others. When a student felt inferior they also had self-doubt and questioned if they knew enough information. Students felt they didn't know all that they should and found themselves comparing what they knew to what others knew. One student described a time when they felt inferior.

I always compare myself to other people's knowledge. I don't think I'm generally a smart person, I think I'm below average and I just try hard and therefore, I am a little smarter. There's this one girl in my class who has a bachelors in chemistry already. She's older, she's almost 30. She's been a phlebotomist, CNA, I think EMT even, so she is one of the really smart ones in the class. So it makes me wish I had all that.

While most of the students described a lack of knowledge or not knowing enough as a weakness, several students explained how they were more able to show what they knew in the clinical and lab environments. The students hoped their instructors noticed what they could do in clinical and in the lab. One student expressed their frustration with not being recognized for the areas in which they excelled.

I see here a specific example of again, just the academic system of the school, and the way things are set up. In our last semester now we're graduating and a lot of my classmates are really good at school, so everybody is talking about the honor roles and straight As, and Sigma Theta Tau, or whatever those things are, and that's fine. I'm great, and I'm proud of them, but it's kind of a frustration. It's very aggravating when I feel my strengths are in a clinical setting or even in these simulations. Where these students that are top of the class can't apply that in real life. . . I feel extremely comfortable, I feel good, I'm having fun. Then I see all my

straight A students and I'm like "What the hell, why am I having to tell you what to do, you're top of the class." It's kind of a frustration thing, it's kind of aggravating. To me that just shows memorization, but not an understanding of what they're learning.

As the students accepted their learning disability they also began to acknowledge the weaknesses and challenges they needed to overcome. Some students felt having some experience as a nursing assistant, phlebotomist, or EMT could be an advantage, and those without any experience were at a disadvantage. Several students discussed not knowing enough as being a weakness. Other students believed anxiety or feeling unsure of themselves was a weakness. One student described being shy as a weakness and related it back to a lack of experience. They believed with experience they would become more confident and not shy with patients. Several students described the high levels of stress and anxiety associated with nursing school as a weakness. While others felt their lack of motivation at times to be a weakness, as one student described.

I guess sometimes I feel weak in my motivation. I lack motivation in trying to continue. Especially recently it's hard, I lack the motivation to sit through a four hour class and pretend like I'm paying attention. I've kind of just stopped pretending. I think that's kind of a weakness. If I'm not moving at a fast rate and I don't have something to look forward to as a reason to constantly be moving and pushing towards something, I kind of lose that motivation and become a little complacent. So that's definitely a weakness. Sometimes being a little bit hard to focus can be a weakness but in a clinical setting I think it can be strength, because I'm constantly focusing on like 80 different things at one time.

All students had *frustrations* in nursing school related to their learning disability.

Many of their *frustrations* were related to *insecurities* the student had about their learning

style and needs. Other *frustrations* came from *being labeled* by others, feelings of being stigmatized, and being misunderstood because of their learning disability.

***Being Labeled.*** Many students had experiences of *being labeled*, stigmatized or misunderstood because of their learning disability and learning needs. Some students talked about being labeled as a slow learner. They explained it may take them a little longer to learn new things but they are not “stupid.” For some students, not disclosing their learning disability to others was because of the label of having a disability. Further, those who had decided to disclose wanted to do so without being judged or labeled by others because of their learning disability. One student explained how they have learned to accept their learning disability and overcame their own thoughts of being a slow learner.

. . . I have a disability, it doesn't make me disabled. So it has taken me a long time to get to that point, because I think I thought I was just kind of labeled as a slow person when I was younger, mostly because we didn't know I had the problem. So I've got a whole lot more confidence in myself now.

Even though some students experienced self-doubt related to the reactions and labels placed on them by others, most students discussed things they had done to overcome any label associated with having a learning disability. Several students talked about not giving up and proving to others they could be successful. The students did not want to be held back because of any labels placed on them, and wanted the same opportunities as other students without learning disabilities. One student explained;

She [a friend] got diagnosed when she was in second grade. So, she always knew. But she wasn't going to college because she struggled enough in high school, and she didn't want further education. I said, “You're giving up on yourself. I refuse

to do that, I refuse to be labeled”. . . I struggled all through high school, so I was labeled the slow one. It wasn't my fault. So now, I have something to prove to everybody, that I'm not stupid, I'm not slow, I'm very smart. It just takes me a little longer to get things done.

The students did not want to be treated differently or be given a label because of their learning disability. They wanted to go through life like a person without a disability and not have people making accommodations for them. The students wanted to be able to enjoy their success and not have to worry about the reactions of others, or the accommodations made by other people. One student described how they worked to overcome the label they felt was associated with their learning disability.

Well, I was kind of labeled, and I just want to prove to everybody that I'm more than being dyslexic. There's more to me than having a problem. Life is not going to be about accommodations. Once I get out into the real world and start working, no one's going to stop and say, "Oh, well, they have dyslexia, so we need to make accommodations for them." I don't want that. I don't want special treatment and it's not going to happen anyway. I mean life is going too fast for someone to stop and say, "Oh wait, they have a problem, we have to stop and slow down for them." I need to learn to adjust to life, life can't adjust to me. So, that's why I don't want to go that road.

Students need to be able to acknowledge when they did well and not worry about the opinion of others. It was important for the students to have confidence and not compare themselves to their peers. Some students continued to be concerned with the label or stigma of a learning disability, or a difference in the way that they learn.

Some students described experiences where they were misunderstood and the negative impact it had on the relationships they had with others. Being misunderstood was perceived as a result of the negative stigma and labeling that came with having a



learning disability. Some felt misunderstood when they approached an instructor or asked questions. The student wanted to clarify or understand new information but, at times, instructors took their questions as not being prepared or questioning the instructor's knowledge. Others felt that the difficulty they had in communicating clearly led to them being misunderstood by others. One student explained,

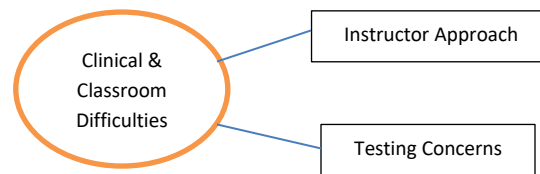
A teacher has considered me badgering them. That I'm questioning their knowledge or that I'm putting them in the spotlight. It can come off in a negative light when really I'm just trying to move on. I'm stuck down here, and you just keep going and you're getting farther and farther away from me. I don't want to let go of not knowing this point way down here. So, depending on the instructor and their instructor's style or willingness to work with me or explain things, that can be challenging. . .

The theme of *frustrations* supported the constituent of "*just another hump to get over.*" All students discussed frustrations they had with *insecurities* in nursing school, and *being labeled* because of their learning differences. The next section will describe the clinical and classroom difficulties nursing students with learning disabilities had to overcome.

**Clinical and Classroom Difficulties.** All students described things they had to overcome or work through in the clinical and/or classroom environments. Most students felt their learning disability had the most impact on their learning in the classroom. Depending on their specific learning disability students had concerns with long lectures, reading assignments, writing assignments, math problems, and instructors who talked too fast. In addition, all students had obstacles to overcome with testing, and many had concerns about taking the NCLEX.

Although all students felt the impact of their learning disability in the classroom, only a few experienced difficulties in the clinical environment related to their learning disability. These students described their instructor's approach to them and their specific learning needs as impacting their clinical experiences. Students preferred instructors who were accepting of them and their learning needs, and associated more negative experiences with instructors who had an aggressive approach, weren't open to questions, and/or weren't sensitive to their learning differences. The common difficulties all students with learning disabilities experienced included *instructor approach* in either the classroom or clinical, and *testing concerns* in the classroom. As depicted in Figure 7, the subthemes that supported *clinical and classroom difficulties* were *instructor approach* and *testing concerns*.

Figure 7: Clinical and Classroom Difficulties



***Instructor Approach.*** An instructor's approach or specific teaching strategies had an impact on students in both the clinical and classroom environments. For most students the teaching style or approach of the instructor impacted their learning more in the classroom than in the clinical setting. Several students described classroom difficulties regarding the teaching style of their instructor. Depending on their individual learning disability, students had additional challenges to overcome when instructors would talk

too fast and didn't write things on the board, provided instructions in only one format (oral or written), used one teaching method, were resistant to student questions or acted annoyed with questions, and were resistant to accommodations when requested by a student. One student described their personal challenges in trying to learn new content and learning an instructor's teaching style.

. . . I have these weird things, this learning process for me that if I can't understand it, I can't move on to learn the next thing. I get stuck at this little point. So obviously, there's a lot of hard things to understand, and I'll get stuck. So in class or after class, I'll say to the instructor I still don't know this, and they just repeat themselves. I'm like, "Hey I hear you, but I don't understand what you're saying. No, I hear you just fine, you don't need to speak louder. You need to find another way to teach me this." I literally told the teacher. "I hear you. Stop yelling at me. You need to say something different. I'm not mad at you, I'm trying to learn." For most teachers I don't think the first thing that comes in the head is, "Oh maybe they don't understand" not, "Oh they're badgering me here. Oh, they're testing my skills." I'm saying "I need help." Sometimes I'm wrapped up, I'll get worked up, or I might not be asking it as nicely as I could be either. I'm anxious and I have fear because I am trying to pass this class. Maybe I'm asking the question in a way or voice that doesn't sound that way.

Instructors, who were resistant to making accommodations, also impacted how a student learned. The reason most students gave for disclosing their learning disability to instructors was to receive accommodations for their learning needs. When an instructor was not open to the accommodations the student's learning was negatively impacted. The student was not able to use the learning strategies they were comfortable with and learning became more difficult. For example, when one student described their experience of asking for an accommodation in their nursing program, and did not receive

it, they decided that they just needed to deal with their disability without accommodations.

. . . Pre-nursing courses were a lot better. I would take tests in a different room and read them to myself, and so I could hear it out loud and that was very helpful. Once I got into the nursing program it became a little bit more difficult. I have requested a separate room and that didn't go over super well. I'm sure if I talked to them about it again it would be fine. But I figured on the NCLEX I'm not going to get accommodations and stuff as much, I mean you can request it but I might as well learn how to be able to take it without.

A few students discussed how having an instructor with an aggressive approach, not being open to questions, and expecting them to know more than they had been taught, were all challenges in the clinical setting. Students also didn't like being called out or told they had done something wrong in front of others. One student explained how their clinical instructor's teaching style negatively impacted their learning.

Last semester was definitely the most frustrating. Definitely! I just felt like I wasn't taken very seriously by my clinical instructor . . . my instructor was awful. She was not nice to me. I didn't know if it was because she could tell that I wasn't always all there because of the anxiety, but she produced my anxiety. So she's an example of somebody in my life who recognized that I had a learning difference and instead of accommodating, she wanted to change it. She didn't want to accommodate me, instead she wanted me to accommodate her, instead of her to accommodate for my learning needs. . . I didn't learn anything from her because I was so anxious when she would talk to me. She made me clam up in my little shell because I was scared of her...she has a very blunt personality. If there was something she didn't like that I was doing she would tell me in a sarcastic way, and it would feed the anxiety fire and then it would just grow and grow . . . it was bad, but I got through it.

For many students their learning process in clinicals involved asking questions and clarifying information they didn't understand. When a student didn't feel comfortable

asking their instructor questions, they had to find another way to reinforce the information on which they had a question. Most students would go to another student or ask a nurse at their clinical site, if they felt comfortable. As one student explained;

Depending on how approachable the teacher is I would want to approach them, but then sometimes they get annoyed. So, you kind of have to feel that around, because especially if it's something that they've repeated a bunch of times. So I usually start with students, my fellow classmates that are on top of it. I can ask them, so they are my first resource.

Different teaching strategies and approaches of instructors, in both the classroom and clinical environments, presented challenges students with learning disabilities had to overcome in nursing school. Even though a few students noticed their learning disability during clinicals, all students perceived their learning disability to affect them in the classroom environment. A primary issue for students with learning disabilities in the classroom was *testing concerns*.

***Testing Concerns.*** All students had experiences when their learning disability became an issue or created a challenge for them in the classroom setting. Most of the challenges or humps the students had to overcome involved testing concerns, long lectures, reading assignments, and writing and math assignments. Most students discussed how their learning disability affected them during tests. Some students noticed their learning disability most during tests compared to other times in nursing school. Testing concerns commonly described by students included taking long tests where the student worried about losing focus. Most students preferred paper and pencil tests over computer tests, where they had the option of underlining, crossing things out, and writing

on the exam paper. For some, Scantrons caused difficulties with following the lines and correctly recording their answer. The length of exams also affected their ability to be successful on the exam. One student explained their concerns with long exams, which was representative of many students' experiences.

Taking long exams. That gets really hard because I stop being able to focus, my brain is kind of all over the place and I'm trying to get myself to get all those pieces back and focus on what I am supposed to be reading, and I read a question like eight times. It gets worse and worse as the test goes . . .

A few students discussed the accommodations they used for testing, which most typically included a private testing room and extra time to complete the test. Some of the students were easily distracted when testing in the regular classroom with the rest of the class, as exemplified by the following quote by one student who normally took their exams at the testing center with other accommodations.

Last semester there were quizzes that I took at home and I did fine. There were ATI quizzes on the computer that I did at home and I did okay on, but then there was one of the ATI exams on the computer in one of my classes last semester. We had to take a critical thinking ATI thing. I took that with the whole class in the computer room. I was totally distracted, I didn't get to finish the test and I got a low score because of it. I talked it over with my instructor and she said that she thought it would be okay to take it in class. She said it wasn't going to be graded and it wouldn't count against my grade. So I decided to go ahead and do it there [in the regular classroom] and I told her afterwards I wish I had done it over there [at the testing center].

Test anxiety was another issue that caused students to lose focus or prevented them from focusing on the exam from the beginning. They worried about not being able to calm themselves down during a test and not passing the test or class. Some students

found ways to calm themselves down such as deep breathing and some took medications to help with the anxiety. One student explained their concerns with test anxiety.

Terrible test anxiety, sometimes it just leaves my head or it will take me a while to settle down and then I will be okay. Then I will go back to the beginning questions. But there have been times where I look at the test and I just go blank until I calm down and start to see some of the ones that I know for sure. Then I will go back to the beginning and it will start clicking...

A test related issue of particular concern to many of the students was taking the National Council of State Boards of Nursing Licensure Exam (NCLEX), which is taken after graduation, and passing this exam is required in order to work as a licensed nurse. A few students who were near the end of their nursing programs talked about the frustrations of completing the paperwork to receive accommodations on the exam, and their fears of losing focus and not passing the NCLEX. The following quote demonstrates the fear and lack of certainty in relation to the NCLEX, as well as the inability to get answers from faculty regarding questions about requesting accommodations on the NCLEX.

I'm getting ready to take the NCLEX . . . I'm looking through my paperwork because I want to see what accommodations I can have with it. If I want to do that or not. And if I do it, I would probably just maybe have a little more time, and maybe a bigger screen size to help with the visual . . . I have a number of the state board because my advisor didn't know; and then I talked to the person in charge of disabilities on campus, and she didn't know what paperwork they needed, either. So I have to call the state board, and I'm not sure if I have the right paper that's needed for it. So I might have to backtrack and find it. I've had this accommodation since like fourth grade. So this college just has a printed copy from my past school and that's all. So I might need more than that for the state board. . . I think I'd be fine without it [accommodations on NCLEX], but then it would be less stress, less anxiety. So that's kind of the biggest part of it. Because I

don't really think I need too many accommodations. I've been doing fine on just like the practice tests and everything.

In addition to testing concerns, all students had experiences where their learning differences were highlighted in the didactic classroom setting. It was commonly difficult to focus and pay attention during long lecture times, making it difficult to retain information and learn. Most students described how they learned best in a different environment where they could be more active, but were made to sit in the classroom for long lectures, where they were easily distracted. The following student expressed their thoughts on long lectures.

. . . I mean the lecture setting, I just don't get it. I don't see how we still learn that way. I feel it's very unrealistic. It works for some people, but then we get labeled as having a learning disability, because I can't sit in a chair for four hours and soak up the information. I mean there is a lot of other people like me that can't do that either, but we hold to this lecture format because it's convenient.

Students experienced anxiety about not being able to pay attention during long lectures, and were concerned with the time they would need later to learn the content they missed because of their anxiety and/or difficulty paying attention. Some also worried about being a distraction to others as they did different things to help them stay focused. A variety of strategies to try to stay focused were used, including doodling, chanting to themselves, or answering other students' questions to try and stay on task during lectures. Students with learning disabilities did not want to stand out or be different, so many would just sit through long lectures, all the while knowing they were not learning what was being taught. One student explained,



I think the long lectures are a huge hindrance because I almost feel like they are a waste of time. I'm sitting here for four hours straight and I am not really learning anything, I will learn just as well if you let me walk around or do something else. But me sitting there is not learning. I used to stand in the back of the room and that helped a lot. I just kind of stopped doing that because you are the weird kid standing in the back of the room, and I don't want to be a distraction for others either. But it definitely helps if I can move. If I can move, then I am going to be more focused.

Another area of concern was long reading assignments for didactic classes. Many students didn't have time to do all the readings, so they often skimmed over the information or didn't look at it at all. If students did look at the readings they said it was hard to stay focused and retain the information. Students would often wait until after class and assignments to go back and look at information they thought was important. One student explained,

“If there's reading involved, I don't always read all of it. I'll just like skim through the chapter. Some of these chapters are 100 pages. I honestly don't have time to read all that.”

Depending on their type of learning disability students also had difficulties with writing assignments and/or math problems. Some students explained how they often did better on writing assignments than exams, but writing assignments took more time and they were worried about mixing up letters. They felt self-conscious about making simple errors and not catching them.

I like them [papers/writing assignments] because I do better, but they are more time intensive. Often I'll make five rough drafts before I get to the end of it. So it seems like it goes on forever. . . I'll have my mom read over my papers, because I noticed I still make a lot of simple mistakes and I don't catch those as easily.

When an exam had a writing component, some were also concerned they would misspell words. The fact that examinations did not provide the opportunity to have someone proofread their writing was also difficult for those students. Students also found challenges in assignments and tests that included math calculations.

Math problems and drug calculations were concerns for many students. Making sure the numbers were correct so that they didn't make any errors was an important concern. The students were aware that an error in a math calculation could lead to a serious mistake, causing a patient harm; and so students were cautious to make sure they figured a math problem correctly to protect the patients' safety. Several processes were described by the students to help ensure that they were competent in drug calculations, including asking for additional drug calculation problems to work on their own outside of class, meeting with their instructors for extra instruction, and purchasing drug calculation books to review the formulas and work extra practice problems. One student explained their process in drug calculation problems.

Numbers trick me up. Because numbers are precise. You can spell a word wrong and still know what it means. You can't get a number wrong and get the right number. You have to have the precise order. So when I'm doing numbers, I am pointing out to each one. That way I'm making sure I'm getting them.

The *clinical and classroom difficulties* students with learning disabilities faced in nursing school were displayed through many different student experiences. The commonality among all students was each student faced difficulties, but the difficulties were unique to each student experience. A common area within nursing education that students had difficulties with and had to overcome was adjusting to different instructor

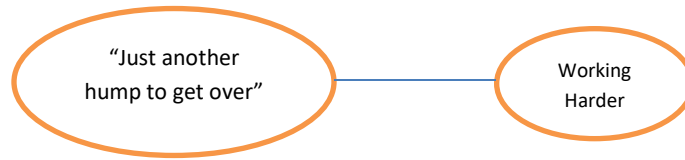
approaches to teaching in their nursing program. Another area students with learning disabilities identified as difficult were tests/exams. *Testing concerns* caused additional stress and anxiety for the students with learning disabilities. Other classroom obstacles included long lectures, long reading assignments, and writing and math assignments. Many of the difficulties students faced required them to *work harder* or put in extra time outside of the classroom to make sure they understood new content. The next section will discuss the students' experiences with having to *work harder*.

**Working Harder.** *Working harder* meant that students with learning disabilities perceived that they worked harder or spent more time studying compared to their classmates without disabilities, as the following quote describes:

More time, hands down. I'll often try to start a week before [a test], five days before, at least. I'll start with making a study guide, and that will be three to four hours, alone. Then reviewing the study guide, probably another three to four hours. I have classmates where it's the night before when they'll start looking at it, and then I'm probably ten hours into it.

But despite their hard work, students felt their grades did not reflect their actual level of knowledge. Further, most students didn't want to stand out or be seen as different by their classmates so they made the decision to not accept accommodations. They believed by not accepting accommodations they would not draw attention to themselves, even though it may have caused them to have to work harder. This section will describe the time and effort many students with learning disabilities put into studying, and the problems students had with focusing.

Figure 8: Working harder



Most students were aware of the different ways they studied compared to their peers, and accepted they needed more time to prepare for an exam and complete assignments. They had found their own pathways to learn the content and were able to apply their knowledge when needed at another time. Some students had changed the way they studied since they began the nursing program. A few students explained how, over time, they realized that it wasn't always the amount of time spent studying that was important, but instead it was the quality of study time. This student explained how they needed additional time and different study strategies than their peers without learning disabilities.

I feel like it [studying] would take more time, but I feel the way that I study compared to other classmates is different. The way I study or the way that I learn is I get stuck on something until I can understand it. Maybe an adaptation that I've done is I learned how to understand things quicker. If I can't understand it, I can't memorize it. Memorizing isn't a thing for me. I don't feel like I spend a lot of extra time studying, because it's very hard for me to just take a couple of hours to study. But when I do study, I make sure that I understand what I'm reading. I might only get through my notes two or three times, when the classmate I study with will spend six hours reading, and that's insane to me, I can't do that. So I don't know time-wise how it goes, because I might spend six hours, but over the course of a couple of days. If I hit it, I've hit it, and I will take a break, and come back to it. I don't know if that takes more time or not, because at that point in time I separate myself from anybody else.

Each student was unique in how they approached, organized and completed their homework. Some students felt they were more conscientious than their peers without a disability, and made sure they got their homework done on time. All students believed they spent more time on completing homework compared to their peers without learning disabilities. Some questioned how their classmates without disabilities had time to do non-school activities, and still received good grades. The following student explained how studying and homework took up all their time.

I think I spend more time studying. It's not very nice for me to say this, but sometimes I get jealous. I will see on Facebook where they [classmates] went here and did this, and I have been home studying the whole weekend, from the time I get up, to the time I go to bed. How do they have time to do this? I know they just either are more organized than I am, or they get it quicker.

While all students believed they spent more time doing homework and completing assignments compared to their peers, some felt they actually did not put in as much time studying for exams as others. Some felt that studying for exams got easier as they progressed in their nursing program, and the amount of time they spent studying was less than in the beginning. However, some students reported that they sometimes developed a false sense of security in their own knowledge level, and that contributed to them not studying as much as they should, as the following quote describes.

For completing assignments depending upon what the assignment entails, if it's a lot of typing or writing I'll probably take longer than them, [classmates without a learning disability] because I don't type or write legibly all that fast. But if it's just a matter of studying, I know I don't put in as much effort for studying as even I should. I think it's because I go over the study guide, Power Point, or scan through the book and I think, "oh yeah I got this, I understand this, I know this."

Then I go to sit down at the test and all of a sudden I'm drawing a blank on certain parts, and I think, "Oh I should have studied harder; I shouldn't have thought, "Oh I know this, and just skip over it." I should study even the stuff I know. So my problem is sometimes I trust my knowledge too much, and I think, "Oh I got it, I got this."

For most students, their grades on assignments and in their courses did not reflect what they actually knew and the effort that they put into their learning. This was a source of frustration to the students. They often felt like they knew the information, but it was difficult for them to demonstrate their knowledge on an exam. For example one student described:

I guess to some degree, but for the most part, I feel no [grades do not reflect what is known]. I feel like the knowledge is all there, but my ability to answer it on a piece of paper, in question format, often doesn't reflect my true knowledge. It's like a well, and my probability of drawing that question and answer out of the well is pretty low; whereas it's all there, it's all in the well, and I can draw on it when I need to. But actually drawing out specific things, it's really difficult.

For many students the amount of time they put into studying was related to problems with retention. Most students had problems with retention even before nursing school. They had to go over content multiple times to be able to remember it at a later time. Reading and retaining information was particularly problematic for most students with learning disabilities. They would read and re-read multiple times, in an effort to retain information.

Interestingly, in contrast to most, a few students thought their grades reflected more than what they actually knew or retained, because they were able to memorize information for the test. However, retention of that information was usually only short term, as the following quote exemplifies.

There are a few things from last semester, I don't quite fully understand. I have always been the kind of person that I can test really well. I can get good grades because I am cramming information, but it doesn't mean it's in there permanently. So that's what I mean, I don't think just because I got the good grades it means it's actually there permanently. So, I am working harder on that now, trying to get stuff, because we were talking about the NCLEX last week or week before, and I almost had a panic attack thinking "Oh my gosh. Okay, it's two years away."

All students described ways in which they believed they *worked harder* than their peers without learning disabilities. One student explained how they sometimes get jealous of their classmates because it is hard to understand how their classmates had time to have a social life, and didn't have to put in as much time studying. Many students explained their frustrations when their hard work and efforts were not acknowledged or rewarded with a good grade.

. . . One test I studied 10 hours and I still barely passed with a C. I knew the material, but when I came to the test, I felt like I didn't understand what they were asking. . . I feel like I do, I try to study a lot, but sometimes studying 10 hours versus 4 hours I could get the same grade. . .

Concerns with the amount of time and effort needed to successfully meet the expectations of a course were often associated with issues of not being able to focus while doing homework, in the classroom, or during an exam. Difficulty focusing and problems with retention were common components of the participants' learning disabilities. When students were not able to focus, they were not able to retain the information, and their grades reflected their issues with studying.

My grades aren't bad, but I feel like I know more than what my grades show or even my assignments or these papers. When I put the time in, I accept my grade and I'm proud of it. But when I am having so much difficulty getting myself to do the work, and then I take the test and I don't do as good as I know that I could,

if I could just get myself to do it. That's the part where people don't understand, because that's what makes you think you're just being lazy doing the work. But it's not as simple as just do it.

Many students found themselves easily distracted and not being able to focus when needed. Some students needed total silence when studying or they were not able to focus. Not being able to focus created additional challenges as a student would have to go back and repeat information that had already been covered. Certain sounds or different activities could be easy distractions and cause students to lose their focus, especially during exams. One student explained:

Yes, it takes me a minute or two to get refocused. During our first test, somebody had a cold and she was sniffing through the whole test and I couldn't focus. I was like, "Oh man, blow your nose or something." It took me longer because I was actually waiting for her to finish so I could finish taking my test. I just couldn't think with her constantly sniffing.

For most students keeping focus in clinical was not an issue. However, a few students did have experiences in clinical where they lost focus. One student had an aversion to change and found it difficult to change focus when moved from one area of clinical to another. Another student explained they do not take criticism well, and when an instructor tried to provide feedback to them about a clinical situation they became defensive, and were not able to focus on what the instructor was telling them. Instead of focusing on what their instructor was saying they were engaged in negative self-talk. Later when the student could focus they went to a classmate to have them explain the situation.



I get really defensive if I do something wrong, I don't take criticism very well even though I should. When my instructor was trying to correct me on my SOAP I was like, "Well, I've been doing this three semesters," in my mind. I never said that to her because I don't have the guts, but in my mind I was like, "Oh my gosh, you got to be kidding me." My instructor was trying to correct me and I had awful anxiety. "I'm never going to get through this, blah, blah, blah," I think the worst possible thing can happen. I get pretty defensive when people try and critique me.

Troubles with focusing caused additional stress and anxiety for students with learning disabilities. Not being able to focus caused anxiety which then caused more issues with trying to focus. Several students talked about different things they tried to do to stay focused during class times. Most students were aware of when they lost focus and would have to engage themselves to get back on track and stay focused, as described by one student.

I tend to distract pretty easily, so staying focused becomes a mixture of chanting to myself; "pay attention to the teacher, pay attention to the teacher, pay attention to the teacher." When I notice I am elsewhere, getting myself back in line, if somebody has a question, I will answer their question, which it's the teacher's [role], but I do it anyway.

Some students used procrastination as a method to improve their ability to focus. Most students saw it as a negative and another source of stress. Interestingly, some students saw this as a good quality because when they procrastinated they were forced to focus and do the work. "I actually, I'm a really good procrastinator; I work well under the time." A few students explained how procrastination helped them to focus when they sat down to do the work or study. One student talked about how they would get up early in the morning on the day of an exam to study, because it forced them to do the work, and they didn't think about what else they had to do.

. . . I don't know if it's a mental thing and I don't know if it's just something that works for me, because I think I tell myself it does, but I usually just say it's kind of crunch time. "I've got a test in four hours, so I need to be focused." So that's just what works for me. If I wait till the end to do it and then I have no choice, but to do it; but sometimes that doesn't work either because then I run out of time.

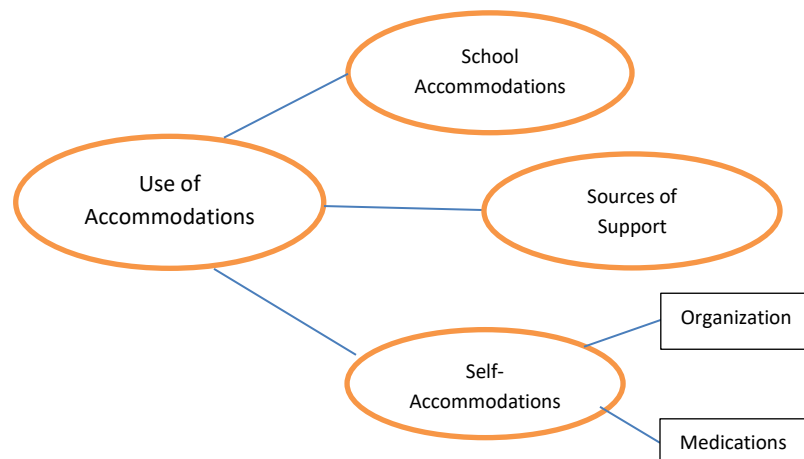
As a nursing student with a learning disability was "*developing adaptive pathways on the way to becoming a good nurse,*" they had to *identify as having a learning disability*, and acknowledged the challenges or "humps" they needed to overcome. To move past the "humps" the students needed to find their strengths, motivation, and different accommodations that worked for them. While the constituent "*just another hump to get over*" involved a variety of *frustrations, clinical and classroom difficulties*, and *working harder*, the students were able to balance some of these difficulties by making and receiving accommodations, which helped them be successful in "*developing adaptive pathway on the way to becoming a good nurse.*" The next section describes the constituent, use of accommodations.

### **Third Constituent: Use of Accommodations**

Nursing students with learning disabilities utilized many different methods when "*developing adaptive pathways on the way to becoming a good nurse.*" The methods used varied from participant to participant, but the similarity was all the students with learning disabilities had found ways or strategies to improve their experience of nursing school and their success. The strategies utilized were divided into three themes, *school accommodations, self-accommodations, and sources of support (see Figure 9)*. *School accommodations* were changes in assessments or instructions provided by the educational

institution to lessen the impact of the student’s learning disability. The student had to be identified by the school’s disability support office and request accommodations to possibly receive a school accommodation. Common *school accommodations* included private testing room, extra time to complete tests/exams, and alternatives to Scantrons for tests/exams. *Self-accommodations* were things the student did for themselves to improve their learning and lessen the effects of their learning disability. Common *self-accommodations* included *organization* and taking *medications* for their learning. The third theme *support from others* included things done for the student by family, peers, the university/college, and others. Common types of support included encouragement and motivation for the student.

Figure 9: Use of Accommodations



**School Accommodations.** All of the participants, who were students with learning disabilities, discussed school accommodations and their reasoning behind either

requesting accommodations or not. The majority of the students had made the decision not to use accommodations provided by the school in their nursing programs. Some of the reasons included they didn't want to be seen as different, the real world doesn't have accommodations, they didn't want to ask for accommodations on the NCLEX, and they didn't want to be viewed as getting an unfair advantage. One student explained:

I kind of wish people were more understanding teacher-wise. More accepting of the fact that by making an accommodation for me it's not actually... I think they worry about, "Oh it's not fair if I make an accommodation for you." But actually that makes it fair because the real world is nothing like school. The real world is handled very differently, it's not Scantron tests in the real world. I kind of wish, for the fact that some people are going to be great nurses and have those skills, but just don't take standardized tests well. I wish there was some way for the schooling, without seeming unfair to someone who's a normal thinker, realize that by us doing certain things differently it actually makes it fairer. Because in essence they're asking us as a fish to climb a tree and judging it on that, and then saying we're bad fish. Whereas if you ask me to swim up the stream and jump that cliff, I totally could do it no problem. I'm a great fish. You're just asking me to climb this tree to prove to you I'm a great fish and I'm sorry, I don't have any limbs to climb the tree with.

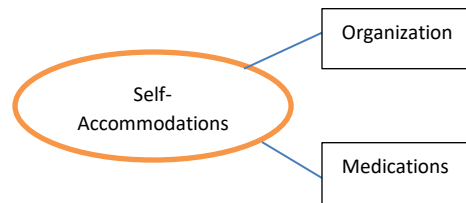
A few of the students had requested, and most of them had received school accommodations. Some of the school accommodations students had accepted included different colored paper exams, alternatives to Scantron tests, testing in a private room, and extra time on exams. One student stated, "I go to the testing center for exams." This student also explained the concerns they had with online tests and quizzes, and were considering asking for accommodations for these types of assessments because they were timed.

I've thought about that [taking ATI tests and quizzes over at the testing center], because they don't last that long but I think I will, because of the grades. I took a

quiz last night and I got a 60% on it, out of 100, and so I failed it because I ran out of time.

**Self-Accommodations.** The majority of the data for this constituent focused on *self-accommodations* students did for themselves to improve their learning and confidence. Although only a few of the students accepted *school accommodations*, all of the students utilized several different *self-accommodations* to be successful and progress in their nursing program. The *self-accommodations* students with learning disabilities utilized included methods of *organization*, and taking prescribed *medications* as depicted in Figure 10. All of the students described their learning challenges and what they did to overcome them. As a student identified the accommodations (self or school) that worked for them, they began to gain confidence in their abilities and experienced more successes in nursing school.

Figure 10: Self-Accommodations



**Organization.** Methods of organization included time management, managing the study environment, and exam preparations. Time management concerns were common among the students. Some had issues with managing their time to get homework done and study for exams, and others had problems getting to places on time. To overcome these issues, students used a variety of tools to help them get organized and manage their

time better. Some used day planners, and many made lists and felt a sense of accomplishment when they were able to cross things off. One student explained how they attempted to manage their time when preparing for class and completing homework on time.

I make lists, so I think about what homework I have to do and I make a little list. So from this time to this time I'm going to study maternal-newborn, and then from this time to this time I'm going to work on that paper for peds, so kind of like that. Sometimes that works, sometimes I don't follow it all that well.

All students discussed their perfect study environment as they described how they got organized to study or do homework. This was the environment where they learned best and felt most comfortable. The type of learning environment preferred varied among students and their learning disability. Some liked to go to a coffee shop or the library and others preferred to be at home. The students who liked to go to a restaurant or coffee shop preferred this environment because there was background noise, but nobody was talking directly to them, and they were forced to do what they went there to do. One student explained:

. . . I guess I like going to the library or Starbucks, and just hanging out and reading in a public environment where I'm kind of forced to do what I'm there to do, and not around my computer.

In contrast, other students preferred a private environment where they were free to study any way they wanted. In this environment they did not have to worry about distracting others or others distracting them. They could have music playing, or silence, and could talk out loud and be active. The following student explained their perfect study environment.

A perfect study environment would be in a place where I knew no one was going to interrupt me; no one was going to walk in, so I didn't have to worry about that. Just kind of free space where I can be loud and obnoxious and jump around and sing silly songs that go with my notes, and not have to worry about someone walking in. I like a warm atmosphere, not white walls, somewhere with plenty of sunlight. Natural light helps a lot for me, as far as studying and reading go. I'm okay with it being silent; if there is sound I tend to gravitate more towards instrumentals instead of TV that becomes more distracting to me. I really like instrumental music just to have something there more than silence.

Still other students needed a silent environment; a place where there were no distractions. These students preferred a place with no noise and nobody else around to interrupt them. Some stayed up late or got up early when they knew their house would be quiet and no one else was around. Some preferred the library where they would find a back room or table, and face the wall so there were no distractions. One student described their perfect quiet study environment as:

Quiet, quiet, can't have distractions, can't have people talking. Sometimes the library's good, sometimes it's not, so I like to be at home in the basement where everything's off, it's just quiet and that way I can focus. Anything else takes away.

For many students finding the best time of day to study was just as important as the study environment. Working in the mornings was a preference among many of the students. Many students described how mornings was their best time to study and do homework. Some students explained how they focused better in the mornings and were less productive as the day progressed. One student explained why mornings were best for them:

The morning is probably better because my anxiety gets worse during the day. So, during the night I have a lot on my mind and it just builds up throughout the day, so I don't study as well, so the morning is definitely better for me.

Preparing for exams was another area where organization was important. A variety of study tools were used to prepare for exams, including making their own study guides, studying in groups or with another person, or making up actions or chants to help them remember content. One student explained how they organized the information to study for a test.

I take the notes that I get in class, and I add more to them. I make study guides so for the tests, instead of looking through all the notes, I have a ten to twenty page study guide I go through. It's like bulleted lists where these medications go with this topic, so I lay it out that way. So then right away, I have the repetition of taking the notes, and copying it into something else, and reading through it. Then I'll read through and highlight the important things, and I'll go back and study that. I make my notes on the side for the key points.

Similar to the students' preferred study environments, when preparing for an exam, there was also variety in who the students preferred to study with. Several students liked to study with another person. The other person was often seen as a form of support and provided reassurance to the student, and also helped to keep them on task. For this group of students studying in a larger group or with more than one person was distracting, but studying with one person who studied in a similar way as they was beneficial. A few students explained when they studied with a classmate they would quiz each other, and work through practice questions and the rationales. They explained it was a time consuming process but effective for them learning the information. The following student described their experience of studying with a classmate.



I move a lot, kind of read through my notes, and I have another student and we will read back and forth. She also has a LD, so the two of us like to get together and she likes to highlight things a lot, and I not as much, I circle things or make my notes or draw a picture. But we both like to read things out loud, so we will switch back and forth reading it and hearing it. I like to move around a lot, so I will be kind of pacing around the room and that's usually how I prepare.

Many of the students explained how studying in groups, or with more than one other person, did not work for them. They would easily become distracted when studying in a group and did not learn or retain much of the information. Many times the study groups would turn into a social time and little studying would get done. One student explained how they learned to make studying with a group effective.

Not if study groups are just doing normal studying, but if people are like, "Help me with this," that kind of studying, I do great at, I do really great at teaching. If I am teaching someone I retain all things really well, and I understand things better. If we are just sitting there all trying to study and quiz each other, it's rare that it sticks with me. I have to do at least, if I am teaching at least I would say 30% of the time, I retain better.

Repetition was a self-accommodation all students used as a learning strategy for preparing for exams in both the classroom, and for clinical lab skills. The students identified ways they go over information several times and in different ways so they remember the content. The process of repetition was time consuming, and many students needed extra time to study. Students would write things down and re-write things to learn. Others would draw pictures or diagrams, make flashcards, or make up songs and chants to say over and over to remember information. Some students liked online recorded lectures that they could listen to when they were ready to focus, and could listen

to many times. A few students audio recorded themselves going over their notes and listened to the recordings many times, as one student explained.

. . . I basically have to have all of my notes. I get everything prepared, everything gone through and then I read it. I read it out loud. I have my own recorder, and I read it out loud through the entirety of my notes. I just reread and reread. I would listen and listen and listen. . . I always recorded myself, so every single test I've ever taken, I've listened to myself talking. Anything I ever needed to memorize was on paper, read out loud, and I recorded myself. I would just listen over and over and over.

The importance of *organization* was evident for all students in all areas of their nursing school experience. Some students identified early what their methods of organization were, while others figured out their best way to stay organized throughout the program. Organization was a self-accommodation all students utilized. The use of *medications* was a *self-accommodation* used by some students to help with their learning, and will be discussed in the following section.

**Medications.** While tools to help the students stay organized were important to accommodate their learning disability, for many students this was not enough to fully manage their disability. Several students made the decision to take medications to help with their learning. The medication improved their ability to focus and also improved their confidence. It was perceived that the medications didn't give them an advantage over others, but instead brought them closer to the level of their peers, giving them the motivation and the ability to study and focus longer. In the words of one student;

I feel the medication makes it easier to sit down and read for longer. Fifteen minutes at a time right now is my max, and then I'll walk around my house and I do random things. I come back and do 15 more. Sometimes, when I take those

medications, when they're working, I can sit for 45 minutes. I can cover so much more ground and then I get the grade that corresponds with the time that you spend doing it. . .

Some students saw improvements in their grades after they started to take medications. Once their grades improved, their self-confidence also improved, as illustrated in the words of one student.

My grades beginning of last semester when I wasn't on anything and now after talking to somebody and taking meds, it's a game changer. I have so much confidence in getting better grades. I don't know if that's it [meds and counseling], but it's been so nice now that I am on something. I didn't even get a C last semester, and usually I'm like Cs, barely passing, so it's been awesome so far.

While the medications were helpful in accommodating and managing their disability symptoms, taking medications could also be a stressor. The process of finding the right medication, and the right dose to be effective, was a time consuming and challenging process. The students didn't always feel like the medications were working like they should, and had to go back to their provider for an increased dose or new medication. A few students also had concerning experiences with other students without a learning disability asking for their medications, especially medications for ADHD. For some there were also concerns with becoming dependent upon their medications.

I guess for me I don't want to be dependent on it. I hate saying that, but I don't want to be on this. I feel like I can function pretty good without it. I'm obviously not as focused and it takes me longer to say things, and explain things because I kind of ramble. But once I'm done with school, I want to be done with it, because I know I'm not going to go on, because I hate school. But it's just something to kind of help me get through school.

All students with learning disabilities used accommodations. Some used both *school accommodations* and *self-accommodations*, while all students used self-accommodations. In addition to the use of accommodations, all students had other *sources of support*. Those sources of support will be discussed in the following section.

**Sources of Support.** The presence of a support system was shown to be a key component to “*developing adaptive pathways on the way to becoming a good nurse.*” Students received support from a variety of different people including family, peers, the university/college, and others. Many students discussed how their family was there to support them and listen to their struggles and successes. Family, which included parents, significant others/spouses, siblings and children of the students provided support in a variety of ways. Some were a source of encouragement cheering the student on, others reminded the student to study or do their homework, and a few even helped with proofreading assignments. Parents of the students were a main support for them as one student gave the following example.

She [my mom] pretty much attacks it head on. She’s one of those people that says, “Don’t wait for it to become a disaster,” and “Let’s solve the problem now.” Let’s get you a prescription.” She’ll remind me to take it, “Are you taking your pill? Are you taking your pill?” So she’s definitely someone who has really encouraged me to say it’s kind of an illness. “You don’t have enough serotonin. Let’s deal with it now.”

Most students also saw their peers as a source of support. Many of the students explained how their classmates had become like family and they couldn’t imagine going through nursing school without them. Much like the support from family the support students received from peers included encouragement and motivation to keep working.

Interestingly the student with a learning disability also wanted to be seen as a support to their peers, and wanted to help them succeed. Several students discussed how their peers helped them study, prepare for exams, and practice skills.

. . . Actually there are a few students that I really appreciated last semester because they have worked with me a lot. It was four of them, and it brought us closer together as a team because if I didn't know something they were there to help show me how to do it and practice it with me. We would come in and one of them would demonstrate it, and then maybe one of the other ones would go next so I could watch a little more, and then I would do it. They would help me by telling me what I could improve on or what I wasn't doing right.

The support that students received from services and individuals from their university/college was also important. Some found support in services the university offered, such as those offered by the disability support office and counseling services. Some also felt support when their instructors would provide reassurance, acknowledged their hard work, and encouraged them. Some students saw their academic advisor, in particular, as a support person and someone they could go to with any questions or concerns, as one student explained.

My advisor was extremely encouraging. She was so supportive. I think, I got confidence just from her supporting me, telling me, "You can do it. If you have any problems, seriously come and talk to me." She opened her doors and made it so easy that it kind of took that fear of school away.

The constituent *use of accommodations* explained what students do to be successful in nursing school. Success came when the student identified what their challenges were and what they needed to do to overcome them. To find success all students used the *self-accommodation of organization*, while some of the students

reached out for additional help and took *medications* to help with their learning. *School accommodations* were also used, in addition to *self-accommodations*, by several students. *Sources of support* from other people were also an important component to the students' success. They found the encouragement and motivation they received from others as invaluable. When a student was able to identify the accommodations that worked for them they became more confident and acknowledged the success of their hard work, and saw their pathway leading them to *becoming a good nurse*.

### **Becoming a Good Nurse**

As students were “*developing adaptive pathways on the way to becoming a good nurse*” it became important to identify what accommodations worked for them to be successful. The majority of students utilized only self-accommodations to be successful, although there were a few who also accepted school accommodations. An important component of students progressing on their pathway was confidence. Confidence was an important component of students finding their pathway to success in nursing school. Confidence was found through success and knowing their strengths. Confidence was also found as students saw themselves becoming a good nurse. As a student became more confident they were also able to identify their successes more clearly. The majority of students found their successes in the clinical environment, where they were able to demonstrate to their instructors what they knew, in ways other than classroom assignments and examinations. The majority of students felt proud during clinicals and

often received praise from nurses on the floor about their nursing care. One student described their success in this way:

. . . It's only a disability because of the way we choose to teach. So if we learned differently then it wouldn't be a disability. So I feel like a huge success for me is in the clinical setting. I might not have the book memorized, and I probably don't have this broader knowledge as other people do, but I'm very good at interacting with people and understanding humans. That's something that's easy for me. So, when I get to clinical, I am good at applying that information that I have learned. I think that's because I do it in actions and I'm able to apply it to the clinical setting better because I've already done the action. And so when I'm in clinicals I am doing the action again in a live setting. So I feel my biggest success in nursing school comes in the clinical setting by far.

As students started to gain confidence and saw more success within nursing school they then saw themselves *becoming a good nurse*. Students explained the characteristics of a good nurse as intelligent, caring, compassionate, and trustworthy. The students all described what a good nurse was to them, and they all believed they met the criteria and would become good nurses. The students' descriptions of a good nurse expanded as students progressed from semester to semester. The following student explained what they thought a nurse did before they started nursing school, and what they perceived nurses to be at the end of their nursing program.

I didn't really know what they (nurses) did. I just thought "Oh, they go into a room, get meds and just walk out." I didn't know anything about assessments; I didn't know anything about charting, the skills, and the techniques, all of those things. Now, when I see a nurse, I see them as extremely smart. I see them as underestimated. . . The nurse is doing the treatment and evaluating the effectiveness of the treatment. They're assessing the patient to make sure it's working, if it's not working, they're making the calls to say "You need to change this" and there's so much responsibility. I feel like people don't understand that. . .

So, when I think of the characteristics of a nurse, as a student nurse watching, some of the really good nurses know all of these things that we have to look up. They can read the ABG or they know their assessments. They can see something coming and know when to change things. I feel like those characteristics are extremely valuable. . .

Being a good nurse involved seeing the whole picture of what was going on with a patient, and using critical thinking. A good nurse also had the characteristics of being intelligent and knowledgeable, showing compassion, was caring and humble, and wasn't afraid to ask questions. The following student described what they perceived a good nurse to be.

I see someone who looks at the whole picture. Somebody who walks in the room and senses, "Okay, something isn't right. Something is off. There is something different. They were acting like this two hours ago, now they are acting like this." I like nurses who are all about the person [rather] than the chart. The nurses who are very attentive to their patients, not just like, "Oh his labs came in." I like the nurses who assess head to toe and just know what they are doing in general. The nurses that are humble and admit they don't know everything. . .

### Summary

In nursing school, students with learning disabilities can be successful by "*developing adaptive pathways.*" The process of "*developing adaptive pathways on the way to becoming a good nurse*" begins with identifying as having a learning disability. Accepting their learning disability often came when the student began to *understand what the learning disability means.* Some students accepted their learning disability, and identified as having a disability after *getting a diagnosis,* and others because of *thinking differently* from their peers accepted their learning differences. After a student understood



their learning disability they went through the process of *making a decision to disclose the learning disability* to others, or not. Many students made the decision to disclose their disability to request accommodations in their classes. Those who decided not to disclose often did so related to fears of being treated differently than their peers.

After the student participants identified as having a learning disability they began to acknowledge the challenges they perceived were related to their disability. The students viewed the challenges as, "*just another hump to get over.*" Many of the challenges included *frustrations with being labeled*, and *insecurities* caused by their learning differences. *Clinical and classroom difficulties*, including the *instructor approach* to teaching, and *testing concerns* were challenges the students had to overcome throughout nursing school. As the students worked to overcome their challenges and learn, they perceived themselves as *working harder*, when compared to their peers.

All student participants recognized the importance of the *use of accommodations* to overcome any challenges they had in nursing school. All students used *self-accommodations*, or things they did on their own, such as *organization*, and some also used *medications* to help them learn best. Some students accepted *school accommodations*, such as a private room for testing and extended time on tests, to overcome challenges they experienced in the classroom setting. All students also recognized the importance of other *sources of support*, such as family and peers for encouragement and motivation.

When nursing students with learning disabilities went through the process of “*developing adaptive pathways on the way to becoming a good nurse*” they identified as having a learning disability, addressed challenges to overcome, and used a variety of accommodations to be successful. Students with learning disabilities can be successful in nursing education. The key to success is “*developing adaptive pathways.*”

## CHAPTER V

### DISCUSSION, IMPLICATIONS, LIMITATIONS, AND CONCLUSIONS

The specific aims of this study guided the descriptive phenomenological research about students with learning disabilities in nursing education. The interviews with the students resulted in rich descriptions of their experiences. This chapter discusses the findings of the study, including the essence and constituents. The study limitations, as well as implications and recommendations for policy, practice, education and research will be discussed. This final chapter will also review the methodology used and present the conclusions of the study.

The data analysis of the student descriptions of their experiences provided a wealth of information. The information gathered led to the development of the model, the essence of which is *“developing adaptive pathways on the way to becoming a good nurse.”* The model can be seen in Chapter Four. The model describes what is needed for a nursing student with learning disabilities to develop their own adaptive pathway to success. Each student at some point discussed the different strategies they used to be successful in nursing school. The development of adaptive pathways is supported with the constituents of *identify as having a learning disability*, *“just another hump to get over,”* and *use of accommodations*. Each constituent is supported by themes and sub-themes as was discussed in Chapter Four.

In addition to the emergence of the essence of the phenomenon there were other important findings. Through the literature review it was found that students with learning disabilities often felt like they were “walking on eggshells” (Maheady, 1999, p. 165). The current study elaborated on this and found students with learning disabilities had to overcome the doubts of others and their own fear of failure. This was explained in Chapter Four, with constituent two, *“just another hump to get over.”* Many students described times where they felt others did not believe in them and their abilities to be successful. This doubt came from instructors, advisors, peers, and family. The students also placed themselves under extra pressure with fears of not passing and failing out of nursing school. The current study provided several examples of times and situations where students felt they were not going to pass, and the added stress and anxiety that caused the students.

A second important finding supports Patricia Benner’s theory, from novice to expert (Benner, 1984). With the sample of students interviewed representing all levels of a BSN nursing student, it was interesting to learn from the students’ experiences how they progressed from novice to advanced beginner. Students who had only completed one semester of nursing school or were in their second semester were in the novice stage. They explained their frustrations with testing and having questions/scenarios about situations they had no experience with, and nothing to relate to. Others talked about their fears of being in the clinical environment without a partner, and not having someone with whom to talk things out. Students who were in their third or fourth semester showed

progress in moving from the novice to advanced beginner. They described a nurse as someone who looked at the whole patient and saw them as more than a lab or diagnosis, really wanting to care for the whole patient, and being confident in their cares and assessments. Students coming to the end of their nursing education, having gone through or were in the middle of their final clinical practicum, were in the advanced beginner stage and in some areas may have been approaching competent. Students in their final semesters described an experienced nurse in the expert stage as someone who they want to become. They described a nurse as being knowledgeable and prepared for all situations, anticipating all different scenarios and knowing how to respond.

This information did not become clear until the end of data analysis. Seeing the development of nursing knowledge was evident after going through all the data and then looking at it again in a different perspective going from the whole, to the parts, and back to the whole again. The next section is going to further describe the participants of the study.

### **Participants**

Nine nursing students with learning disabilities participated in the study, including eight females (88.9%) and one male (11.1%). According to the National Council of State Boards of Nursing (NCSBN) (2016) prior to 2000, only 5.8% of licensed nurses were male, and between 2013-2015, that percentage increased to 14.1%, which is similar to this study. Participants must have completed a minimum of one semester of their nursing program, and all were in nursing programs that consisted of five semesters.

The participants represented all four of the semesters; second semester had three participants, third semester had three participants, fourth semester had two participants, and the final fifth semester had one participant. Diversity among the participants was also seen in their ages. The age range of participants was 21-55, with the average being 31.77. The average age of newly licensed registered nurses is 31.6 years (NCSBN, 2015), which is similar to the average age of participants. In addition, several different learning disabilities were represented among the participants, as discussed in Chapter Four. The diversity among participants provided a wealth of rich data, which led to the finding of the essence of the phenomenon, *“developing adaptive pathways on the way to becoming a good nurse.”*

Over time and through each student’s own process they were able to find their pathway, and what worked best for them as they were learning how to be a nurse. The participants who had a diagnosis of a learning disability were diagnosed between the ages of seven and thirty-three, with an average age of nineteen. Some of the students talked about learning early on in their academic career how they learned best, while others learned through a process of trial and error. Several of the students talked about new ways of learning that they had found were effective for them since being in the nursing program. These varied among the students but included studying with another person, reading things out loud, recording themselves and listening to it over and over, making note cards or flash cards, and making up actions or chants.

In general, the students were familiar with their learning disability, and what it meant to them and their learning. Students were able to describe how their learning was affected by their learning disability and the things they did to overcome any weaknesses. For some, the diagnosis of having a learning disability brought a sense of relief because they now had an explanation for some of their struggles. For others, a diagnosis opened new doors to resources and opportunities they didn't know were available.

### **The Essence of the Phenomenon**

The essence of the phenomenon is what was constant and essential in the data. Discovering the essence of a phenomenon means identifying what is the same in separate unique experiences (Dahlberg, Drew & Nystrom, 2001). The essence is what makes something what it is; the phenomenon of experiences students with learning disabilities faced in nursing education would not be what it is without the essence. The essence of the phenomenon in this current study was *“developing adaptive pathways on the way to becoming a good nurse.”*

The constituents of the essence are what make the essence explicit. The constituents of this current study were *identify as having a learning disability*, *“just another hump to get over,”* and *use of accommodations*. All three constituents are necessary for the essence of *“developing adaptive pathways on the way to becoming a good nurse”* to display itself. In order for a nursing student with a learning disability to *“develop adaptive pathways on the way to becoming a good nurse”* they must first

identify as having a learning disability, then determine what humps they need to overcome, and finally identify what accommodations they need in order to learn.

The students all explained the different things that they did when they were studying, doing homework, taking an exam, at clinicals or in the simulation or skills lab that were most effective for their learning. Even though there were a few students who stated they did not know any study strategies, throughout the interviews they all explained what they did to learn. All students expressed the importance of doing things their way even if it was different from their peers.

As students developed their own adaptive pathway to success in nursing school they identified the accommodations and different strategies that worked for them. As the students identified what worked for them, they gained more confidence, experienced more successes, and saw themselves *becoming a good nurse*. The essence of “*developing adaptive pathways on the way to becoming a good nurse*” was evident in all of the student interviews. Even though the students’ experiences were different and they had different learning disabilities, all students talked about how they had learned to do things their own way. The process of developing their own adaptive pathway included the constituents discussed above. The next section will describe more about the constituents of the essence.

### **The Constituents of the Essence**

The essence involved three constituents: 1) *identify as having a learning disability*, 2) “*just another hump to get over,*” and 3) *use of accommodations*. The



constituents, themes and sub-themes of the essence all relate to each other to show the essential structure of the phenomenon (Dahlberg, Dahlberg & Nystrom, 2008).

### **Identify as Having a Learning Disability**

All students in this current study identified as having a learning disability, but not all disclosed their disability to others. Ijiri and Kudzma (2000), who described a framework to assist nursing faculty in maximizing the success of students with learning disabilities, explained students with learning disabilities who viewed their disability as part of their identity and who received appropriate support had higher levels of success.

**Understand what the Learning Disability Means.** Many students developed an understanding of their learning disability by *getting a diagnosis*, and/or by looking up information about their learning differences. As the students began to understand their learning disability, many described themselves as *thinking differently*. All students understood the way they learned was unique to them, and how they had to study and do things was different from their peers without a learning disability.

Although the students with learning disabilities in this current study recognized their learning differences, they were concerned about being treated differently by their peers and instructors because of their disability. Maheady (1999) supported this finding with the theme, “put their pants on the same way.” Maheady (1999) conducted a qualitative multiple-case study of nursing students, nursing faculty, nurses, patients and other students and looked at how reasonable accommodations can be used to support students and nurses with disabilities. Students with learning disabilities want to be treated

like any other student. Walker et al. (2013), who through mixed methods interviewed and surveyed students with disabilities and professional staff about the tensions between higher education and placement providers in the health care environment, also briefly mentioned a barrier to students disclosing their disability was a concern of being treated differently.

Although there were studies noted in the literature review that discussed the concern students with learning disabilities had regarding being different, this did not seem to be as predominant a finding in the literature review as it was in this current study. This information could be missing from the literature as many of the studies were from a perspective other than the students, such as instructors or students without disabilities. Another possible explanation is the methods used in other studies focused on other components of having a learning disability, such as diagnostic processes and success strategies. All students in this current study provided examples of times they felt different or were worried about being different, and would go to great lengths not to be seen as different or treated differently.

For some students to *identify as having a learning disability* they had to go through the process of *getting a diagnosis*. After a student was diagnosed as having a learning disability, or suspected they might, they looked for more information to learn about their learning differences. Ridley (2011), in a study about students with dyslexia, found those who went through the diagnosis process and received a diagnosis had mixed feelings, as to whether or not it was beneficial. Some felt the process to be interesting

where others saw no benefit to them. Ridley's (2011) study findings support this current study in that students in this study also had mixed feelings about getting a diagnosis. Some students explained how getting a diagnosis felt like a relief as it provided an explanation for some things, and some also described the added resources available to them after receiving a diagnosis. A few students saw their experiences of trying to get a diagnosis as negative. They did not see the benefit of a diagnosis and felt more self-conscious after the appointment. Even with a diagnosis students would not label themselves as disabled and instead made the decision to focus on their strengths.

**Making a Decision to Disclose the Learning Disability.** Students discussed disclosing their learning disability to family, peers and instructors. Carney et al. (2007), who studied how a university met the needs of students with disabilities through surveying students with disabilities and special educators, cited the low numbers of students who disclose their disability to instructors. Although that study included more than students with learning disabilities the findings revealed only 63% reported their disability to faculty at the start of the semester. What was concerning is that 45% reported negative responses from the faculty after their disclosure (Carney et al., 2007).

In this current study, 66.7% (6 out of 9) of students were identified by their institution's disability support services as having a learning disability, but only 33.3% (3 out of 9) received accommodations from the school for their learning. The main reason students gave for disclosing their learning disability to instructors was to receive accommodations and, if the student didn't want accommodations provided by the school,

they saw no need in disclosing their disability. Several students had negative experiences when disclosing their disability and request for accommodations, and these experiences impacted their learning and their decision to disclose to others.

Most students found self-accommodations to be effective and didn't feel the need to disclose their disability to instructors. Wray et al. (2012), who looked at screening all nursing students for learning disabilities on admission to a nursing program, also found students who disclosed their disability early in their program had higher rates of success and progression. All of the students in this current study, who disclosed their learning disability to their nursing instructors, did so in the first semester of the nursing program in order to request accommodations they perceived they needed to help with their learning, and be successful.

Most students who made the decision not to disclose their learning disability to their college or instructors said the reason was that they did not want to be seen as different. The students did not want to be treated differently by their instructors or peers or be seen as receiving special treatment. Walker et al. (2013) found similar results, reporting that students thought disclosing their learning disability would cause them to be treated differently and their abilities questioned.

The students described their experiences of telling family and peers about their learning disability as mostly positive. Most students who disclosed their learning disability to peers explained their reaction as supportive and non-judgmental, and found them as a source of support. Students disclosed their learning disability to family as well,

because they needed them as a source of support. Orr and Goodman (2010), who used a case study design to develop an understanding of the experiences of post-secondary education students with learning disabilities; and McCleary-Jones (2008), who through mixed methods studied the experiences of students with disabilities in community colleges, also identified the need for support from family and friends for students with disabilities.

### **“Just Another Hump to Get Over”**

The data within this constituent showed students looked at their learning disability as “*just another hump to get over.*” Denhart (2008) conducted a phenomenological study looking at the barriers students with learning disabilities faced in higher education. The themes of the study were, (a) being misunderstood, (b) needing to work harder than those without a learning disability, and (c) seeking out strategies for success. Many of these were similar to the themes of this constituent: *frustrations, working harder, and clinical and classroom difficulties.* The data from this current study supported the themes of Denhart’s (2008) study, as well as the barriers identified as (a) organization of concepts in reading and writing, (b) oral and written comprehension, (c) verbal communication, and (d) having a different way of thinking. The current study identified humps students had to overcome in both the clinical and classroom environments. Classroom challenges discussed by the students in the current study included issues with long reading assignments and writing assignments. The students with learning disabilities in the current study also described issues they had with communication and being

misunderstood, as well as concerns with being treated differently compared to students without disabilities.

**Frustrations.** This study revealed students became frustrated with *insecurities* they had related to their learning disability, and *being labeled*. Findings from this current study also indicated students were frustrated with being misunderstood. They were aware of their learning differences and worried about how they came across to others. They did not want to come across as being rude or disrespectful when they were simply trying to learn. In addition to concerns of being misunderstood, students in this current study also explained their frustrations with *being labeled*. Although students were concerned with being labeled, they were not defined by the labels, and did what they could to overcome them. Denhart's (2008) study supported the above findings, in that being misunderstood held students with learning disabilities back from asking for the support that they needed in fear of being labeled as lazy and wanting an advantage.

Fear of failure was the most common fear described among the students in this current study, and a source of insecurity. Ijiri and Kudzma (2000) found the majority of students with learning disabilities came into college with fears of failing. Maheady (1999) found students with learning disabilities fear their instructors finding out about their disability, and them being dismissed from the nursing program. This was not a finding of this study. None of the students said at any time during the interviews that they were worried, if someone found out about their learning disability, that they would be dismissed from the nursing program. A possible explanation for this is the time

between the two studies. Maheady conducted their study in 1999, just nine years after the Americans with Disabilities Act (ADA) was passed. This current study was done eight years after the ADA was amended in 2008. Over the years, perhaps society has become more aware of disability laws and giving all people an equal opportunity, and thus, students in this study did not face some of the same fears of dismissal because of their disabilities.

**Working Harder.** *Working harder* was common among participants. Students explained they worked harder related to issues with focusing and retention of information. Students also described weaknesses they had to overcome and procrastination. Most of the students felt they did work harder and longer than their peers, but that their efforts were not seen in their grades. Denhart (2008), who studied students with learning disabilities in higher education, and Kolanko (2003), who interviewed nursing students with learning disabilities, described similar findings, explaining students with disabilities felt they worked harder but their hard work was not recognized by others. Denhart (2008) also found students with disabilities worked harder, at times to the point of exhaustion and other illnesses, not wanting to ask for help or be labeled. Many students in this current study talked about how they were easily distracted and had issues with retaining information. Students explained how they had to go over things many times, often having to reread, rewrite and relearn information so that they could retain it.

**Clinical and Classroom Difficulties.** Most students explained how they mostly noticed their learning disability within the classroom and did not have concerns related to

their learning disability in the clinical environment. Classroom difficulties students talked about included testing concerns, writing and math concerns, reading assignments and long lectures. The instructor's teaching style and approach to the student also had an impact on the students learning in both the classroom and clinical environments.

Students were more comfortable in the clinical environment because they felt they fit in and were not singled out related to their learning disability. Several students commented on how real life was nothing like the academic setting, and when they were in everyday life they did not perceive their learning disability to have an impact. Students saw the clinical environment as a more accurate representation of everyday life where they could blend in. Several students wanted to be able to demonstrate to their instructors their knowledge or comprehension of content in a way other than a test or exam, and saw clinicals as their opportunity to show what they knew. In the classroom setting students with learning disabilities felt their learning differences were highlighted, related to either school or self-accommodations they used to learn; whereas they saw their performance during clinical as a strength and success. Many students in the current study described having more difficulties with the lower-order cognitive skills of knowledge and comprehension in the classroom (Adams, 2015). Whereas most of these same students, described their strengths as application of their knowledge in the clinical environment, and even high-order cognitive skills such as analysis, where they were able to critically think through a situation at clinicals. Even though on Bloom's Taxonomy, students with learning disabilities may be perceived as having more difficulties with knowledge and



comprehension in the classroom, through “*developing adaptive pathways on the way to becoming a good nurse*” they found ways to learn on their own, to be able to later apply and analyze their knowledge confidently in the clinical setting.

Fuller, Healey, Bradley, and Hall (2004) through surveys with qualitative comments described barriers students with learning disabilities faced in higher education. These barriers included lecturers who talked too fast, visual slides taken down too quickly, and trying to listen or watch and take notes at the same time. This was consistent with this study’s findings that learning was negatively impacted for students when instructors talk too fast. Students also explained it was difficult for them to learn when an instructor said something was important, but did not put it on the board for the student to write down.

Fuller, Healey, Bradley, and Hall (2004) in their study of students with disabilities in higher education, also found that students with disabilities had more issues with written work, and anxiety during times of evaluation such as exams. Most students in this current study also talked about difficulties they had with written work. They were self-conscious and insecure about switching letters around or not catching simple mistakes.

Other studies have found that nursing instructors often had safety concerns regarding students with learning disabilities (Carroll, 2004; Walker et al., 2013). What this study found was that the students were aware of their weaknesses and took steps to overcome them. The students talked about double checking math calculations with

another person, as they were aware of the severe consequences an error could cause.

Ridley (2011) had similar findings, in the study of students with dyslexia, noting students with learning disabilities acknowledged their responsibilities to provide safe care and took extra steps to ensure patient safety.

### **Use of Accommodations**

The *use of accommodations* was a commonality among all students. What was different was what each student considered to be an accommodation. Accommodations were identified in the areas of *school accommodations*, *self-accommodations*, and *sources of support*.

**School Accommodations.** School accommodations, such as a private testing room and extended time on tests, were things students requested through disability support services. The reason most students disclosed their learning disability was to request accommodations for their learning needs. In the current study only three out of nine (33.3%) participants were using school accommodations in nursing school. These three students all explained the reason they disclosed their disability to their instructors was to receive accommodations. Many students explained they did not want to use school accommodations as they felt it would draw attention to them, they did not want others to know about their disability, and/or they did not want to be treated differently than their peers without disabilities.

**Self-Accommodations.** Whether a student identified as having a learning disability with the university/college and accepted school accommodations, or not, all

students had self-accommodations that they described as helping them with learning. Self-accommodations included those things students did to improve their learning and confidence, and in this study, included *organization* and *medications*.

Students explained the importance of being organized. Organization for some was time management, while others saw it as being in the right study environment and working in the mornings. Parker and Boutelle (2009) found, when students with learning disabilities were given an added support of a coach, the goals they made with their coach were often related to organization and time management. Issues with organization and time management are not new concerns for students with learning disabilities, as Shuler (1990) also found these to be “red flags,” or signs a student may have a learning disability or specific learning needs.

Little could be found in the extant literature about the use of medications as an accommodation for learning disabilities. Three of the nine students in this current study discussed taking medications as a self-accommodation measure for their learning needs. The lack of information in the literature review may be because some of the learning differences students talked about, such as ADHD and ADD commonly treated with medications, are not considered to be specific learning disabilities, as explained in Chapter One. ADHD and ADD are classified as other health impairments, and students with these diagnoses were included in the current study because of the effects ADHD and ADD have on learning and educational performance related to issues with alertness in the educational environment (NICHCY, 2012). Prescribing of medications is not an

accommodation provided by disability support services of colleges and universities, and therefore not considered a school accommodation. The students who reported taking medications for their learning explained seeing other healthcare providers for their medication needs.

Like the students in this current study, Heiman and Precel (2003), who compared students with and without learning disabilities, also found students with learning disabilities used more strategies for learning such as making up chants and drawing to help with repetition of information and retention. They also found all students, those with and without learning disabilities, did things to repeat new information being learned. Students with learning disabilities preferred to learn things orally or visually. Heiman and Precel (2003) also found students with learning disabilities had a more difficult time paying attention. The current study supports those findings. Many students in this current study explained how they had a hard time focusing in class and while studying, and were easily distracted, which then caused the students to have to repeat and relearn information over and over again.

**Sources of Support.** The need for a support system was consistently identified in all student interviews. The sources of support were from many different people including family, peers, university/college resources, among others. Maheady (1999) also found students were supported in diverse ways through family, friends and instructors.

Walker et al. (2013) identified the importance of instructors being a support for students with learning disabilities, but only 35% of instructors were aware of having

contact with a student with a disability. The current study found this to be a barrier to a support system because, if instructors were not aware of the students learning needs, they were not be able to provide them with what they needed.

### **Becoming a Good Nurse**

*Becoming a good nurse* is a consequence of nursing students with learning disabilities following the model of “*developing adaptive pathways.*” Students developed a sense of confidence when they identified their own strengths, and had success in both the classroom and clinical environments. For nursing students with learning disabilities to perceive their ability to be successful they needed to identify as having a learning disability, acknowledge the challenges they needed to overcome, and use accommodations to help with their learning.

Wray et al. (2012) found students with learning disabilities were successful through collaborative efforts of themselves, accommodations, and support systems. This study supports those findings as the students discussed the importance of all three components. Although students talked about the significance of a support system and accommodations, they shared more how they wanted the work they did to result in success. Students want to be successful without having to rely on another person or thing. Students explained what their strengths were and how they felt they were successful when they were able to utilize their own strengths. Many students talked about their strengths as being in the clinical environment, and they felt proud as they saw themselves making good decisions, providing good cares and *becoming a good nurse.*

## **Implications**

Although the results of this study cannot be generalized to all students with a learning disability in nursing education, the results of the study are supported by other studies researching students with learning disabilities in higher education and nursing education, which supports the credibility of the findings. The findings of this current study provided an understanding of the unique experiences of students with learning disabilities in nursing education. The knowledge acquired through this study has important implications for nursing policy, practice, education, and research.

## **Policy**

The Americans with Disabilities Act (1990) ensures equal opportunity, nondiscrimination, and full participation with accommodations, if needed. The ADA Amendments Act of 2008 (ADAAA, 2008) was passed to reinforce and carry out the original intent of the ADA, and placed a greater emphasis on the institution to prove efforts were made to offer accommodations, and less on the individual to prove their disability. According to the ADA (1990) and ADAAA (2008) institutions of higher education are required to make reasonable accommodations, if needed, for students with disabilities unless the modifications would fundamentally alter the educational services being offered. Although institutions of higher education are not required to make accommodations for students who do not disclose they have a disability, the institution should anticipate they have students with disabilities who qualify for services. During recruitment for this study two institutions of higher education stated they had no students

with learning disabilities in their nursing programs and declined participation. Institutions of higher education need to anticipate they have students with learning disabilities and not restrict their opportunities for participation by assuming they do not have any students with disabilities.

A way for institutions to anticipate and be prepared for a student with a disability to come forward would be to require training of faculty on students with disabilities. The model of “*developing adaptive pathways on the way to becoming a good nurse*” can be used in higher education to develop a policy to incorporate training or an education module about students with learning disabilities. It is important when providing information about learning disabilities to educators to include the voice of students with learning disabilities. Providing information specifically about different learning disabilities is beneficial, but including the student experiences about being successful will better enhance the training on learning disabilities.

Nurse educators, along with other faculty in higher education, often have little knowledge about disabilities or laws in place to ensure students with disabilities an equal opportunity. Faculty in higher education need more training on the ADA (1990), ADAAA (2008), what their responsibilities are as faculty when a student discloses a disability and requests accommodations, and the potential consequences of not making a requested approved accommodation for a student. Being mandated to review a learning module or go through a short training on students with learning disabilities and the requirements of the ADA and ADAAA will increase the educators’ comfort, and let them

know who to contact for assistance when they have questions related to a student with a learning disability.

In higher education students with learning disabilities are required to disclose their learning disability to disability support services on campus to request and receive school accommodations. Many students with learning disabilities in this current study did not disclose their learning disability for fear of being treated differently. Wray et al. (2012) discussed having all nursing students screened for learning disabilities at the beginning of the nursing program. This would identify any students with a learning disability and those students at risk. Once the students were identified they could start to get added support and have higher levels of success. The findings from this current study do not support Wray's recommendation of having all students screened for learning disabilities. As discussed and found in this current study many students do not disclose their disability for fears of being treated differently, they don't want or need accommodations, or because they simply don't want to. The decision to disclose a learning disability is a personal one that the student should be able to make and not be mandated to disclose based on required screenings.

### **Practice**

This study helped to demonstrate that students with learning disabilities were aware of the extra burden they carry to ensure patient safety. Even though studies (Sowers & Smith, 2004; Marks, 2007) have shown no correlation between students with learning disabilities and unsafe care, many in healthcare and nursing education believe students with learning disabilities jeopardize patient safety. The results of this current



study revealed students were aware of their limitations and would do what was needed to ensure patient safety. Students with learning disabilities can become nurses, good nurses who provide safe and competent cares. A recommendation for nursing practice would be to educate nursing supervisors, managers and nurse educators on nursing care units about learning disabilities. Asking all nurses on hire or with a new nursing role what their specific learning needs are will maximize the training and orientation all nurses receive and not single out nurses with learning disabilities.

### **Education**

There are numerous implications this current study has on nursing education. To begin, nursing education needs to include more about learning disabilities in their curricula. The more nurses know about learning disabilities will not only improve their acceptance of nurses with learning disabilities, but also improve the care nurses provide to patients with learning disabilities.

Several students explained how they didn't feel their grades and test scores reflected what they knew. Nursing education needs to look at alternative ways to assess what students are learning. Some students explained they can tell you what they know better than they can answer a test question. Others explained how they hoped their instructors noticed what they did in skills labs, simulations and clinicals, as they felt that was more representative of their knowledge.

Bloom's Taxonomy can be used to achieve a consistency with intended learning, instructional activities, and assessment methods (Ming Su, Osisek, & Starnes, 2004). The

overall goal of a nursing curriculum is to promote the transfer of learning from the classroom to clinical practice. This goal can be achieved through different instructional activities such as with case studies. As a student is working through a case study they first have to understand the conceptual *knowledge* about the case, which becomes the building blocks for that case. Next they need to *analyze* their knowledge and determine such things as cause and effect relationships. The student then takes their knowledge and *applies* it when making decisions or completing a task. The case study allows students to *analyze* the data and *compare* a variety of options to determine the best course of action for the situation. The next step in completing the case study would be *evaluating* the knowledge and decisions that were made (Ming Su, Osisek, & Starnes, 2004). The use of case studies is one alternative way students could demonstrate what they know other than through tests and examinations.

This current study also supports the recommendation for higher education to embrace universal design. Universal design, as explained in Chapter Two, creates a learning environment that promotes success for all students, both with and without disabilities (Lombardi & Murray, 2011). Many of the students in this current study expressed their desire to be evaluated in an alternative way, besides traditional testing. Universal design for assessment would allow all students, those with and without disabilities, to demonstrate their knowledge in a format without barriers while still maintaining the focus and goal of the assessment/test (Ketterlin-Geller & Johnstone, 2006). Several students in this current study also discussed how they like when an

instructor puts the course lectures on-line so they can go back and review the information and lecture at a time that is good for them. Repetition and review were strategies that helped students with learning disabilities succeed. Having all course information and lectures online, creates a learning environment in which all students can succeed. It doesn't replace the in-classroom instruction but instead enhances it by giving students an opportunity to review the information at a time and place where they learn best.

Another area of needed research is looking at the impact of innovative teaching methods, such as flipping the classroom, on students with learning disabilities. Flipping the classroom is a teaching method used to promote active engagement of students. It is a learner-centered classroom where students watch online recorded lectures, read, take quizzes, and complete other types of assignments before coming to class (Billings, 2016). The work completed prior to class allow the students to apply the new content to real world situations by solving clinical cases, developing care plans, or having debates on controversial issues during class time often working in a group. Benefits of flipping the classroom allow students to learn the new content at their speed, and able to review the content as many times as needed before coming to class. Even with the benefits there are also challenges for both educators and students when changing to a flipped classroom (Billings, 2016). For students a challenge can be the needed preparation before coming to class. This is a change from the traditional classroom and may be met with some resistance. Many students with learning disabilities in this current study expressed concerns with group work and having to complete assignments in front of their peers.

The students worried about making errors and having the rest of the class watch them. Further research is needed to determine if flipping the classroom is an effective teaching method for both students with and without learning disabilities.

One student explained their frustrations with not being recognized for their clinical accomplishments. They described how students who were seen as top of the class were recognized by being inducted into the honor society and graduate with honors recognition. What was frustrating for the student was that they viewed their peers as being good at taking a test but could not always apply that information to real life and clinical situations. Nursing education needs to look at ways to publicly acknowledge those students who excel in the clinical environment. Although most of the students described ways they celebrate their success privately, it may reduce the gap students with learning disabilities feel between them and their peers without disabilities, if they were acknowledged for their strengths.

Several implications have been noted for nurse educators as individuals. Many students explained how the reactions of their instructors to their learning disability impacted their experience of nursing school. Students who felt they were treated differently or judged because of their disability cited more negative experiences. Nurse educators need to be accepting of the student's learning needs and open to the use of accommodations. Without this approach, nursing students with learning disabilities will have a much harder time on their pathway to *becoming a good nurse*.

The model of “*developing adaptive pathways on the way to becoming a good nurse*” can also be used for nurse educators in situations where disability support services are not available or an option. The model can be used by instructors, and shared with students who have disclosed to them as having a learning disability or they suspect may have different learning needs. The model can be used by nurse educators to show students success is possible with a few adaptations.

One of the most important nursing education implications from this study is the enhanced understanding that nurse educators can gain related to students with learning disabilities. Understanding what these students go through, how they best learn, and what they need to help them be successful is important for nurse educators to be able to better support students with learning disabilities. It is important to note that each student’s experience is unique, but the similarities among the experiences provide us with a wealth of information, as shown in the model of “*developing adaptive pathways on the way to becoming a good nurse.*” By reviewing the model and student experiences, nurse educators will be more aware of the needs of students with learning disabilities. In addition, the information from this current study can help alert nurse educators when a student is struggling. Many students with a learning disability will not disclose their disability, but they may be more likely to accept help if the instructor approaches them.

### **Research**

This study also illuminated that additional research is needed in the area of students with learning disabilities in nursing education. One area that needs further

research is comparing the progression of students with and without learning disabilities as they go from a novice nurse to an advanced beginner nurse (Benner, 1984). This research needs to be done to see if the progression is similar and students reach the next level around the same time.

Research also needs to be conducted with students with learning disabilities who were not successful in nursing education. The experiences of these students need to be studied and compared to experiences of students who were successful. This information may provide higher education with things to look for in students who may be at risk for failure, and may provide an opportunity to intervene to increase the student's success. Data needs to be collected to see if there are student characteristics that lead more to success or failure. Other factors such as type of school, instructor's teaching style, and specific learning disability also need to be studied to see if any of these factors have a correlation to a student's success in nursing school.

Research looking at the experiences of both the nursing student and nurse educator/instructor is needed. Understanding the experience of the student is important, but for improvements to be made to nursing education it is also important to know the experiences of the instructor. Many conflicts occur related to a lack of information and misunderstanding of each other's experience.

The time of a student's diagnosis of a learning disability, and their progression and success within their nursing program also needs to be examined. It is important to understand the acceptance a student has of their learning disability, and what the learning

disability means to the student. Looking at the adjustment period of a student recently diagnosed compared to a student who was diagnosed earlier in life needs to be studied. More knowledge is needed to understand how a student adjusts to a diagnosis of a learning disability, and what the diagnosis means to them.

More research is also needed to identify another way besides the NCLEX to assess a graduate nurse's knowledge and competence. Several students expressed their frustrations with testing and not being able to show what they knew through traditional testing methods. Having an alternative method of assessing a graduate nurse's knowledge and competence is needed.

Additional research is also needed to determine if nurses with learning disabilities have any difference in practice related errors, and patient safety. Although the literature review in Chapter Two explained no studies have revealed a link between nurses with disabilities and patient safety issues, the belief still exists (Sowers & Smith, 2004; Marks, 2007; Ridley, 2011). Students with learning disabilities in this current study described what they did to ensure patient safety, and were aware of any limitations they may have related to their disability. More research is needed comparing students and nurses with learning disabilities to students and nurses without learning disabilities in the area of patient safety.

### **Research Approach Used**

The research methodology used for this current study was descriptive phenomenology. Descriptive phenomenology was an appropriate choice for this study as

it allowed the student participants to share their experiences of going through nursing school with a learning disability. Although previous studies have been conducted looking at students with learning disabilities in higher education and in nursing education the majority of these studies are dated. Little information is available about students with learning disabilities in higher education since 2008 when the ADA was amended.

Descriptive phenomenology allowed the researcher “to go back to the things themselves” and learn about the students’ experiences (Dahlberg, Dahlberg & Nystrom, 2008).

The desire to know how people experience their world and some phenomena is reason enough for research interviews (Dahlberg, Dahlberg & Nystrom, pp. 183-184, 2008). Throughout the interviews in this current study, students with learning disabilities were asked to describe their experiences of nursing school. Main questions, follow-up questions and probe questions were asked to get the students to describe their experiences with as much detail as possible. The information gathered during the interviews provided a wealth of information that allowed for a detailed description of the phenomenon. In depth interviews allowed for me to go “to the things themselves” thus giving me the ability to do full justice to the everyday experience of the lived experience (Dahlberg, Dahlberg & Nystrom, 2008).

During data analysis I remained as close as possible to the original data to be able to describe the phenomena and its meanings while avoiding interpretation or explanation (Dahlberg, Drew & Nystrom, 2001). Data analysis was done using bridling, which involved the process of bracketing where I restrained the pre-understandings I had



evident in personal beliefs, theories, and assumptions regarding the phenomenon being researched (Dahlberg, Dahlberg & Nystrom, 2008). Being able to hold back any pre-understandings and scrutinize myself helped me to remain open during the data analysis process. Remaining open during the data analysis process allowed me to be surprised by the data, coming to understand what I did not know (Dahlberg, Dahlberg & Drew, 2008).

It was difficult and took a conscious approach to bracket out my own understandings and assumptions. Being directly involved with the participants and the phenomenon made it impossible to bridle out all pre-understandings and assumptions. Because of this the data analysis process was influenced by my previous experiences and knowledge. For example, I had to consciously remember to ask students to describe in their words the different components of nursing education (theory, clinical, lab, and simulation). My experience as both a student and instructor within nursing education led to some assumptions that had to consciously be addressed.

Being involved in this research study appeared to be a positive experience for the students. Students explained the interviews as being a benefit to them. One student explained the interviews as, “kind of a good thing to just talk about it,” and “kind of a learning experience for me.” Another student explained, “I wish I would have thought about these things sooner,” and “someone asking the right questions and making me analyze the right side of things.” Dahlberg, Dahlberg, and Nystrom (2008) explained it is not unusual for people being interviewed to say this is the first time they have had an opportunity to express thoughts and ideas important to them. Another student stated, “this

is fun,” and they didn’t know what to expect but they enjoyed the interviews. In addition to the positive comments related to the interviews, another positive was that all of the participants completed a second interview, a further indication that they were engaged with the process as a positive one. Dahlberg, Dahlberg and Nystrom (2008) explained participating in a lifeworld research interview has the potential of bringing interviewees closer to their own experiences, expanding their own awareness and understanding of their experiences.

The research process and interviews were also a positive experience for me. Throughout the interviews with the students, I was inspired by their dedication, persistence and excitement for nursing. After most of interviews I found myself looking forward to the nursing profession’s future. The compassion the students spoke with as they worked through their journey of becoming a nurse was inspiring. All of the students spoke of learning how to be a nurse who was caring and provided safe cares.

At the conclusion of each interview, I would listen to the interview recording and jot down any post-interview notes and reflections I had regarding the interview. This process helped me to remain open to the phenomenon as being described by the students during the interviews. As a nursing instructor, I found myself interested in the descriptions of the instructor qualities they learned best from or found challenging, although a conscious effort was made to focus on the student’s whole experience of being in nursing school with a learning disability.

Data analysis, although intimidating, was exciting. The beginning of data analysis was daunting, but as the data started to come together I felt encouraged. Seeing the themes and subthemes, and constituents and essence come together to describe the phenomenon was amazing. Throughout the data analysis I found myself surprised the most by the findings of, *thinking differently* and the variety of *self-accommodations* students utilized including repetition. Although I don't feel these are new concepts for students with learning disabilities, the frequency and varied experiences described by students around this theme and subtheme was surprising.

The subtheme, *thinking differently*, encompassed the many different ways students described and explained the times and ways in which they felt different. This was a genuine concern most of students expressed. Concerns of being different emerged within other themes and subthemes as well; such as, *making a decision to disclose the learning disability* to peers and instructors, *working harder*, *insecurities*, *being labeled*, *clinical and classroom difficulties*, and *school accommodations*. At one point during an interview one student questioned if nursing was right for them because of how different they felt they were from their peers. After talking more about this, the student explained they felt nursing was right for them, at least at this time, because they felt comfortable in clinicals and with patient cares. I explored this information more in follow-up interviews by asking students what they felt a nurse was and if they saw themselves in that role. All students said they saw themselves as *becoming a good nurse*, and most of the students explained they only felt different in the classroom environment.

The other finding surprising to me was the different *self-accommodations* students used such as repetition. What was surprising with this information again was the frequency of which it was discussed, and the different ways students used repetition to study and learn. Several students explained how things take them more time. They don't want extra time and attention in the classroom, but they do need extra time to do homework and complete assignments outside of class. Students said what takes their peers two hours to complete might take them four or more hours. As discussed in Chapter Four students used a variety of methods to repeat information, such as, making up chants, writing, recording lectures or themselves, and flash cards. To remain open to this information and the students' experiences of using repetition, students were asked to explain how they study, do homework and prepare for exams. Even though there were a few students who said they didn't know any study strategies or how to study, all of them described ways they used repetition.

The whole process of data analysis and bringing the parts of the phenomenon together, and consciously thinking about how everything fits together to bring meaning to the phenomenon, is in agreement with both the philosophical goal of going "to the things themselves," and research goal of developing an understanding of the phenomenon. Throughout this research study I had to remind myself to be the researcher and to step away from the role of instructor. By doing this I believe I was able to stay open and really hear the stories and experiences of the students without placing any assumptions on the analysis of the data.

## Limitations

Limitations of the study include the lack of generalizability to other types of higher education programs. For a study to be generalizable the sample must be large enough to represent the overall population, which most commonly occurs in quantitative research. Although considered a limitation of qualitative research, from a positivist paradigm, the ability to generalize findings is not a focus within an interpretivist paradigm, which underlies most qualitative research (Munhall, 2007). Rather, attention is focused on finding a purposive sample that provides rich descriptions of the phenomenon of interest. Qualitative researchers are usually not concerned with how the results from their studies will be generalized to other situations, but instead are more concerned with the transferability of the results. Transferability refers to how the particular findings from the study can be transferred to another similar situation (Morse, 1994). Transferability is how a person is going to use the research results in their own lives or experiences. For the results of a research study to be transferable, great detail is needed regarding the study methods and the environment where the research occurred.

Nine students volunteered to participate in the study. Although the researcher had a target sample of 12-20, the nine participants of the study made up a diverse sample in age, gender, learning disability, and semester of nursing program. The nine participants came from three different institutions but each institution was not represented equally. Six participants came from one institution, two participants from another institution, and one participant from the third institution. Thus, the nine students who participated

represented a rich variety of experiences with different contextual backgrounds, which is in keeping with sampling methods for descriptive phenomenology. Therefore, although 12-20 students was the target sample size, it is difficult to predict, a priori, how large or small a qualitative sample must be in order to yield diverse and rich experiences. This was able to be achieved, in this study, with nine participants.

Additional limitations included limiting the sample of participants to traditional, on-campus BSN and associate degree students. With the differences in nursing programs, including delivery methods and length of program, a future study is recommended to look at the experiences of nursing students with learning disabilities in the various types of degree programs for nurses. For this study, innovative modes of delivery for education were not included to keep the focus on the student's experiences and separate and differentiate from the curriculum delivery methods. In addition, only students with learning disabilities in a nursing education program who spoke English were interviewed. Thus, how the phenomenon of nursing education among students with learning disabilities presents itself may be different for those students in non-traditional programs, or among those for whom English is not their primary language.

Other limitations that surfaced throughout the data collection and data analysis included recruitment challenges. Because of privacy laws and policies school personnel were not allowed to release student names or contact information to the researcher without the student's permission. Both disability support personnel and deans or chairs of nursing programs were contacted to share information regarding the study to any student

who may have met the inclusion criteria discussed above. In addition, since many students want to remain private about their disability, and will not disclose their disability, students with learning disabilities may have been unknown to personnel and administrators.

Seven institutions of higher education were contacted regarding participant recruitment from their institution. Four of the seven institutions replied to the researcher and indicated they would send the recruitment email to their students. Multiple attempts were made by the researcher to contact the four institutions to ensure the recruitment email had been sent and to see if they had any questions, only three of the institutions replied to the communication attempts. Participants of this study came from three of the institutions. One institution did not reply to any communication attempts made by the researcher. Two of the institutions declined participation in the study stating they did not have any students with learning disabilities in their nursing program. This was a barrier to recruitment and also a limitation for the study. It is unlikely an institution of higher education would not have any students with learning disabilities. The ADA (2008) also explains institutions need to anticipate a student with a disability will come forward. Stating they did not have any students with learning disabilities in their nursing program was not anticipating one or more students may come forward. This was also a limitation for the study as potential participants were not given the opportunity to participate and share their experiences. It is also possible, that the experiences of students with learning

disabilities from those institutions that did not recognize their existence could be different from those who participated in the study.

The nine participants in the study were an adequate representation of student nurses with learning disabilities, although, it is possible they do not represent the views of all students with learning disabilities. It is also realistic to accept not all students who met the inclusion criteria of the study contacted the researcher and therefore their experiences are not known.

A final limitation of the study is the sample included some students who self-reported a learning disability and did not have an official diagnosis. Although all student participants met the inclusion criteria of the study, it is possible the students who self-reported did not have a diagnosable learning disability. This could have had an impact on the students' experience in nursing school, and the data collected for this study. In addition, only those who were current students were recruited. The experiences of students with learning disabilities who were not successful in their nursing education program are missing from the study.

Although not considered a limitation, a difference between quantitative and qualitative research is independent versus dependent context. Quantitative research is independent of context, meaning it is without societal or cultural values and the researcher is not involved in the research process. Whereas, qualitative research is context dependent meaning societal and cultural values are present within the research and the researcher is involved in the research process (Crowe & Sheppard, 2010).



Concerns of context dependence in qualitative research include the effect the researcher has on the study and results. All efforts were done in the study to have the researcher hold back her own assumptions, biases and pre-understandings regarding the phenomenon through a reflective journal minimizing any effects on the study or results.

### Conclusions

A student with learning disabilities in higher education, and more specifically nursing education, is not a new phenomenon. Although there is an increase of students with learning disabilities in higher education there is little information available about their experiences of higher education and more specific to this study, nursing education.

This study used descriptive phenomenology to gain more knowledge about the experiences of students with learning disabilities in nursing education. Nine nursing students with learning disabilities participated in the study. Data was gathered using semi-structured interviews where the students shared their experiences of nursing school. The essence of the students' experiences of being in nursing school with a learning disability was "*developing adaptive pathways on the way to becoming a good nurse.*" The essence displayed itself through the constituents of *identify as having a learning disability*, "*just another hump to get over,*" and *use of accommodations*.

In developing their own adaptive pathway through nursing school students with learning disabilities had to *identify as having a learning disability*. There were several different examples given of how students first identified as having a learning disability or learning difference. Once a student identified as having a learning disability they made

the decision if they wanted to disclose their disability to others. The process of making a decision to disclose or not, often involved the student learning more about their learning disability to *understand what the learning disability means* to them. Some described being very open about their learning disability, whereas others were private, and did not want to disclose with fears of being treated differently.

Students with learning disabilities “*developing adaptive pathways on the way to becoming a good nurse*” needed to identify challenges they had to overcome. This constituent of the essence was termed, “*just another hump to get over.*” The students explained the challenges as frustrations, such as with *being labeled* and *insecurities* they had related to their learning disability. Students described *working harder* than their peers for the same results. Many talked about problems with staying focused and retaining information. Other challenges students described were *clinical and classroom difficulties*. The majority of students explained their challenges as being in the classroom and involved the *instructor approach* to teaching and *testing concerns*.

The final step in “*developing adaptive pathways on the way to becoming a good nurse*” was to determine what accommodations were needed for learning. Each student had different needs in regards to learning and their *use of accommodations*. All students described different *self-accommodations* they used to improve their studying, ability to learn, and testing. All students talked about the ways they used *organization* to improve their learning. Each student described what their perfect study environment was and ranged from complete silence to studying with another person. Some students discussed

the use of *medications* to improve their study time and learning. *School accommodations* were accommodations some students received from the school, such as testing in a private room and extended time for exams. Students also described *support from others* as an important part of their pathway to success. A student's support system could include many different people, such as family, peers, the university resources, and others.

The consequence of a nursing student with a learning disability "*developing adaptive pathways on the way to becoming a good nurse*" was success in nursing school. As the student began to recognize their strengths, and experienced more successes, they gained more confidence. This new sense of confidence carried over to both the classroom and clinical, and the student started to see themselves *becoming a good nurse*.

The major finding of this study was the development of the model "*developing adaptive pathways on the way to becoming a good nurse*." This model illuminated the pathway to success for students with learning disabilities in nursing education. The findings of this current study support earlier studies, in addition to providing more explanation of the experiences of students with learning disabilities in nursing education, which is largely absent from the extant literature.

This study described the phenomenon of nursing education as experienced by students with learning disabilities. The information collected and analyzed for the study was used to create a model, which displays how students with learning disabilities "*develop adaptive pathways on the way to becoming a good nurse*" as they are working their way through nursing school. Each student's pathway may be different but students

with learning disabilities have the potential to be successful in nursing school, and become good nurses who provide safe and competent cares.

The information found in this current study makes important contributions to research related to nursing education, as little research has been done regarding nursing students with learning disabilities, since the ADA was amended in 2008. With the numbers of students with learning disabilities increasing in higher education, universities and colleges need to be more aware of the needs of these students. The information from this study should be used to guide future decisions in nursing practice, policy, education and research in regards to students with learning disabilities.

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## APPENDICES

Appendix A  
Inclusion/Exclusion Criteria Form

**Inclusion/Exclusion Criteria Form**

*The Meaning of Nursing Education as Described by Students with Learning Disabilities*

1. Are you an undergraduate nursing student enrolled in the traditional on campus bachelor of science in nursing (BSN) or associate degree program?  
 YES  NO
2. Have you completed a minimum of one semester of the nursing program?  
 YES  NO
3. Do you speak fluent English?  
 YES  NO
4. Are you identified by your institution's disability support services or do you self-identify as having a learning disability?  
 YES  NO



Appendix B  
Letters to Disability Support Services & Deans/Chairs of Nursing Programs

Dear (name),

My name is Jacqueline L. Reep-Jarmin; I am a PhD student at the University of North Dakota in the College of Nursing and Professional Disciplines. I am in the process of conducting research for my dissertation, *The Meaning of Nursing Education as Described by Students with Learning Disabilities*.

The research question addressed in the study is, “How is nursing education experienced by undergraduate students with learning disabilities?” The purpose of the study is to develop an understanding of the lived experience of nursing education from the perspective of students with learning disabilities, and delineating the essence of the phenomenon. Specific aims include (a) to describe, through the experiences of students with learning disabilities, how having a learning disability is part of their nursing education experience, (b) to describe factors which help them succeed and progress in their nursing education programs, and (c) to describe factors which have made success and progression difficult in their nursing education programs.

I am contacting you because you are the Dean or Chair of the Nursing Program at your academic institution. Currently, I am working on receiving IRB approval for my research study and identifying institutions to recruit research participants. Research participants will be traditional undergraduate nursing students from selected institutions in the upper Midwest. The selected institutions will be approved by their state board of nursing and accredited by a national accrediting agency. The institutions must have an undergraduate nursing program with an on-campus mode of delivering education to students. In addition, the selected institutions must have disability support services or department. Research participants, in addition, to being undergraduate nursing students enrolled in the traditional on campus bachelor of science in nursing (BSN) degree or associate degree program, must also have completed a minimum of one semester of the nursing program, self-identify or be identified by the institution’s disability support services as having a learning disability and be able to speak and understand English.

Students who meet the inclusion criteria and voluntarily agree to participate in the study will be asked to complete a demographic form and participate in two interviews. The first main interview will last approximately 60-90 minutes and the second interview is expected to last 30-45 minutes. The interviews will occur at a mutually agreed upon location. Student participants will receive a \$10.00 gift card for a local merchant at the conclusion of the second interview.

All efforts will be done to ensure confidentiality of student participants and institutions. All identifying information, including individual and institution names, will be removed from any research materials. Anonymity of participants will be maintained by using labels of “Participant A1cb3,” “Participant B3ad1,” and so on. Institution names will not be used on any research materials, and any institutions inadvertently mentioned during the interviews will be removed during the transcription process.

No contact will be made with you, your institution, and students prior to receiving IRB approval from the University of North Dakota’s institutional review board. At the time IRB approval is received, you as Dean or Chair of the Nursing program, will be contacted asking for assistance in sharing information about this study with students in your nursing major per email. Any students interested in participating in the study will be asked to contact me through the information provided to them in the email. Participation in the study is completely voluntary and students can withdraw at any time without penalty.

At this time, I need a response stating whether or not I will be able to recruit participants from your institution. If the response is yes, and I am able to recruit from your institution please state this in a letter, on your institutions letter head, signing the letter with your name and title. The letter must illustrate your organization/institution understands their involvement in the study and agrees to participate. This letter will be attached to the IRB form submitted to the University of North Dakota’s institutional review board. Please also state if I will need to contact the institutional review board at your institution. If I am not able to recruit participants from your institution please state this in a response as well.

Letters can be scanned and sent to me by email, [jacqueline.reep@my.und.edu](mailto:jacqueline.reep@my.und.edu). Letters can also be sent to me by the US Postal Service, PO Box 462, Stanley, ND 58784.

I have attached a form for your response, please feel free to use or create your own. I have also attached a copy of the email I will ask for you to forward to your nursing major students after I receive IRB approval and send you the official email.

Thank you for your attention and assistance. If you have any questions or concerns please contact me by cell phone 701-629-1299, or email [jacqueline.reep@my.und.edu](mailto:jacqueline.reep@my.und.edu).

Jacqueline Reep-Jarmin, MSN, RN, PhD student

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Email for Nursing major students:

Subject: Research Participants Needed

My name is Jacqueline L. Reep-Jarmin; I am a PhD student at the University of North Dakota in the College of Nursing and Professional Disciplines. I am conducting research for my dissertation, *The Meaning of Nursing Education as Described by Students with Learning Disabilities*. The research question addressed in the study is, "How is nursing education experienced by undergraduate students with learning disabilities?"

I am looking for nursing students who either self-identify as having a learning disability, or have been diagnosed as having a learning disability. If you are interested in participating in the study you will be asked to complete a demographic form and participate in two interviews. The first main interview will last approximately 60-90 minutes and the second interview is expected to last 30-45 minutes. The interviews will occur at a mutually agreed upon location. Student participants will receive a \$10.00 gift card for a local merchant at the conclusion of the second interview.

All efforts will be done to ensure confidentiality of student participants and institutions. All identifying information, including individual and institution names, will be removed from any research materials. Participation in the study is voluntary and you can withdraw from the study at any time without penalty.

If you are interested in participating in the study or would like more information please contact the researcher conducting this study **Jacqueline L. Reep-Jarmin, MSN, RN, PhD student**, at [jacqueline.reep@my.und.edu](mailto:jacqueline.reep@my.und.edu) or **701-629-1299**.

Thank you for your time.

Jacqueline Reep-Jarmin, MSN, RN, PhD student  
University of North Dakota  
College of Nursing and Professional Disciplines

## Appendix C Classroom Visit Information

My name is Jacqueline L. Reep-Jarmin; I am a PhD student at the University of North Dakota in the College of Nursing and Professional Disciplines. I am conducting research for my dissertation, *The Meaning of Nursing Education as Described by Students with Learning Disabilities*. The research question addressed in the study is, “How is nursing education experienced by undergraduate students with learning disabilities?”

I am looking for nursing students who either self-identify as having a learning disability, or have been diagnosed as having a learning disability. If you are interested in participating in the study you will be asked to complete a demographic form and participate in two interviews. The first main interview will last approximately 60-90 minutes and the second interview is expected to last 30-45 minutes. The interviews will occur at a mutually agreed upon location. Student participants will receive a \$10.00 gift card for a local merchant at the conclusion of the second interview.

All efforts will be done to ensure confidentiality of student participants and institutions. All identifying information, including individual and institution names, will be removed from any research materials. Participation in the study is voluntary and you can withdraw from the study at any time without penalty.

If you are interested in participating in the study or would like more information please contact the researcher conducting this study **Jacqueline L. Reep-Jarmin, MSN, RN, PhD student**, at [jacqueline.reep@my.und.edu](mailto:jacqueline.reep@my.und.edu) or **701-629-1299**.

Thank you for your time.

Jacqueline Reep-Jarmin, MSN, RN, PhD student  
University of North Dakota  
College of Nursing and Professional Disciplines

Appendix D  
Consent to Participate in Research

**THE UNIVERSITY OF NORTH DAKOTA**  
**CONSENT TO PARTICIPATE IN RESEARCH**

**TITLE:** *The Meaning of Nursing Education as Described by Students  
Students with Learning Disabilities*

**PROJECT DIRECTOR:** *Jacqueline L. Reep-Jarmin*

**PHONE #** *701-629-1299*

**DEPARTMENT:** *College of Nursing and Professional Disciplines*

**STATEMENT OF RESEARCH**

A person who is to participate in the research must give his or her informed consent to such participation. This consent must be based on an understanding of the nature and risks of the research. This document provides information that is important for this understanding. Research projects include only subjects who choose to take part. Please take your time in making your decision as to whether to participate. If you have questions at any time, please ask.

**WHAT IS THE PURPOSE OF THIS STUDY?**

You are invited to be in a research study about students with learning disabilities in nursing education because you are an undergraduate nursing student who self-identifies or is identified by your institution's disability support services as having a learning disability.

The research question addressed in the study is, "How is nursing education experienced by undergraduate students with learning disabilities?" The purpose of the study is to develop an understanding of the lived experience of nursing education from the perspective of students with learning disabilities, and delineating the essence of the phenomenon. Specific aims include (a) to describe, through the experiences of students with learning disabilities, how having a learning disability is part of their nursing education experience, (b) to describe factors which help them succeed and progress in their nursing education programs, and (c) to describe factors which have made success and progression difficult in their nursing education programs.

**HOW MANY PEOPLE WILL PARTICIPATE?**

Approximately 12-20 people will take part in this study at the University of North Dakota. The sample will consist of traditional undergraduate nursing students from one state in the upper Midwest

### **HOW LONG WILL I BE IN THIS STUDY?**

Your participation in the study will last approximately nine months to one year. You will need to meet with the researcher two times for in-person interviews at a mutually agreed upon location. The first interview is expected to take about 60-90 minutes /1-1.5 hours, and the follow-up interview is expected to last 30-45 minutes.

### **WHAT WILL HAPPEN DURING THIS STUDY?**

If you agree to be in this study, you are asked to complete a demographic form and participate in two interviews. The first main interview will last approximately 60-90 minutes and the second interview is expected to last 30-45 minutes. The interviews will occur at a mutually agreed upon location, and will be digitally recorded and later transcribed into a written text document.

Your name will never be connected to any information you share. Names, institutions, and any other possible identifying information will be removed during the transcription process and transcripts will be coded using “Participant A1cb3,” “Participant B3ad1,” and so on, instead of your name, so the information you provide remains anonymous.

### **WHAT ARE THE RISKS OF THE STUDY?**

There may be some risk from being in this study. Although, there are no known risks to participants who participate in the study; a potential risk can include emotional upset or stress related to the topic of learning disabilities.

You may experience frustration that is often experienced when completing interviews. Some questions may be of a sensitive nature, and you may therefore become upset as a result. However, such risks are not viewed as being in excess of “minimal risk” If, however, you become upset by questions, you may stop at any time or choose not to answer a question.

### **WHAT ARE THE BENEFITS OF THIS STUDY?**

You may not benefit personally from being in this study. A possible benefit includes the opportunity to reflect on your experiences and develop a deeper understanding or

knowledge of your experiences. However, we hope that, in the future, other people might benefit from this study because of the experiences you share.

### **WILL IT COST ME ANYTHING TO BE IN THIS STUDY?**

You will not have any costs for being in this research study.

### **WILL I BE PAID FOR PARTICIPATING?**

You will receive a \$10.00 gift card for a local merchant after the follow-up (2<sup>nd</sup>) interview.

### **WHO IS FUNDING THE STUDY?**

The University of North Dakota and the research team are receiving no payments from other agencies, organizations, or companies to conduct this research study.

### **CONFIDENTIALITY**

The records of this study will be kept private to the extent permitted by law. In any report about this study that might be published, you will not be identified. Your study record may be reviewed by Government agencies, the UND Research Development and Compliance office, and the University of North Dakota Institutional Review Board.

Any information that is obtained in this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. As a mandatory reporter: You should know, however, that there are some circumstances in which we may have to show your information to other people. For example the law may require us to show your information to a court or to tell authorities if we believe you have abused a child, or you pose a danger to yourself or someone else. Confidentiality will be maintained by means of labeling data with the code of "Participant A1cb3," "Participant B3ad1," etc. Interview transcripts will be stored in a locked file cabinet and any electronic copies will be password protected. Demographic information, consent forms, notes, etc. will be kept in a different location or electronic file away from interview transcripts. Only the researcher and dissertation committee will have access to data gathered during the study including digital recordings, transcripts, notes, etc. Any transcriptionists used to transcribe the interviews will be required to sign a confidentiality form.

If we write a report or article about this study, we will describe the study results in a summarized manner so that you cannot be identified.

Interviews will be digitally recorded. Any recordings or digital copies of the interviews will be heard by the researcher, members of the dissertation committee, and a transcriptionist. Any digital recordings will be destroyed at the completion of the study and after the report of findings. Interview transcripts, notes, and other written text documents related to the study will be kept in a secure location for a maximum of five years and minimum of three years, following the study.

### **IS THIS STUDY VOLUNTARY?**

Your participation is voluntary. You may choose not to participate or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise entitled. You may discontinue your participation even after the study has started. You can discontinue your participation by notifying the researcher by phone or email. Your decision whether or not to participate will not affect your current or future relations with the University of North Dakota.

### **CONTACTS AND QUESTIONS?**

The researcher conducting this study is *Jacqueline L. Reep-Jarmin, MSN, RN, PhD student*. You may ask any questions you have now. If you later have questions, concerns, or complaints about the research please contact *Jacqueline L. Reep-Jarmin* at **701-629-1299**. *Dissertation Committee Chair and student advisor, Dr. Liz Tyree*, can be contacted at **701-777-4522**.

If you have questions regarding your rights as a research subject, you may contact The University of North Dakota Institutional Review Board at **(701) 777-4279**.

- You may also call this number about any problems, complaints, or concerns you have about this research study.
- You may also call this number if you cannot reach research staff, or you wish to talk with someone who is independent of the research team.
- General information about being a research subject can be found by clicking "Information for Research Participants" on the web site:  
<http://und.edu/research/resources/human-subjects/research-participants.cfm>

**I give consent to be digitally recorded during this study.**

**Please initial:**         **Yes**         **No**

**I give consent for the researcher to take notes during the interviews.**

**Please initial:**         **Yes**         **No**



**I give consent for my quotes to be used in the research; however I will not be identified.**

**Please initial:**         **Yes**         **No**

Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.

Subjects Name: \_\_\_\_\_

\_\_\_\_\_  
Signature of Subject

\_\_\_\_\_  
Date

I have discussed the above points with the subject or, where appropriate, with the subject's legally authorized representative.

\_\_\_\_\_  
Signature of Person Who Obtained Consent

\_\_\_\_\_  
Date

Appendix E  
Demographic Information

**Demographic Information**

The Meaning of Nursing Education as Described by Students with Learning Disabilities

1. Name: \_\_\_\_\_
2. Preferred Contact Information:
  - a. Mailing Address: \_\_\_\_\_
  - b. Email Address: \_\_\_\_\_
3. Telephone Number: \_\_\_\_\_
4. Age: \_\_\_\_\_
5. Gender:            Male                                  Female
6. Race/Ethnicity (circle all that apply)
  - a. White/Caucasian
  - b. Black/African American
  - c. Hispanic/Latino
  - d. Asian
  - e. Pacific Islander
  - f. Native American
  - g. Alaskan Native
  - h. Other – please describe: \_\_\_\_\_
7. Type of School: \_\_\_\_\_
  - a. Degree Program (circle response):    Associate                                  Bachelors
  - b. Semester in Nursing School: \_\_\_\_\_
  - c. Total number of semesters in your nursing program: \_\_\_\_\_
  - d. Do you expect to complete the program in the designated amount of time:
    - i. Yes
    - ii. No
    - iii. Explain: \_\_\_\_\_



Appendix F  
First Interview Letter

Dear (participant),

Thank you for agreeing to participate in my dissertation research study, *The Meaning of Nursing Education as described by Students with Learning Disabilities*. Our first interview will be on (date) at (time). I will meet you in (location). I anticipate this first interview will take approximately 60 to 90 minutes. I will be digitally recording the interview so that our words can later be transcribed into a written text document that can be analyzed.

During this first interview, I will be asking you to tell me in detail about the experiences you have had as a nursing student with a learning disability. Specifically, I will be asking you to do the following:

- 1) Tell me about a typical day for you in your nursing program.
- 2) Tell me about how you experience your learning disability. Please give an example.
- 3) Tell me about a time since you have been taking nursing courses, when your learning disability became a factor or issue.
- 4) Tell me about a success you had in nursing school. Did your disability play any part?
- 5) Tell me about a time when something hindered your success in nursing school.

In order to prepare for the interview, it may be helpful to think about at least one experience that you can tell me about for each of the situations listed above. I will be asking you to describe your experiences in as much detail as you can.

If you have any questions, please feel free to contact me by telephone, at (701)629-1299, or by email, at [jacqueline.reep@my.und.edu](mailto:jacqueline.reep@my.und.edu). I look forward to meeting with you and learning about your experiences.

Sincerely,

Jacqueline Reep-Jarmin, MSN, RN, PhD student  
Principal Investigator

Appendix G  
Interview Guide

**Participant:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Specific Aim	Main Question	Follow-up Question
<p>1-To describe, through the experiences of students with learning disabilities, how having a learning disability is part of their nursing education experience.</p>	<p>1-Tell me about a typical day for you in your nursing program.</p> <p>2-Tell me about how you experience your learning disability. Please give an example.</p>	<p>1a-Please describe your daily routines.</p> <p>1b-Please describe how you prepare for class each day.</p> <p>1c-Please explain how you organize your time.</p> <p>2a-How have these experiences affected your academics? How have you learned to cope with your learning disability?</p> <p>2b-Please tell me how your learning disability affects your day to day life as a nursing student. Please give an example.</p> <p>2c-Please describe how you prepare for an exam.</p> <p>2d-Please describe your routine in doing homework and completing assignments.</p> <p>2e--Please tell me about your study</p>

	<p>3- Tell me about a time since you have been taking nursing courses, when your learning disability became a factor or issue.</p>	<p>habits and techniques.</p> <p>2f-Please tell me about the accommodations you receive in your nursing classes.</p> <p>3a-Were your instructors involved? How did they respond?</p> <p>3b- Are your instructors aware of your learning disability? If so, how did you decide to inform them? If not, why did you choose not to inform them?</p> <p>3c- Were your classmates aware? How did they respond?</p>
<p>2- To describe factors which help them succeed and progress in their nursing education programs.</p>	<p>1-Tell me about a success you had in nursing school. Did your disability play any part?</p>	<p>1a- Tell me about another experience.</p> <p>1b- What things were involved that helped this be a success for you? - yourself, peers, faculty, family, college/university.</p>

<p>3-To describe factors which have made success and progression difficult in their nursing education programs.</p>	<p>1. Tell me about a time when something hindered your success in nursing school.</p>	<p>1a- Tell me about another experience.</p> <p>1b-What factors or things were related to the difficulties? - yourself, peers, faculty, family, college/university.</p>
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Appendix H  
Confidentiality Agreement – Transcriptionist

MUTUAL CONFIDENTIAL DISCLOSURE AGREEMENT

This Agreement is dated the , November 11, 2015 and effective upon the date of first disclosure or the date of this Agreement, whichever occurs first, between and among Jacqueline Reep-Jarmin, (hereinafter "Client") and TranscriptionStar – iSource Solutions Inc., a California corporation with office located at 23441, Golden Springs Dr., Diamond Bar, CA 91765 (hereinafter "Company") (Client and Company each are referred to herein as a "Party" and are collectively referred to herein as the "Parties").

WHEREAS, Company has agreed to provide transcription services to the Client, during the course of which the Parties to this Agreement may wish to disclose to each other in oral and written form or in other medium, certain non-public confidential and proprietary information.

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained herein and intending to be legally bound, the parties hereby agree as follows:

1. In connection with the Services, it may be necessary or desirable for a Party to disclose to the other certain non-public Confidential Information. For purposes of this Agreement, "Confidential Information" shall mean all non-public, confidential and proprietary information relating to the Parties, their respective clients and the Services, which has been or will be disclosed by a Party orally or as set forth in writing, or contained in some other tangible form.
2. The receiving Party hereby agrees to hold in strict confidence and to use all reasonable efforts to maintain the secrecy of any and all Confidential Information disclosed by the disclosing Party under the terms of this Agreement and may not disclose Confidential Information without the express, written prior consent of the disclosing Party, with the exception of the following:
  - (a) Information that, at the time of disclosure, is available to the public, or thereafter becomes available to the public by publication or otherwise, other than by breach of this Agreement by the receiving Party;
  - (b) Information that the receiving Party can establish by prior record was already known to them or was in their possession at the time of disclosure and was not acquired, directly or indirectly, from the disclosing Party;



(c) Information that the receiving Party obtains from a third party; provided however, that such information was not obtained by said third party, directly or indirectly, from the disclosing Party under an obligation of confidentiality toward the disclosing Party;

(d) Information that the receiving Party can establish was independently developed by their employees or contractors who had no contact with and were not aware of the content of the Confidential Information.

3. The receiving Party may disclose Confidential Information if compelled to do so by a court, administrative agency or other tribunal of competent jurisdiction, provided however, that in such case the receiving Party shall, immediately upon receiving notice that disclosure may be required, give written notice by facsimile and overnight mail to the providing Party so that the providing Party may seek a protective order or other remedy from said court or tribunal. In any event, the receiving Party shall disclose only that portion of the Confidential Information which, in the opinion of their legal counsel, is legally required to be disclosed and will exercise reasonable efforts to ensure that any such information so disclosed will be accorded confidential treatment by said court or tribunal through protective orders, filings under seal and other appropriate means.

4. The receiving Party shall not use the Confidential Information for any purpose other than in connection with the Services. The receiving Party will only disclose Confidential Information to their directors, officers, employees or agents, as applicable.

5. The receiving Party shall take all reasonable steps, including, but not limited to, those steps taken to protect their own information, data or other tangible or intangible property that they regard as proprietary or confidential, to ensure that the Confidential Information is not disclosed or duplicated for the use of any third party, and shall take all reasonable steps to prevent their directors, officers, employees and agents (as applicable) who have access to the Confidential Information from disclosing or making unauthorized use of any Confidential Information, or from committing any acts or omissions that may result in a violation of this Agreement.

6. Title to, and all rights emanating from the ownership of, all Confidential Information disclosed under this Agreement, or any material created with or derived from the Confidential Information, shall remain vested in the disclosing Party. Nothing herein shall be construed as granting any license or other right to use the Confidential Information other than as specifically agreed upon by the Parties.

7. Upon written request of the disclosing Party, the receiving Party shall return promptly to the disclosing Party all materials and documents, as well as any data or other media (including computer data and electronic information), together with any copies

thereof, or destroy same and, upon request of the disclosing Party, provide a certificate of destruction.

8. The receiving Party agrees that the disclosure of Confidential Information without the express consent of the disclosing Party will cause irreparable harm to the disclosing Party, and that any breach or threatened breach of this Agreement by the receiving Party will entitle the disclosing Party to injunctive relief, in addition to any other legal remedies available, in any court of competent jurisdiction.

9. This Agreement shall be construed under and governed by the substantive laws of California, without giving effect to the conflicts of laws provision thereof. Any disputes arising between the Parties relating to this Agreement shall be subject to the exclusive jurisdiction and venue of the federal and state courts located in the City and State of California, and the Parties hereby waive any objection that they may have now or hereafter to the laying of venue of any proceedings in said courts and to any claim that such proceedings have been brought in an inconvenient forum, and further irrevocably agree that a judgment or order in any such proceedings shall be conclusive and binding upon each of them and may be enforced in the courts of any other jurisdiction.

10. This Agreement constitutes the entire agreement among the Parties as to the subject matter contained herein, shall supersede any other prior or contemporaneous arrangements as to the Confidential Information, whether written or oral, and may be modified in writing only.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the day and year first above written.

TranscriptionStar - iSource Solutions Inc.

By:

Name: Shiva Kumar

Title: COO

Date: November 9, 2015

By: Name: Title: Date:

Appendix I  
Second Interview Letter

Dear (participant),

It is almost time for us to talk again, and I want to give you some information about what I will be asking you during our second interview, which will be (date) at (time). Our interview will take place at (location). I anticipate this second interview will take approximately 30-45 minutes. I will be digitally recording the interview so that our words can later be transcribed into a written text document that can be analyzed.

During this second interview, I will be asking you the following questions:

- 1) Tell me about the ways you have learned to make adjustments or self-accommodate to be successful in your educational experiences.
- 2) Tell me about a time when you felt proud in your nursing program.
- 3) Tell me about a time when you experienced frustration in your nursing program.

In order to prepare for the second interview, please try to think of specific experiences to answer the questions above. I, again, will be asking you to describe your experiences in as much detail as you can. In addition to these questions, I may have a few other things that I will ask you to comment on, based upon questions that have come up for me in the course of the interviews I have been doing.

I also want to give you time during this second interview to tell me about anything that you may have forgotten to mention during our first interview. This second interview will also give you an opportunity to mention anything you feel I should know about being a nursing student with a learning disability.

If you have any questions, please feel free to contact me by telephone, at (701)629-1299, or by email, at [jacqueline.reep@my.und.edu](mailto:jacqueline.reep@my.und.edu). I look forward to talking to you again, and learning more about your experiences.

Sincerely,

Jacqueline Reep-Jarmin, MSN, RN, PhD student  
Principal Investigator

Appendix J  
Interview Guide-2

Specific Aim	Main Question	Follow-up Question
<p>1-To describe, through the experiences of students with learning disabilities, how having a learning disability is part of their nursing education experience.</p>	<p>1-Tell me about some ways you have learned to self-accommodate or work with your learning differences to get the most out of your study/class time.</p> <p>2-Tell me what your learning difference/disability means to you.</p>	<p>1a- Describe your perfect study environment.</p> <p>2a-How have these experiences affected your academics?</p>
<p>2- To describe factors which help them succeed and progress in their nursing education programs.</p>	<p>1-Tell me about a time in nursing school when you felt proud.</p>	<p>1a- Tell me about another experience.</p> <p>1b – What do you see as your strengths?</p> <p>1c – Do you believe your exam grades and course grades reflect what you have learned? Please explain.</p> <p>1d – What area of nursing do</p>

		you hope to work in? Why?
3-To describe factors which have made success and progression difficult in their nursing education programs.	1. Tell me about an experience that caused you frustration.	1a- Tell me about another experience. 1b – Do you feel you spend more, less time or about the same amount of time studying and doing school work as your peers/classmates? 1c – What do you think are your weaknesses?

