The purpose of this qualitative study was to explore how fifteen students with blindness and visual impairments experienced their engagement in undergraduate studies at four 4-year universities and perceived their success. They also provided their understandings of the impact of institutions, faculty, staff, and others on their academic success. Previous literature suggests that students with blindness and visual impairments as well as students with other disabilities were academically successful in college because of institutional support and the positive attitude of faculty and peers (Baggett, 1994; Branker, 1997; Enberg, 1999; Fichten, 2005; and Roy, 2000). Findings from this study demonstrate that participants’ understandings and experiences with blindness varied and their subsequent adjustment and transition also differed. Participants described several factors that facilitated the creation of positive educational experiences during their undergraduate programs: positive exposure to a new region of the country, positive peers, supportive departments and professors, financial opportunities, and welcoming and diverse campus environments. As these students transitioned to the university, they utilized accommodations and services provided by Disability Students Services (DSS) to facilitate their access to the academic environment. The undergraduate students also described challenging experiences, including feeling academic discrimination, a sense of isolation, limited campus accessibility, and peer interaction issues. There were other support systems that facilitated participant academic success, such as mentors, family, administrators, and staff. This study concluded that blind
and visually impaired undergraduate students were more likely to succeed academically when they felt a sense of connectedness with the university academic system. DSS is most responsible for facilitating that connectedness. Quality contact and collaboration with faculty were also important, as well as the attitudes of faculty, administration, and staff. The disconnectedness between study participants and the university system was fostered through inflexible bureaucratic procedures; the attitudes of faculty, staff, and administrators; and isolation from peers. Implications for policy include a recommendation for additional funding of technology-related assistance programs, in-service training on disability issues awareness for faculty and staff, and campus-wide committees on university accessibility. This study suggests future research is needed on the academic success of this population in community colleges and at the graduate level. There is a need for more empirical research and research on the population’s social integration. The study recommends that higher education programs develop self-advocacy programs for blind and visually impaired students, in-service training for faculty, and peer mentorship programs.
Undergraduate Educational Experiences: The Academic Success of College Students with Blindness and Visual Impairments

by
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A dissertation submitted to the Graduate Faculty of North Carolina State University in partial fulfillment of the requirements for the Degree of Doctor of Education

Higher Education Administration

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2009

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Chair of Advisory Committee
DEDICATION

As I reflect upon the academic journey on which I embarked almost ten years ago, many individuals have provided both encouragement and support. In deciding to whom this dissertation is dedicated, it is imperative that I mention as significant those individuals who have fostered in me this ceaseless quest for knowledge and the love of learning that has been passed down to me from one generation to another. I dedicate this dissertation to the loving memory of my grandmother, Iris Garner, who impressed upon me from my earliest memory that once one has come to know the truth of God and that He is the giver of knowledge and truth, then one is prepared to embark upon the educational journey that has been prescribed by man and promulgated through the university. I dedicate this dissertation to my mother, Mattie Scott, who also impressed upon me the fact that education is the key to opportunity and success. Thank you, Mom. To my sister, Brenda, who has always encouraged and supported me in all of my academic endeavors. Thank you also.

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the same challenges and opportunities of a 21\textsuperscript{st} century world, I dedicate this dissertation to you.

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To my Governor Morehead School family, I wish to dedicate this dissertation, because you were like brothers, sisters, and cousins. Some were like aunts and uncles, while others provided instruction, love, and care as faculty and staff. Having this shared experience at GMS has not only shaped us, but also it has bonded us together as none other except for “family”. To you I wish to dedicate this work. Specifically, I would like to recognize my fifth grade teacher, Mrs. Elenor Hennis, who continued to water the seed of desire to achieve. I dedicate this dissertation to you. To Marian High, the late Lorie Getz, the late Eugenia Anderson, and the late H. Mozelle Jones, I dedicate this dissertation. Each of you encouraged and supported me in all of my academic efforts. Thank you. To the late William (Champ) Nelson and John Wood: the lessons learned through athletic competition have been invaluable. I wish to dedicate this dissertation to you. To the Reverends Timothy
Snyder and Robert Parrish, who provided encouragement and support both in my personal and spiritual life, I wish to dedicate this work. Thank you. To all of the following individuals: Terry Louis, Walter Bryant, Wendell Williamson, Barrett Simmons, Annie Burris, Terri McLean, Van McLean, Lawrence Carter, Margaret Carter, Herbert Everet, Eric Dixon, Kellie Spruill, James Benton, and a host of others. You have provided encouragement and support. Lastly, to my other friends, Dr. Charles Walker, Alexandra McMillan-Mordecai, Larry Bergman, Paige Houser, Walter Wittman, Elaine Barnette, Tracy Moore, Cynthia Moore, Dorothy Harris, Greg Parra, William Edward Byrd, George Bass, John Kelly among others, I wish to dedicate this dissertation.
Ricky Scott is a native of the sovereign state of North Carolina, where his earliest educational and familial experiences were rooted in the Christian ethos. This foundation of faith, hope, and charity has buttressed him and his undertakings from then to the present. While Scott was in secondary school, he was both academically and athletically accomplished. He served in a number of leadership positions as president of the following organizations: Beta Club, Future Business Leaders of America, and United Christians of America. In addition, he served as vice-president and treasurer of student government. During these years, he was also a successful wrestler and track and field participant, receiving many first place medals for individual events and assisting his team in winning four Eastern Athletic Association for the Blind wrestling and track and field titles. Moreover, he served as captain of both the wrestling and track teams during his senior year. In addition to receiving many academic honors and awards, Scott graduated high school as the valedictorian of his class.

Scott then began his undergraduate education at the University of North Carolina at Chapel Hill, where he received his Bachelor of Science degree with a double major in both Industrial Relations and Psychology. While at the University of North Carolina, he embraced the challenges and opportunities of the undergraduate college student experience, which facilitated his growth and development in a diverse college community and the larger community that he faced upon his graduation. During his time at North Carolina, he served as a member of a variety of organizations associated with his major, including the Society of Industrial Relations Majors and the Honor Society for Industrial Relations Majors. He also served as a member of the Organization for Students with Disabilities. As a member of this
organization, he had the opportunity to engage in campus-wide disability awareness
discussions and presentations across the campus community.

Upon graduation from the University of North Carolina at Chapel Hill, Scott became
employed at North Carolina Disability Determination Services, which is a state agency that
has as its primary responsibility the adjudication of the Social Security Administration’s
programs of supplemental security income and social security disability insurance. In the
position of Hearings and Appeals Specialist, he was responsible for administrative
adjudication of hearings and appeals claims remanded from the administrative law judges to
Disability Determination Services. In addition, Scott had the responsibility for ensuring
effective communication with administrative law judges, attorneys, claimant representatives,
social service staff and any other staff involved in the assistance and representation of those
individuals seeking benefits from the Social Security Administration. Further, he had the
responsibility for the recruitment and retention of medical consultative staff in the provision
of such services for the Professional Relations office at Disability Determination Services.
After serving the citizens of North Carolina through his employment at Disability
Determination Services, Scott, as a way to enhance his skills through the pursuit of advanced
degrees, received a Masters degree in Public Administration from the University of North
Carolina at Charlotte. While completing the coursework for his masters degree, Scott
continued his involvement in advocacy and leadership on issues related to the full inclusion
of blind and visually impaired individuals in education, transportation, and employment
through presentations, lectures, seminars at the university, at local advocacy organizations,
and with the public in general. Meanwhile, Scott served as assistant to the director of
Metrolina Association for the Blind, where he played a key role in the selection and hiring of new employees, survey administration, data collection, data analysis, data presentation, and other reportings to the board of directors. The capstone of his educational achievement was the completion of his masters thesis, entitled “A Preliminary Program Review: A Comparative Analysis of Paratransportation in Two North Carolina Cities,” which investigated the satisfaction of persons with blindness and other disabilities with paratransportation in their perspective cities.

Shortly thereafter, Scott began to pursue a doctorate degree at North Carolina State University by successfully completing the Preparing for the Professoriate Program. In the Program, he had an opportunity to be mentored by a faculty from his department for one academic year. While he participated in seminar sessions related to issues of research, teaching, and service required for faculty, he also had an opportunity to lecture and instruct the class. Meanwhile, he has continued his advocacy and leadership with a variety of organizations.

First, Scott has served on the Statewide Independent Living Council, resulting from the appointment of Governor James B. Hunt, to represent eastern North Carolina on this committee. The primary charge of this committee was to conceptualize, formulate, and draft the statewide independent living plan for the Division of Services for the Blind. Second, Scott has served as treasurer and member at large of the Raleigh Mayor’s Committee for Persons with Disabilities, which has as its primary responsibility the promotion of the full inclusion of persons with disabilities in education, transportation, and employment. While serving on this committee, Scott played a key role in the conceptualization, formulation,
design, and implementation of the paratransportation program known as ART, or Accessible Raleigh Transportation. ART is a two-tiered paratransportation program that provides on-demand response transportation service to persons with disabilities and also a more limited and restrictive service requiring advanced scheduling of trips. He remains involved in efforts to preserve the integrity of the ART program through his service on ad hoc committees designed to address specific issues related to the effective and efficient administration and financing of the program.

Scott also served as a member of both local chapters of the National Federation of the Blind and the American Council of the Blind, which seeks to promote the full economic and social integration of blind and visually impaired individuals into American society.

Fourth, Scott has served as president and vice president of Raleigh Elite Lions Club, which provides financial support for programs and services for blind and visually impaired children and adults across North Carolina, including support for the White Cane program, prevention of blindness, the Governor Morehead School, and Camp Dogwood. In addition, Scott has served as a member of the Friends of North Carolina Library for the Blind and Physically Handicapped, which provides assistance to the North Carolina Library for the Blind for the purchase of Braille books, recordings, printings of magazines, among other forms of support. Scott has also served as President of the Governor Morehead School Alumni Association, whose primary responsibility is to promote the education and preservation of the Governor Morehead School for the Blind.

Scott served as President of the North Carolina Advocacy Council for the Blind and Disabled. The chief responsibility of this organization is to engage in disability awareness
activities, provide computers to the blind and disabled through procurements from business and industry, and engage in advocacy efforts on behalf of those individuals seeking services from organizations established for that purpose. In addition, Scott has served on the Advisory Committee for the Raleigh Lions Clinic for the Blind, which provides consumer and public input on the provision of programs and services to employees of Raleigh Lions Clinic for the Blind and for those blind and visually impaired individuals living in the local community.

Scott has received training as a facilitator from Achieved Global, which provides instruction in facilitation skills needed for the improvement of the interactions of individuals in organizations. His hobbies include reading, playing beep baseball, and socializing with friends and family.
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CHAPTER 1

Many individuals experience difficulty with seeing printed material, but few of them experience this difficulty to the degree that Linda does. Linda, a psychology major at a state university located in the northeastern United States, says, “When I try to read printed material, especially for long periods of time, the letters run together. I only see a smudge. I also have difficulty with reading photocopied material. You know, some of my professors do not want to provide better material for me because they believe that because I do not have a guide dog or a cane that I can see” (Scott, 2000, p. 6). Tom, an industrial relations major at a state university located in the southeastern United States, says, “one professor told me that he could not modify his lectures and exams because of the nature of the material being presented and because he felt that the integrity of the class might be compromised” (Scott, 2000, p. 7).

These two students, according to their ophthalmologists, have a visual impairment that prevents them from seeing printed material normally. But it is not just physical impairment that keeps these students from achieving their educational goals. The perceptions of faculty, staff, and administrators of programs for students with blindness or visual impairments and their disability also shape these students access to educational facilities and materials. These two students filed a complaint with the office of Civil Rights of the U.S. Department of Education alleging discrimination because of their disability. University administrators, however, felt that they should have dropped the classes and taken them with another professor.
The specific understandings and impacts of accessibility for academic environments to students with blindness or visual impairments are currently debated in American higher education institutions. This debate has intensified because students with blindness or visual impairment are participating in postsecondary institutions at an ever-increasing rate. In the most recent survey of first-time, full-time freshmen attending four-year institutions, 16 percent of students (12,000 students) reporting a disability identified themselves as being either visually impaired or blind (Henderson, 2001). This percentage is almost double the number of freshmen (7,000 students) reporting blindness or visual impairment twenty years previously (U. S. Department of Education, 1996). Moreover, 4.4 percent of all students, including freshmen, reporting a disability (92,000 total students) identified themselves as being either visually impaired or blind (U. S. Department of Education, 1996). This is considered a somewhat lower estimate of the actual number of college students with visual impairments, because many students with visual impairment do not identify themselves as having a visual impairment. In addition, some students with visual impairment transfer from one college or university to another and, by design, transfers and part-time students were excluded from these data (U.S. Department of Education, 1996).

Furthermore, the U.S. Department of Education (1999) reported that 70.4 percent of high school students with blindness or visual impairments enrolled in college within one year of graduation from high school. This is a result of accelerated efforts to identify and classify students with special needs and to provide them with appropriate services in public elementary and secondary schools. Now many of these individuals with blindness and visual impairments are seeking access to higher education. This population was once almost
unheard of in postsecondary academic settings; however, the number of college students with blindness and visual impairments who are first-time college students has almost doubled since the 1980’s from approximately 11,000 in 1984 to approximately 20,000 in the 1990’s (U. S. Department of Education, 1996). In 2004, there were approximately 6.8 million children and youth in special education programs (U.S. Department of Education, 2006). Thus, it is believed that even larger numbers of students with visual impairments will seek admission into institutions of higher education in the future.

**Background of the Problem**

In 1999, the U.S. Department of Education (2002) reported that 8.9 percent of all postsecondary students in the nation were disabled in some manner. In other words, approximately 1.7 million out of a total of 19.2 million students, including undergraduate and graduate programs and professional programs, reported having at least one disability (U.S. Department of Education, 2002).

Butler-Nalin, Marder, and Shaver (1989) concluded that this population of college students with blindness and visual impairment experience difficulty in college. Although high school graduates with blindness and visual impairment attend college at similar rates to those of high school students without blindness or visual impairments, only 16% of students with blindness and visual impairment are likely to graduate from college in a four-year period of time (U.S. Department of Education, 1998) as compared to 40% of college students without blindness or visual impairment in the same four-year period (Astin, Tsui, & Avalos, 1996). More than thirty years ago, a national study conducted by Monahan, Giddan, and Emener (1978) at Florida State University found that 32 percent of students with blindness
and visual impairment (3000 students) dropped out of college after their freshman year. Over ten years later, Brown (1990) noted again that the dropout rate of American college students with visual impairments and blindness was unacceptably high, at more than 30 percent (4000) after the first year. In 1998, eighty-four percent of all American students (117,000 students) with visual impairments and blindness did not graduate in six years (U.S. Department of Education). The attrition rate of college students with blindness or visual impairment has remained virtually unchanged during the decades when enrollment has boomed and special education has undergone its most significant reform in years.

Statement of the Problem

The attrition rate of college students with visual impairments or blindness remains extremely high. In 1998 the U. S. Department of Education reported that eighty-four percent of individuals with blindness or visual impairment enrolled in undergraduate programs dropped out of college within five years. The literature suggests a number of potential causes (Nelson, Smith, Appleton, & Raver, 1993). One cause that may influence attrition is student beliefs. In 1993, Nelson et al. conducted a study of college students with disabilities. These students described a set of factors that they believe influenced their success in college. They viewed the following factors as significant to their success: discipline, self-confidence, and ability as well as quality interactions with peers and faculty. A second cause that may influence attrition of college students is faculty beliefs. Research by Baggett (1994) and Roy (2000) revealed that faculty believe individuals with disabilities should have equal access to education, yet many express concern that providing accommodations may compromise the integrity of the course, may be unfair to other students, or may mean that the student may be
unable to perform the work. A third cause that might influence attrition is institutional policy and support. Literature shows that the policies and institutional support mandated by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990 creates a system of fixed and inflexible policies and support services (Burgstahler, 1994). This inflexible bureaucratic structure can create delays in services delivery and it does not allow for the individuality of a disabbling condition. In the Burgstahler studies (1992, 1994), many students with disabilities expressed frustration with policies and procedures that did not allow for individual autonomy in determining how services might be most effectively delivered.

**Purpose**

The purpose of this study was to explore how students with blindness and visual impairments experience their engagement in undergraduate studies in a collegiate environment and perceive their own success. To ascertain these students’ perception of their undergraduate studies experience, this study was designed to determine the following: How do they define what it means to be blind or visually impaired and what it means to be academically successful? What do they identify as being the factors that are important for their success and how does this information relate to educational attainment? How do they perceive what the institutional support system is for the student who has blindness or a visual impairment? In other words, what do these particular students with blindness and visual impairment believe supported their success in undergraduate studies? This study provided a description of both beliefs and experiences of themselves and the collegiate environment that college students with blindness and visual impairments believe support their college success.
Research Questions

The following questions guided the interviews used in this study:

1. What are students with blindness and visual impairments’ understandings of blindness and its relation to their success?
2. How do students with blindness and visual impairments define their academic success?
3. What factors do students with blindness and visual impairments identify as the most influential in their academic success?
4. What are students with blindness and visual impairments’ perceptions as to how they are viewed, treated, and respected by faculty, staff, and/or administrators?
5. How do students with blindness and visual impairments perceive the impact of these key authorities on their academic success?

Need for the Study

This study had its genesis in an unpublished pilot study the researcher conducted in October of 2000 with college graduates who were blind. The study explored these students’ understanding of the perceptions and attitudes of university faculty and administrators about blindness and people with blindness or visual impairments and their understanding of the role that services provided by the university office of Disability Students Services (DSS) played in their academic success. One purpose of the study was to examine the nature of the services provided. Information for the study was gathered by reviewing the college’s catalog and DSS list of services posted on the website. Interviews were also conducted with blind students.
The overall findings of this pilot study described ten factors that college students with blindness or visual impairments viewed as important to their success in college. These factors were divided into two general categories: psychological belief factors and sociological factors. Psychological belief factors included the following: discipline and effort, acceptance of their disability, personal ability, self-confidence, prior knowledge and experience, and ability. The sociological factors included the following: family support, interaction with other students, interaction with faculty and staff and university support services.

**Conceptual Framework**

Aspects of both Weiner's (1979) and Tinto's (1987) theoretical models inform established boundaries for the study and guide this project. Weiner (1979) postulates that students attribute their success in college to internal factors, including ability, effort, mood, maturity, and health, and external factors, including the teacher, task difficulty, family support, and luck. In addition to the classification of causality as either internal or external and stable or unstable, Weiner disputes Rosenbaum’s categorization of causality into intentionality (effort or teacher bias) and unintentionality (ability, task difficulty, and mood), arguing that a third categorization of causality is needed. Weiner defines this third dimension as controllable versus uncontrollable factors. Tinto (1987) postulates that academic and social integration factors contribute to college success. Academic integration requires students to both meet structure dimensions, the formal standards of the university, and meet normative dimensions, the less explicit values and norms of academia. Social integration occurs on two levels, the level of the university and the level of a subculture or subcultures.
within the university. Social integration is a student’s perception of how well he or she fits in with the beliefs, attitudes, and norms of the university and of the subcultures. A full discussion of both Weiner and Tinto’s conceptual models is provided in Chapter 2.

Significance of the Study

This study seeks to understand and document the undergraduate experiences and the academic engagement of students with blindness and visual impairments. The perspectives of these students with blindness or visual impairments in undergraduate programs will provide a needed insight into the experiences of this group that will help shape policy, research, and practice at institutions of higher education. Understanding how undergraduate students with blindness or visual impairments negotiate the undergraduate experience is somewhat limited because of the paucity of qualitative research in this area. The findings of this study can help institutions of higher learning make the experiences of undergraduate students with blindness and visual impairment more positive, facilitating their persistence in the academe.

The findings of this study may inform actions undertaken by policy makers and can facilitate the academic success of undergraduate students with blindness or visual impairments through the provision of financial resources to support program activities designed to facilitate persistence at institutions of higher learning. This study may assist other areas of inquiry regarding the academic success of students with blindness or visual impairments across other areas of academe. Further, it may result in research into the academic success of students with disabilities at other types of institutions of higher learning.
Limitations of the Study

It is important to note certain limitations of this study. These findings cannot be applied in general to all university students who are blind and visually impaired. These findings are specific to this subset of students within the total population of college students with blindness and visual impairments at four universities. The DSS staff only agreed to submit the recruitment letter to their registered students with blindness and visual impairment in an electronic format through email. Therefore, only students who used an electronic medium for communicating were selected for this study. Second, this subset represented only those students who volunteered to participate in the research; third, this subgroup had to meet specific university, school, or departmental admissions criteria to be accepted; and fourth, the students with blindness and visual impairments of this subset may have requested and received support services which may not be readily available at other higher education institutions. The historical education biographies of this subset of students may also have influenced the findings in unknown ways.

The nature of these universities may have impacted the findings. These are large four-year public institutions with an expressed commitment to equal educational opportunity for all its students, including those with blindness and visual impairment. Their acceptance of and level of support for accommodations may also have affected these findings. The issue of critical mass may have affected these findings, because students perceiving other peers like them are more likely to persist (Tinto, 1987).
Definition of Terms

The following are terms used throughout this dissertation:


Attribution theory: the study of perceived causation. The theory examines a person’s motivation to understand and interpret the cause-effect relationship underlying events (Chen & Tollefson, 1989).

Attrition: a lessening in number.

Blindness: Refers to visual acuity 20/200 in the better eye with best correction or limitation in the fields of vision such that the widest diameter of visual field has an angular distance of no greater than 20 degrees (Jernigan, 1995).

DSS: Disability Students Services. Refers to the university office that has the primary responsibility for promulgating policies and procedures for the provision of accommodations and services for students with disabilities.

Etiology: the cause of a disorder.

Minimum Eligibility Standard for Continued Enrollment: for the universities in this study, eligibility for any undergraduate student is the maintenance of the required grade point average for the number of credit hours attempted plus transferred credit hours.


PL 94-142: the Education of All Handicapped Children Act. A public law that mandates changes in the assessment and education of individuals with visual impairments.

Postsecondary Academic Settings: also known as higher education beyond the secondary level (high school) especially at the college level.

Services and Accommodations: Compensatory efforts provided for blind and visually impaired students that minimize the effects of disability on classroom performance.

Self-efficacy: the sense of personal control over achievement outcomes.

Visual Impairment: Refers to visual acuity ranged between 20/70 and 20/200 in the better eye after best correction (Ferguson, 2001).
CHAPTER 2: LITERATURE REVIEW

The purpose of this chapter is to present an overview of the literature. It presents the prevailing definition of blindness and visual impairment that has guided the policies and procedures at higher education institutions. It also presents a description of major federal legislation that has influenced the provision of higher education to students with blindness and visual impairments. It further presents a discussion of the conceptual framework that will guide the course of this study. It then concludes with a discussion of those supports and services provided by institutions of higher education for those college students with blindness and visual impairment.

Background on Medical and Legal Understandings of Blindness and Visual Impairment

In order to better understand the participants selected for study, it is important to provide a definition related to their impairment. According to the Americans with Disabilities Act (ADA) of 1990, an individual with a disability has a physical or mental impairment that substantially limits a major life activity, has a record of such an impairment, or is regarded as having such an impairment. Physical and mental impairments include, but are not limited to:

such contagious or noncontagious diseases and conditions as orthopedic, visual, speech and hearing impairments, cerebral palsy, epilepsy, muscular dystrophy, multiple sclerosis, cancer, heart disease, mental retardation, emotional illness, specific learning disabilities, HIV disease, caring for oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning and working. (Americans with Disabilities Act [ADA], 1990, p. 1)
Individuals with mobility impairments can include those individuals with visual impairments. Pieranglo and Jacoby (1996) describe a visual impairment as a “lack of vision or reduced vision that may result in delays or limitations in motor, cognitive and social development” (p. 143). Visual impairments will be either congenital (present at birth) or acquired (occurring later in life as with injury or diabetes). The point at which the condition is acquired may have an influence on the acquisition of certain skills, such as mobility or Braille skills. Individuals with visual impairments will have cognitive abilities comparable to that of individuals without a visual impairment. However, their intellectual scores when measured by traditional testing instruments may be lower, since they are unable to attain certain skills acquired by others through the visual perceptual mode. Individuals with visual impairments may also experience limitations in orientation, mobility, and socialization (Pieranglo & Jacoby, 1996).

The level of visual impairment of each individual is dependent on the unique factors of each person, but when determining standards for services and accommodations, a legal definition must be set. This legal definition is ultimately determined with the help of the medical field to ensure that legislative action is not arbitrarily based. Thus, the legal and medical definition of blindness and visual impairment refers to having a visual acuity ranging from 20/70 to 20/200. Blindness refers to visual acuity of 20/200 in the better eye with best correction or limitation in the fields of vision such that the widest diameter of the visual field has an angular distance no greater than 20 degrees (Matson, 1990; Vaughan, 1998; Ferguson, 2001; Omvig, 2002). A person is said to have a visual acuity of 20/200 if he or she must be at a distance of 20 feet in order to read the standard type which a person with normal 20/20
vision can read at a distance of 200 feet (Matson, 1990; Vaughan, 1998; Ferguson, 2001). The restriction of the visual field to 20 degrees is equivalent to tunnel vision (Matson, 1990; Vaughan, 1998; Ferguson, 2001). In comparison, visual impairment refers to visual acuity ranging from 20/70 to 20/200 in the better eye after best correction (Matson, 1990; Vaughan, 1998; Ferguson, 2001).

Even individuals who share the same diagnosis may not experience blindness and visual impairment in the same manner. Different types of eye conditions influence what an individual can see. But for the purposes of this study, it is necessary to present the prevailing definition, because it has guided public policy and procedures with respect to the provision of higher education to individuals with blindness and visual impairments.

Federal Legislation Related to Blindness and Visual Impairment

The Federal government promulgated the definition of blindness as a visual acuity ranging from 20/70 to 20/200 in the Social Security Act of 1935, which provided grants to public organizations to assist the blind (Tembroek & Matson, 1959; Matson, 1990; Vaughan, 1998). It was later used in PL 94-142, the Education for All Handicapped Children Act of 1975. This definition has significance for institutions of higher education seeking to comply with Section 504 of PL 93-112, or the Rehabilitation Act of 1973. In July 1990, the Americans with Disabilities Act was signed into law. This federal act prohibits discrimination against persons with disabilities and in many of the same areas as Section 504, in other words, in public accommodations facilities, but it focused on a different target group. It was expanded to include private entities and organizations. Those not covered under Section 504 (including private businesses, non-government funded accommodations and
services, and state and local governments) were now required to provide full and equal access to individuals regardless of their disabilities (Jarrow, 1991; Omvig, 2002). In October 1990, Congress amended the Education of All Handicapped Children Act of 1975 and its name was changed to the Individuals with Disabilities Education Act (IDEA). The term “handicapped student” was changed to read child/student/individual with a disability. The change in the terminology is significant, as it now reflects that a disability is only one facet of a person’s total being (First & Curcio, 1993).

As special education within elementary and secondary schools grew during the 1970’s, it became necessary that programs and services be developed for the changing educational needs of students with blindness and visual impairment. Some colleges and universities had programs and services for students with disabilities even before the 1970’s. With the passage of the Rehabilitation Act of 1973, IDEA, and ADA, Congress charged the responsible agencies with promulgating the regulations aimed at correcting program and service inequities. These acts were designed to keep handicapped individuals from being segregated or removed from the mainstream. One such federal law is Public Law 94-142, the Education of All Handicapped Children Act, which mandated changes in the assessment and education of individuals with varying disabilities. The Act provides the foundation for securing a systematic methodology for the identification, assessment, and education of children and youth with disabilities.

Key Discussion of Conceptual Framework and Related Studies

The conceptual framework outlines who and what will be studied. Both Weiner’s (1979) and Tinto’s (1987) models inform and guide the study. Students attribute their
success to internal and external factors (Weiner, 1979) as well as social and academic integration factors (Tinto, 1987). All these factors lead to degree completion (Weiner, 1979; Tinto, 1987). The college experience strongly influences students’ success.

**Weiner's Theory**

Weiner (1979) postulated that in achievement-related contexts, the causes perceived as most responsible for success and failure are ability, effort, task difficulty, and luck. That is, in attempting to explain the prior success or failure at an achievement-related event, the individual assesses his or her level of ability, the amount of effort that was expended, the difficulty of the task, and the magnitude and direction of experienced luck. He assumed that rather general values are assigned to these factors and that the task outcome is differentially ascribed to the causal sources. In a similar manner, future expectations of success and failure would then be based upon one’s perceived level of ability in relation to the perceived difficulty of the task (labeled by Heider (1958) as *can*), as well as an estimation of the intended effort and anticipated luck. In listing the four causes reported above, Weiner did not intend to convey that they were the only perceived determinants of success or failure, or even that they were the most salient ones in all achievement situations.

**Dimensions of Causality.** Inasmuch as the list of conceivable causes of success and failure is infinite, Weiner (1979) created a classification scheme, or a taxonomy, of causes. In so doing, similarities and differences are delineated and the underlying properties of the causes are identified. This is an indispensable requirement for the construction of an attributional theory of motivation.
The prior theoretical analyses of Rotter (1966) and Heider (1958) were available to serve as Weiner’s initial guides in this endeavor. Rotter and his colleagues proposed a one-dimensional classification of causality. Causes were either within (internal) or outside (external to) the person. In a similar manner, Heider (1958) has articulated an internal-external classification of causality. Rotter labeled this dimension locus of control, whereas in the present context, locus is conceived as a backward-looking belief and therefore is referred to as locus of causality. Indeed, Weiner (1979) contends that the concepts of locus and control must be separated.

The causes can be readily catalogued as internal or external to the individual. From the perspective of the student, the personal causes include ability, effort, mood, maturity, and health. Teacher, task, and family are among the external sources of causality. But the relative placement of a cause on this dimension is not invariant over time or between people. Inasmuch as attribution theory deals with phenomenal causality, such personal interpretations must be taken into account. That is, the taxonomic placement of a cause depends upon its subjective meaning. Nonetheless, in spite of possible individual variation, there is general agreement when distinguishing causes as internal or external.

A second dimension of causality, which Weiner (1979) has come to perceive as increasingly important, is labeled stability. The stability dimension defines causes on a stable (invariant) versus unstable (variant) continuum. Again Heider (1958) served as Weiner’s guide, for he contrasted dispositional and relatively fixed characteristics, such as ability, with fluctuating factors such as effort and luck. Examining ability, typical effort, and family would be considered relatively fixed, while immediate effort, attention, and mood are
more unstable. Effort and attention may be augmented or decreased from one episode to the next, while mood is conceived as a temporary state. However, as indicated previously, the perceived properties of a cause can vary.

Still a third dimension of causality that was identified by Heider and later incorporated into the achievement domain by Rosenbaum (1972) was labeled intentionality. Causes such as effort or the bias of a teacher or supervisor were categorized as intentional, whereas ability, the difficulty of the task, mood, and so on were specified by Rosenbaum to be unintentional.

In prior writings, this distinction was accepted (Weiner, 1976). Weiner (1979) asserts that it is now apparent that Rosenbaum (1972) mislabeled this dimension. Rosenbaum argued that the dimension of intentionality is needed to differentiate, for example, mood from effort. Both of these are internal and unstable causes, yet intuitively they are quite distinct. Rosenbaum invoked the intent dimension to describe this difference, with mood classified as unintentional and effort classified as intentional. However, it seems that the dimension Rosenbaum had identified was that of control. Failure attributed to a lack of effort does not signify that there was an intent to fail. Intent connotes a desire, or want. Rather, effort differs from mood in that only effort is perceived as subject to volitional control. Hence, Weiner (1979) proposes that a third dimension of causality categorizes causes as controllable versus uncontrollable.

**Internal Factors**

Attribution theory is “the study of perceived causation; it examines an individual’s motivation to understand and interpret the cause-effect relationships underlying events”
Although there are many attributional approaches, they all share the idea that people search for the causes of behavior. These perceived causes play a vital role in determining task persistence, effect associated with task outcomes, and reactions to the behaviors of others (Chen & Tollefson, 1989). This theory emerged from the work of Heider and Rotter in person perception in the 1950’s and 1960’s. Most recently, the theory has generated interest among researchers in education, because its framework provides an understanding of how students explain their successes and failures in school and the effect of these explanations on their self-esteem and subsequent behavior (Chen & Tollefson, 1989). High degrees of self-efficacy, defined as a sense of personal control over achievement outcomes, characterize the attribution patterns of college students in the Chen and Tollefson (1989) study. When ratings were used to collect attributions, the students attributed academic success to effort and ability. When a free-response method was utilized to collect specific attributions, achievement was explained by more course specific factors.

Studies of students with blindness and visual impairments often involve an analysis of the students’ style of attribution or their ideas concerning the causes of their academic successes and failures (Roy, 2000). Academically successful students tend to attribute their successes and failures to their own efforts or actions (reflecting an internal locus of control). They persevere on difficult tasks, delay gratification, and are actively involved in the learning situation (Roy, 2000). Students with blindness and visual impairments often attribute their successes and failures to factors outside of their control (reflecting an external locus of control). They attribute success to their ability, effort, persistence, and discipline, and they point to external factors as contributors to their lack of academic success, such as
difficulty accessing information and the negative attitudes of faculty and administrators (Roy, 2000).

There have been a number of studies on students with blindness and visual impairments’ self concept and its relationship to academic success. Tuttle and Tuttle (1996) noted that the self-concept of individuals with blindness and visual impairment undergoes an evolutionary process. That is, many of them possess a negative self-concept that is rooted in the negative perceptions and attitudes regarding blindness and visual impairment. This negative sense of self adversely affects motivation. Many individuals with blindness and visual impairment report that the more positive their sense of self, the more motivated they are to be successful (Tuttle & Tuttle, 1996). Self-concept has been considered in various studies comparing students with blindness and visual impairment to other handicapped and non-handicapped students.

Oakland, Banner, and Livinstone (2002) discovered that “in general, the investigation of self-concept differences between blind and normally achieving children has yielded inconsistent results” (p. 29). Many investigators have stated that students who are blind or visually impaired have significantly lower or more negative self-concept scores than non-handicapped or normally achieving peers (Tuttle & Tuttle, 1996; Roy & MacKay, 2002). Other researchers reported no significant differences between the general self-concept of individuals who are blind or visually impaired and normative populations (Tuttle & Tuttle, 1996; Roy & MacKay, 2002). Tuttle and Tuttle suggest that, conceptually, there are a number of possible reasons for inconsistent self-concept results:
(1) Constructs such as self-concept or self-esteem are vaguely defined and do not point to any clear operational definitions. (2) A bewildering array of operational definitions and hypotheses, and instruments are utilized in self-concept research. (3) The definition of blindness and visual impairments is operationalized in different ways; thus, the populations may not be truly comparable. (4) Different investigators have employed different research designs, studied a wide range of ages, and made use of numerous different tests and measures, which further restricts the possibility of arriving at comparable conclusions. (Tuttle & Tuttle, 1996, p. 132)

Litner, Mann-Feder, and Guerard’s (2005) qualitative study reported on the experiences of students with learning disabilities who were enrolled in a university-level program. Among the factors that students identified as promoting their academic success included personal attributes, such as tenacity and determination, and engagement in activities outside of academics that supported the development of positive identity.

Although Astin’s (1977) longitudinal analysis of college impact on students has not considered blind and visually impaired students, this study does outline select factors that influence academic success on a large cross-section of undergraduate students. These factors include: maximum interpersonal involvement, devotion of time and effort to academic pursuits, and participating in athletics. “All three patterns of high involvement--interpersonal, academic, and athletic--lead to increased chances of completing college, implementing career objectives, and satisfaction with the undergraduate experience” (Astin, 1977, p. 241). It is important to note here that Astin covered some 200,000 students and a national sample of more than 300 postsecondary institutions of all types; however, this study
spanned the 1960’s and 70’s, a time when students with blindness and visual impairments represented a very small percentage of the total student population. These factors may be applicable to students with blindness and visual impairments, resulting in similar impact on them.

**Self-advocacy.** College students with blindness and visual impairments are expected to be self-reliant in seeking out and participating in both academic and social activities (McBroom, 1997; Matson, 1990; Gil, 2007). Whereas in the secondary environment educators and administrators were responsible for facilitating their access to both academic and social activities (McBroom, 1997; Vaughan, 1998; Gil, 2007), at the college level students with blindness and visual impairments are expected to be proactive. Gil (2007) addresses several issues at the secondary and postsecondary level that impact whether or not students with disabilities leaving high school are adequately equipped with self-advocacy and self-determination skills, skills essential to their success at the college level. The author discusses effective transition practices in preparing secondary students with disabilities and their parents for higher education.

According to McBroom (1997), students with blindness and visual impairments entered college with inadequate study skills among other deficits. Furthermore, the college environment can be hostile and uninviting, in part because it excludes individuals with blindness or visual impairments (Matson, 1990; Vaughan, 1998). When these students are not proactive in their environment because of temperament and/or an unwelcoming hostile environment, they fail to succeed. Therefore, college students with blindness and visual impairment are likely to develop a poor sense of self-concept and self-esteem (McBroom,
These students, then, tend to develop a failure syndrome (Roy, 2000; McBroom, 1997; Matson, 1990). Thus, in spite of their capacity to succeed, these college students fall behind their sighted peers or drop out of college (McBroom, 1997; McBroom, Sikka, & Jones, 1994; Marder & D’Amico, 1992).

External Factors

External factors have also been examined in prior research literature. The goal of the Nelson et al. study done in 1993 was to create an account of some of the sociological and psychological belief factors college students with disabilities view as important to their academic success or failure. The findings of this study indicated that the achievement-related beliefs of students with disabilities were not limited to personal beliefs about ability, discipline, effort, and so forth. Even when directly asked, a majority of students did not think that ability in general was critical to their academic success. Though they commented that these matters were important to their academic success, social support and campus climate factors such as family support, interaction with other students and faculty and university services were also considered to affect their academic performance.

Family and spouses. The support of family is a social and campus climate factor that might influence the academic success of these students. Though the support of family does not directly influence academic performance, according to Nelson, et al. (1993), other nontraditional college students have expressed its importance to their social integration. College students with learning disabilities also revealed that they received emotional support from their families (Murphy, 1992). They indicated that they would receive words of encouragement and support from their parents. They also noted the importance of their faith
in God to their academic success. Murphy (1992) further observed that spouses were an important source of assistance.

**Peers.** Although peers may have been socially rejecting in secondary school, during college, they can also be valuable sources of assistance (Murphy, 1992). All of the college students with learning disabilities relied upon the help of other students to succeed academically. In all situations, they sought the assistance of other students who appeared to be the most competent in their classes. These college students with learning disabilities attempted to get the help of their peers in obtaining class notes, reviewing for tests, and reading.

**Faculty and staff.** Murphy (1992) observed that although entitled to certain accommodations, students with learning disabilities learn quickly that the cooperation of the faculty enhances the academic and social value of the accommodation. Some faculty were reluctant to modify their classroom procedures, giving students only partial accommodations or urging them to postpone receiving any special considerations until they “showed that they really needed them” (Murphy, 1992, p. 64). These students indicated that most of the faculty were willing to provide course accommodations. Junco and Salter (2004) evaluated the Project Opportunity and Access online training program for whether it can change the attitudes of faculty and staff regarding students with disabilities. The attitudes of faculty and staff regarding students with disabilities were measured through the Attitudes Towards Disabled Persons Scale. The study demonstrated that the attitudes of those who participated in the training program were significantly better, although gender appeared to be a mediating variable.
Given the significance of faculty attitude to the success of blind and visually impaired college students, it is also important to understand the significance of attitude of not only the faculty but also of peers and other campus administrators to the success of these students. Graham-Smith and Lafayette (2004) have investigated the impact of Disability Student Services (DSS) staff members on the success of students with disabilities. They distributed an electronic survey to students with disabilities at Baylor University regarding what accommodations were most beneficial to them. Findings of this study revealed that students were overwhelmingly in favor of a caring staff and a safe environment. Based on these findings, the study researchers indicated that emphasis on an individual’s spirit is more important than structure and policy. The authors state that other accommodations are necessary, but they must be provided by caring staff members who can focus on individual needs. Murray, Flannery, and Wren (2008) also distributed a survey to staff members at a large private university to investigate their attitudes towards students with learning disabilities (LD). Findings of the 70 returned surveys revealed that staff generally had positive attitudes and were willing to provide accommodations to students with LD. Many of the respondents mentioned the need for training and professional development regarding students with LD at postsecondary institutions.

Tinto’s Interactionalist Theory

Tinto views students’ departure for college as a longitudinal process that occurs because of the meanings the individual student ascribes to his or her interactions with the formal and informal dimensions of a given college or university (Braxton, Sullivan, &
Johnson, 1997; Tinto, 1987, 1993). Such interactions occur between the individual student and the academic and social systems of a college or university.

More specifically, Tinto (1975) posits that various individual characteristics (for example, family background, individual attributes, and precollege schooling experiences) that students possess as they enter college directly influence their departure decisions, as well as their initial commitments to the institution and to the goal of college graduation. Initial commitment to the institution and initial commitment to the goal of graduation influence the level of a student's integration into the academic and social systems of the college or university.

According to Tinto (1975) “academic integration consists of structural and normative dimensions” (p. 104). Structural integration entails the meeting of explicit standards of the college or university, whereas normative integration pertains to an individual's identification with the beliefs, values, and norms inherent in the academic system. Social integration pertains to the extent of congruency between the individual student and the social system of a college or university. Tinto holds that “social integration occurs both at the level of the college or university and at the level of a subculture of an institution” (Tinto, 1975, p. 107). Social integration reflects the student's perception of his or her degree of congruence with the attitudes, values, beliefs, and norms of the social communities of a college or university.

Tinto postulates that academic and social integration influence a student's subsequent commitments to the institution and to the goal of college graduation. The greater the student's level of academic integration, the greater the level of subsequent commitment to the goal of college graduation. “Moreover, the greater the student's level of social integration,
the greater the level of subsequent commitment to the focal college or university” (Tinto, 1975, p. 110). The student's initial levels of commitments—institutional and graduation goal—also influence his or her levels of subsequent commitments. In turn, the greater the levels of both subsequent institutional commitment and commitment to the goal of college graduation, the greater the likelihood the individual will persist in college.

Moreover, Tinto carefully points out that his theory accounts for voluntary student departure (1975). He also stresses that his theory “strives to explain the departure process within a given college or university and is not a systems model of departure” (Tinto, 1993, p. 112). First, Tinto’s model speaks to the longitudinal process of departure as it occurs within an institution of higher education. It focuses primarily on the events which occur within the institution and/or which immediately precede entry to it. Again, it is not a system’s model of departure nor is it intended to account for individual behavior after departure. The immediate focus of the model is on explaining why and how it is that some individuals come to depart their institution prior to completing their degree program (Tinto, 1975). Second, the model pays special attention to the longitudinal process by which individuals come to voluntarily withdraw from institutions of higher education (Tinto, 1975). Third, the model is longitudinal and interactional in character. It emphasizes the longitudinal process of interaction, which arises among individuals within the institution, and which can be seen over time to account for the longitudinal process of withdrawal or disassociation, which marks individual departure (Tinto, 1975). In this sense, it is not merely a descriptive model of departure but an explanatory one (Tinto, 1975). Its primary goal is not to describe the degree to which different individuals and institutional attributes are associated with
departure, though that description may follow from the model. Rather, the model seeks to explain how interactions among different individuals within the academic and social systems of the institution lead individuals of different characteristics to withdraw from that institution prior to degree completion (Tinto, 1975).

In focusing on the multiple interactions which occur among members of the institution, the model is also primarily social in character. That is, it looks to the social and intellectual context of the institution, its formal and informal interactional environment, as playing a central role in the longitudinal process of individual departure (Tinto, 1975). Though it accepts as a given the fact that individuals have much to do with their own leaving, it argues that the impact of individual attributes cannot be understood without reference to the social and intellectual context within which individuals find themselves (Tinto, 1975). By extension, Tinto’s model further argues that the affect of the formal organization upon departure is largely indirect. Its impact upon departure occurs through the effects the organization has upon the social and intellectual communities of the institution (Tinto, 1975). In this fashion, the communities of the college mediate, if not transform, the effect of the formal organization upon student behavior.

The model also aims at being policy-relevant in the sense that it can also be employed by institutional officials as a guide for institutional actions to retain more students until degree completion (Tinto, 1975). It is structured to allow institutional planners to identify those elements of the institutional environment which may interfere with the progression of students until degree completion. In permitting such identification, the model is intended to enable institutional officials to ask and answer the question: how can the institution be altered
to enhance retention on campus? Broadly understood, it argues that individual departure from institutions can be viewed as arising out of a longitudinal process of interactions between an individual with given attributes, skills, and dispositions (intentions and commitments) and other members of the academic and social systems of the institution (Tinto, 1975). The individual’s experience in those contexts, as indicated by his/her intellectual and social (personal) integration, continually modify those intentions and commitments. Positive experiences, that is, integrative ones, reinforce persistence through their impact upon heightened intentions and commitments both to the goal of college completion and to the institution in which the person finds him/herself (Tinto, 1975). Negative experiences serve to weaken intentions and commitments, especially commitments to the institution and thereby enhance the likelihood of leaving (Tinto, 1975).

Individuals enter institutions of higher education with a range of differing family and community backgrounds (e.g. as measured by social status and size of community bringing with them a variety of personal attributes such as sex, race, and physical disability), skills (e.g. intellectual and social), value orientations (e.g. intellectual and political preferences), and varying types of precollege educational experiences and achievements (e.g. high school grade point average). Each is posited as having a direct impact upon departure from college as suggested by its well documented affect upon levels of academic performance in college (Tinto, 1975). More importantly, each affects departure indirectly through its direct affect upon the formulation of individual intentions and commitments regarding future educational activities. Intentions or goals specify both the level and type of education and occupation desired by the individual. Commitments indicate the degree to which individuals are
committed both to the attainment of those goals (goal commitment) and to the institution in which they gain entry (institutional commitment). These, together with skills and value orientations, describe the social and intellectual resources and orientations regarding educational continuance, which individuals bring with them into the college environment (Tinto, 1975). Together with external commitments, they help to establish the initial conditions for subsequent interactions between individuals and other members of the institution (Tinto, 1975).

Given individual attributes and dispositions at entry, the model further argues that subsequent experiences within the institution, primarily those arising out of interactions between the individual and other members of the college, are centrally related to further continuance in that institution (Tinto, 1975). Interactive experiences which further one’s social and intellectual integration into the academic and social life of the college are seen to enhance the likelihood that the individual will persist within the institution until degree completion (Tinto, 1975). They do so by way of the impact integrative experiences have upon the continued reformulation of individual goals and commitments. Positive integration serves to raise one’s goals and strengthens one’s commitments both to those goals and to the institution within which they may be attained (Tinto, 1975). Negative experiences, those that separate the individual from the social and intellectual communities of the college, do not lead to sufficient integration in those communities, and may lead to departure (Tinto, 1975). They may do so by either lowering one’s goals and/or by weakening one’s commitment, especially to the institution. Clearly the model posits that, other things being equal, the lower the degree of one’s social and intellectual integration into the academic and social
Communities of the college, the greater the likelihood of departure (Tinto, 1975). Conversely, Tinto posits that the greater one’s integration, the greater the likelihood of persistence.

Academic dismissal and voluntary withdrawal from college. It is further postulated that experiences in the formal and informal components of the academic and social systems of the institutions may have distinct, though necessarily interrelated impacts upon differing forms of institutional departure (Tinto, 1975). Integration into the academic system of the college, especially in its formal component, is seen as directly linked to those forms of departure which arise from a substantial incongruence, or mismatch, between the skills and abilities of the individual and the level of demand placed on that individual by the academic system of the college (Tinto, 1975). Academic difficulty (and therefore, academic dismissal) reflects a situation in which the demands of the academic system proved too great. The individual either does not have the ability to meet those demands or has yet to develop and apply those skills and study habits needed to do so. But when the demands of the formal academic system are not challenging enough, boredom and voluntary withdrawal rather than dismissal are generally the result (Tinto, 1975).

Incongruence may also result from a substantial mismatch between the intellectual orientation of the student and that of the institution. This does not have to do with formal academic activities alone. It also reflects the outcome of the day to day interactions between faculty, staff, and students which occur outside of the classrooms and laboratories. Beyond the importance of those contacts for the social and intellectual development of the students, they are central to the process by which students come to judge the degree of congruence
between their own intellectual orientation and that which characterizes the life of the institution (Tinto, 1975). Thus, contact with faculty and staff does not in itself ensure congruence. Nevertheless, wide ranging contact may increase the likelihood of its occurrence because of the impact extensive personal contact has upon value change among maturing adults (Tinto, 1975).

Contact with faculty and staff may affect departure in quite another way. They may also influence individual judgment about the degree to which the institution, as reflected in the actions of its representatives, is committed to their welfare. These influence in turn the development of individual commitment to the institution and therefore decisions as to continued persistence (Tinto, 1975). Wide ranging contact generally leads to heightened commitment and therefore serves, in this manner, to enhance the likelihood of persistence. The absence of interaction, however, results not only in less commitment and possible lowered individual goals, but also in the person’s isolation from the intellectual life of the institution. It may also reinforce or at least leave unchecked the development of deviant intellectual orientation that may further serve to disassociate the individual from other members of the academic system (Tinto, 1975). Though the presence of interaction does not by itself guarantee persistence, the absence of interaction almost always enhances the likelihood of departure (Tinto, 1975).

Experiences in the formal and informal social systems of the institution are also seen as leading to voluntary withdrawal. They may do so either in the form of social incongruence or social isolation. Interactions among students within that system are viewed as central to the development of the important social bonds that serve to integrate the
individual into the social communities of the college. The social (personal) integration and resulting social rewards which arise from it lead to heightened institutional commitment. They also serve as guide posts for the development of social and intellectual identity so important to the life of the young adult (Tinto, 1975). In this sense, social isolation and/or intellectual and social deviancy within the social system of the college is an important element in the process of voluntary departure from institutions of higher education (Tinto, 1975). Other things being equal, the greater the contact between students the more likely individuals are to establish social and intellectual membership in the social communities of the college and therefore more likely they are to remain in college (Tinto, 1975).

*The college as an interactive system.* Inherent in the model of institutional departure is the important notion that colleges are, in a very real sense, systematic enterprises comprised of a variety of linking interactive parts: formal and informal, academic and social. Events in one segment of the college necessarily and unavoidably feed back and impact upon events in other parts of the institution (Tinto, 1975). This applies both within systems and between their formal and informal components and between systems in a variety of ways. The model argues that, to fully comprehend the longitudinal process of departure, one must take note of the full range of individual experiences which occur in the formal and informal domains of both the social and academic systems of the institution (Tinto, 1975).

Experiences, for example, in the informal academic system may feed back upon one’s experiences in the formal domain of that system. This may happen in two ways; rewarding interactions between faculty, staff, and student outside the classrooms and offices of the institution may lead directly to enhanced intellectual development and therefore to greater
intellectual integration in the academic system of the college (Tinto, 1975). They may also result in greater exposure of students to the multiple dimensions of academic work and therefore indirectly lead to heightened levels of academic performance in the formal academic system (Tinto, 1975).

Conversely, the absence of informal student/faculty interactions and/or unrewarding interactions may lead to lower levels of academic performance, which may in turn result in academic dismissal from the institution. The character of faculty/student interactions within the formal domain of the academic system, specifically in the classroom, can, and do, influence the likelihood of additional interactions outside the classroom (Tinto, 1975). The same interplay of formal and informal interactions may also occur within the social system of the college. It may arise, for instance, when individuals are able to gain a position in the formal social structure of the system. Working for the student newspaper, holding work study jobs at the institution, or serving as an officer in the student government may serve to enhance individual integration into the informal world of student life. In the same fashion, membership in the informal social system may greatly assist the student in gaining access to those formal positions in the social world of the institution.

Though it should be clear by now that integration in the academic and social systems of the college are argued to be distinct processes, it does not follow that they are totally independent of one another. Quite the contrary, they are mutually interdependent as they unavoidably involve many of the same actors (Tinto 1975). Events in one system necessarily impact upon activities in the other. In so far as the demands of these systems are to some degree in competition, that is, they ask the student to allocate scarce time and energies among
alternative forms of activities, it is entirely possible that integration in one system of the college may constrain or at least make more difficult integration into the other. Among institutions with particularly demanding academic requirements, this may lead to some degree of social isolation among students. Conversely, when social pressures for social interaction among student peers are great, individuals may find keeping up with even the minimum demands of the academic system quite trying. If, however, the subcultures of either system are supportive of activities in the other, then the two systems may work in consonance to reinforce integration in both the academic and social systems of the institution (Tinto, 1975).

In this sense, their interaction may further the institutional goal of retention. When institutional subcultures are varied in character, as they frequently are, then their interactive impact upon departure depends very much on how individuals come to choose between participation in those subcultures. The model does not argue, however, that full integration in both systems of the college is necessary for persistence. Nor does it claim that failure to be integrated in either system necessarily leads to departure. Rather it argues that some degree of social and intellectual integration must exist as a condition for continued persistence (Tinto, 1975). Conversely, it states that the absence of some form of social and intellectual membership in the academic and social communities of the college serves to establish the condition for departure from the institution (Tinto, 1975). Within the framework of the model, it is entirely possible, for instance, for individuals to achieve integration in the academic system of the college without doing so in the social domain. Persistence may follow if the individual’s goals and commitments are such as to bare the
costs of isolation in the social system of the college. Though the converse may apply, the formal demands of the academic system are such as to require the individual to meet at least the minimum requirements of academic performance (Tinto, 1975). In this instance, the social rewards accruing from integration in the social system of the college may not offset the inability and/or failure of the person to become integrated in the academic system of the college.

The interactive systematic character of the model also highlights the important interplay between the social and intellectual components of student life (Tinto, 1975). In the same manner that both forms of integration, social and intellectual, are essential to the process of persistence, so also are the two forms of collegiate experience central to the important processes of social and intellectual development that are at the very basis of higher education. To ignore one for the other or to suggest that each occurs independently of the other is to distort the integrative character of individual experiences in college (Tinto, 1975). Both are essential to the full development of the individual. In this manner, the model discussed above posits that individual integrative experiences in the formal and informal domains of the academic and social systems of the college are central to the process of departure, especially that which takes place voluntarily. Such experiences continually act upon individuals’ evaluation of their educational goals and their commitments both to the attainment of those goals and to the institution to which initial entry has been gained. Integrative experiences heighten the likelihood of persistence (Tinto, 1975). Their absence increases the likelihood of departure by establishing conditions which tend to isolate the
individual from the daily life of the institution (Tinto, 1975). In turn, these conditions serve to reduce goals and weaken commitment, especially to the institution.

**Departure and membership in college communities.** In a very important sense, the model described above takes as a given that colleges are very much like a broader human community which surround them. Colleges are seen as being made up of a cluster of social and intellectual communities comprised of students, faculty, and staff each having distinct forms of association tying its members to one another. The process of persistence in college is by extension viewed as a process of social and intellectual integration leading to the establishment of competent membership in those communities. Conversely, departure from college is taken to reflect the unwillingness and/or inability of the individual to become integrated and therefore establish membership in the communities of the college. Competent membership in college communities is at least partially determined by the formal demands of the academic system of the college, that is, by the need to maintain minimum levels of academic performance.

It is also influenced by the prevailing intellectual and/or academic culture of the institution. That culture helps define the formal structure and what its competent membership is and what it is not (Tinto, 1975). For the broader collegiate setting, it serves to establish the intellectual and social coordinates by which institutional interactions are gauged. The prevailing academic culture acts to define, in effect, what is appropriate and what is deviant. But, as in the broader social arena of society, total integration is not seen here as a necessary condition for college persistence. Individuals may persist without becoming fully integrated. Rather, the model argues that some form of integration, that is,
some form of social and/or intellectual membership in at least one college community, is a minimum condition for continued persistence (Tinto, 1975). Colleges, like most other organizations, are typically composed of a variety of communities or subcultures, each with its own distinct view of the world. One or more will be centrally located in the mainstream of institutional life. Sometimes referred to as dominant communities, these will often establish and/or be guardians of the prevailing institutional ethos, that distinctive signature which marks the institution as having a discernable character (Tinto, 1975).

Other communities often exist at the periphery of institutional life. Though viable on their own, they are normally subordinate to the dominant community on campus in the sense that they do not form or shape the prevailing social and intellectual character of the institution. Individuals may find membership in any one of these communities. It is entirely possible, for instance, for an individual to be isolated from a majority of local college communities and from the dominant community and still persist if competent membership can be established in at least one locally supportive social or intellectual community. Deviancy from the social or intellectual mainstream of institutional life does not in itself ensure withdrawal. In so far as individuals are able to find some communal niche on campus, then it is possible for a person to be seen as deviant from the broader college environment and still persist to degree completion (Tinto, 1975).

**Social Integration Factors**

Many researchers have examined other nontraditional college students’ perceptions of factors that affect their academic success, but there appears to be little or no research conducted with students with disabilities before the research done by Nelson et al. (1993).
The most significant contribution of the Nelson et al. (1993) study concerns disabled students’ beliefs about the importance of sociological factors. College students with disabilities perceive the quality of their academic experience in broad terms. They see the importance of a sense of integration into an academic community and a sense of belongingness. Though few students indicated “that university support services were important to their academic success,” comprehensive programs for students with disabilities should and often do influence faculty members’ awareness and access (Nelson, et al., 1993, pp. 17-18). This study addresses both psychological and sociological factors that facilitate success not only in the classroom but also outside of the classroom.

In 1999, Hodges and Keller conducted a qualitative study on six college students with blindness or visual impairments on those factors that facilitate their social integration into college. The findings reveal that these students believe that the following factors support their social integration: self assertiveness in initiating interactions with peers, living near campus, and membership in extracurricular activities on campus.

Enburg (1999) also conducted a qualitative study that examined the supports and barriers experienced by college students who are blind. These students were observed across a number of ecological environments that are typically encountered during the collegiate years. Through observations and structured interviews, the researcher was able to document the supports and barriers experienced by students as they ventured through the maze of departments, resources, course requirements, faculty, peers, community environments, and public attitude. Findings from the collective case studies suggest that supports and barriers
experienced by students are often the product of self determination skills and the attitudes maintained by others in the academic and community environments.

Many college students with blindness and visual impairments report that although colleges and universities provide classroom accommodations to facilitate academic success, they experience a sense of loneliness and isolation (West et al., 1993; Wiseman et al., 1988; Roy, 2000). They feel that other students only involve them in classroom activities but not in residential life activities (West et al., 1993; Wiseman et al., 1988; Roy, 2000). A minority student attending a predominantly white institution expressed these feelings of isolation and loneliness on arriving at college, but these feelings of isolation and loneliness may also apply to a student with a visual impairment:

Within hours of arriving there, I experienced culture shock. Walking around the lush, green campus, I saw almost no other students from minority groups. I felt very alone. Although many of my feelings were part of the normal anxiety of going off to college, some of them were born of a sudden realization that fitting in was no longer just a daytime endeavor. I had gone to high school several hours a day in an environment full of people who were different from me-racially, religiously, culturally, or in other ways. But every afternoon and weekend I was home, where I was supported and encouraged for the next day's challenges. College, on the other hand, would engage me 24 hours a day, seven days a week. The isolation that I felt as I walked around the campus did not lessen once I returned to my room. (Parker, 1997, B7)
As McBroom, Tedder, and Kang (1991) found, since youths with visual impairments are often overprotected by family members and service providers, they may not have developed the social skills necessary to integrate into the campus community. Traditional students, however, have developed the social skills which have facilitated their social integration. Social integration has been associated with the completion of their degrees (Astin, 1977, 1984; Kuh et al., 1991; Nora & Cabrera, 1996; Pascarella & Terenzini, 1980; Terenzini, Theophilides, & Lorang, 1984), satisfaction with college (Astin, 1977), sense of acceptance (Collison, 1990; Terenzini et al., 1994), and adjustment to college (Magolda-Baxtor, 1992; Kuh, 1993; Tomlison-Clarke & Clarke, 1994).

Social integration has varied as a measure of success for nontraditional students (Metzner & Bean, 1987; Murguia, Padilla, & Pavel, 1991; Nora & Cabrera, 1996). In 1987 Metzner and Bean conducted a study of 624 nontraditional (commuter, part-time) freshmen from a Midwestern urban university enrolling 22,000 students. They found that, for those students who had been successful during their freshman year, social integration on campus proved to be less significant because social integration for them occurred outside of the campus environment. In 1996, Nora and Cabrera also conducted a study of a Midwestern college. Data were gathered from 800 first-year college students (52 percent). They found that parental encouragement, parental support, and perceptions of discrimination in classroom and on campus had significant direct effects on social integration. In 1996, Murguia, Padilla, and Pavel conducted a qualitative study involving 24 Hispanic and Native-American college students. They found that their involvement in ethnic enclaves facilitated their social integration in the larger campus environment. This ethnic enclave
provided a sense of identity and stability for these students, which was important to their social integration.

Tinto (1987) posited that students who become socially and academically integrated into their campus communities complete college at higher rates than do students who do not integrate. Of the 102 college students with legal blindness whom McBroom (1997) interviewed, 67% reported participation in extracurricular activities, a rate similar to that of sighted students. McBroom included only students who were in their third or fourth year of college, had some level of success, and had overcome the high probability of dropout in the first year of college. These successful students were asked what advice they would give incoming students with visual impairments. They provided answers in 11 categories, 5 of which are directly related to social activity: transportation, orientation and mobility skills, contact with peers, assertiveness and independence, and extracurricular activities.

Such social and academic integration has been found to be dependent on a variety of influential pressures, both before and during college. Students enter college with various characteristics, including goals, expectations, and experiences; but their initial commitment and intention are altered continually as they interact in their college communities. Satisfying interactions result in greater integration and commitment to completing their degrees, whereas negative interactions tend to promote withdrawal.

*Background influences in social integration.* Researchers on social integration have consistently espoused the necessity of knowing students' personal and social characteristics at admission (Newcomb & Wilson, 1966; Pascarella, 1985; Pascarella & Terenzini, 1991; Paul & Kellerher, 1995; Weidman, 1989). Investigation of the social networks of 55 youths aged
14-23 who were blind or had low vision showed that the number of friends increased with age, but that the family remained the predominant social support network. In addition, 65% of the participants identified fewer than five friends, 53% named one or no friend from school or work, and 76% named one or no friend from club affiliations.

Wolffe and Sacks's (1997) comparison of the social lives of youths aged 15-21 who were blind, had low vision, or were sighted indicated that those with low vision reported less interaction with peers and more passive activities than those who were sighted or were blind. The researchers concluded that: "the visually impaired students' opportunities for social integration with and acceptance by sighted age mates appeared to be limited at best" (p. 256). At the same time, the proportion of persons aged 18 and over with visual impairments who graduate from high school is much smaller than that of sighted persons (45% versus 80%) ("Demographics Update," 1997). Problems with social integration could be a contributing factor in the difference in attrition rates of students who are sighted and those with visual impairment.

**Off-campus influences on social integration.** During college, students continue to interact with persons and organizations off campus (Weidman, 1989; Litner et al., 2005)—a situation that, it has been assumed, interferes with their integration into campus life (Astin, 1984). External factors, such as high school friends not attending the same institution (Christie & Dinham, 1991), family (Christie & Dinham, 1991; Eaton & Bean, 1995; Hays & Oxley, 1986), and off-campus contacts (Newcomb & Wilson, 1966) may limit opportunities for involvement on campus (Astin, 1996; Christie & Dinham, 1991). Only limited information is available on the off-campus activities of students with visual impairments.
On-campus influences on social integration. Studies of indicators of persistence among traditional college students for academics have addressed the importance of campus characteristics that are assumed to shape the social integration of students. These indicators include campus peers (Kuh et al., 1991), dormitory residence (Astin, 1993; Pascarella, 1985), opportunity for extracurricular activity (Astin, 1984; Kuh, 1993; Kuh et al., 1991; Niles, Sowa, & Laden, 1994), and institutional mission (Arnold, Kuh, Vesper, & Schuh, 1993; Pace, 1984; Terenzini et al., 1994).

With regard to nontraditional students, Metzner and Bean (1987) found that older commuter part-time students interacted with a university environment differently from traditional students. For example, those nontraditional students interacted with the academic system of the university in a formal manner. These formal interactions occurred between faculty and student primarily in the classroom. Also, these students’ interactions of a social nature outside of the classroom occurred primarily outside of the campus environment. In regards to traditional college students, their interactions with the university environment primarily focused on those interactions within the academic and social systems of the college. In addition to formal interactions within those systems, they also developed informal interactions that facilitated their integration in both the academic and social systems of the university. However, similar findings were reported for students of ethnic minority groups (Murguia, et al., 1991; Nora & Cabrera, 1996). Older, part-time, minority students primarily focused on the formal academic system of the university through positive interactions with faculty and other students. To facilitate this interaction, they reported that family support and encouragement facilitated their academic success. Little social
interaction occurred in the university. For those minority students living on campus, they reported that their involvement in ethnic enclaves facilitated their integration in the university environment both academically and socially. These findings may be applicable to college students with blindness and visual impairments who have a similar nontraditional experience of campus life. How well one can be integrated in these areas can certainly influence persistence.

*Academic Integration Factors*

Transition into college can be difficult for many students as they engage in pursuing the unfamiliar. This event can be even more complex for students with disabilities who may have experienced moving from a supportive setting in which disabilities were accommodated to the Individual Education Plan (IEP) to one where they must now personally advocate for the services they need (Dalke & Schmitt, 1987; Gil, 2007). While making this transition, students will also be required to work across a variety of campus settings. Students will encounter a variety of academic integration factors as they advocate for supports and services during their collegiate years.

Upon admission, students with disabilities will perform as active participants within the college community. It is within this environment that they will be required to interact with advisors, service providers, professors, and peers. In addition, there are a number of social opportunities that students may enjoy as a part of the college community that encompasses the college environment. Gajar (1992) showed that students will most likely establish their initial contact with an academic advisor. She described this interaction as one that will primarily focus upon establishing academic goals, choosing a major, and enrolling
in an appropriate sequence of courses. Some students may also choose to seek direction regarding career options and how their disability would best be accommodated with that professional environment.

Often advisors will refer students to a campus center designated for providing supports and services to students with disabilities. Students who have identified themselves with a disability will interact with an intake counselor as a means of obtaining supports and services required to facilitate their academic participation. Services are usually made available by a center located on campus. Although students are expected to engage in self-advocacy, it is through such a center that students can receive assistance in coordinating the services required to facilitate their academic performance (Dalke & Schmitt, 1987; Getzel, 2008). West et al. (1993) reported that although there are support centers across most college environments, students said “They were unaware of the services to which they were entitled or which were available” (p. 457). Additionally, it was indicated that services were requested and provided, but they were generally found to be “too little too late.”

Getzel (2008) investigated higher education programs that promote the retention of youth and young adults with disabilities in college. The author discussed the student support factors, including services that develop self-determination skills, self-management skills, assistive technology skills, and promote career development. The author also reported on two professional development emphases that promote faculty ability to provide these students with support. Since these accommodations can have a tremendous impact upon the academic performance of students with disabilities, it is important for faculty as well as students to have an awareness of the availability of such resources.
During their collegiate years, students are required to interact with a vast array of professors and peers. It is vital for professors to become conscious of the accommodations required to meet their learners’ needs. According to Hodge and Preston-Sabeen (1997), educators at the postsecondary level must understand two precepts: “1) The definition of an accommodation; and 2) the circumstances under which they are responsible for providing accommodations” (p. 1).

The environment of the academic arena can also present difficulties to students with mobility impairments. Newer and smaller campuses are generally found to be free of the encumbrances that are more typical among many of the older college environments (Burbach & Babbitt, 1988). Construction sites that may prevail as older campuses are becoming renovated can present difficulties to students who are blind as they attempt to maneuver through such encumbrances. Characteristics of the campus environment will be determined by the size, location, and types of programs provided by the university. This, in turn, will determine the types of services that will be required to facilitate the participation of students with disabilities (Gajar, 1992). Such factors will be important for students to consider when choosing a college to attend. As students participate within a postsecondary institution educational program, they will be required to interact within that particular environment. Students identified with a disability will not only participate within classroom environments, but may find it advantageous to participate in ancillary programs as well as residential and social organizations. It is possible that through such interactions students may enhance their opportunity for success.
Key Research on Academic Performance and Academic Success

The need for studies that explore students with blindness or visual impairments in higher education is a very exigent one. In the decades of the 1980’s and 1990’s, there was a rapid increase in the percentage of students with blindness and visual impairments attending institutions of higher learning. For example, the U.S. Department of Education (1996) reported that only 30% of high school students with blindness and visual impairments enrolled in college in 1973. By the end of the nineties, the U.S. Department of Education (1999) reported that 70.4% of high school students with a visual impairment enrolled in four-year institutions.

Moreover, the significant increase in the number of students with visual impairments attending colleges and universities over the past two decades is accompanied by an equal concern for the academic failure of a number of these students (McBroom, 1997; Wagner, 1993; Marder & D’Amico, 1992). In a survey of students with blindness or visual impairments graduating from colleges or universities, it was found that only 16 percent of students with blindness or visual impairments actually graduate (Marder & D’Amico, 1992; Wagner, 1993). Thus, one can observe that the attrition rate for students with blindness and visual impairment is more than 80 percent (Marder & D’Amico, 1992; Wagner, 1993; U. S. Department of Education, 1998). And even though this rate has remained high over several decades, there have been no studies known to the researcher that have been conducted by colleges and universities with the intent to probe into the reasons for this high attrition rate. Clearly, despite the larger number of students with blindness or visual impairments matriculating to institutions of higher learning and the growing regard for their academic
success, not all colleges or universities are monitoring these students’ academic performances or graduation and attrition rates. Because information is not as complete as it might be, this suggests that there is some reason to be concerned about degree completion by students with visual impairments and blindness (McBroom, 1997; Marder & D’Amico, 1992; Wagner, 1993). These researchers contend that many factors could possibly contribute to why students with blindness and visual impairment do not complete their degree. It is important for educators to understand those academic factors that these students say facilitate their success in college.

Academic Deficits Issues

As programs and services for the blind and visually impaired increased, as well as attendance at colleges and universities, assessments revealed that many of these students with blindness and visual impairments had academic deficits. They graduated from secondary schools without the necessary academic skills to compete successfully in college (McBroom, 1997). This is one of the reasons regulations established guidelines and certified the rights of this population to an appropriate education using the proper testing and accommodations necessary to complete that education. However, some students were still admitted to college with sub-optimal academic backgrounds (Matson, 1990; McBroom, 1997; Vaughan, 1998). It is important to note that even though the Rehabilitation Act of 1973 presented a definition of blindness for postsecondary institutions along with a set of concomitant accommodations in the effort to improve services for students, many college students with blindness and visual impairments still find academic work rather difficult, especially if it is accompanied
with a sense of isolation and loneliness (Hodges & Keller, 1999; McBroom, 1997; McBroom, Sikka, & Jones, 1994).

**Attitudes Issues**

Many researchers have provided definitions of attitude. Some refer to attitude as a readiness to respond to a situation; others incorporate the two notions that attitudes are a learned response with lasting qualities. Still others offer a behavioral definition of attitude (Shaver, 1987). There are additional definitions in the literature. But most researchers in social psychology provide the following accepted definition of attitude: “a predisposition to behave in a favorable or unfavorable manner toward a particular class of social objects” (Shaver, 1987, p. 152). This definition includes three components: 1) a cognitive component, 2) an affective component (both of which deal with one’s beliefs about an attitude object), and 3) a behavioral component, which is “the general predisposition to respond in the manner (favorable or unfavorable), which reflects one’s beliefs and evaluative judgments about the attitude object” (Shaver, 1987, p. 152). The behavioral component may be the easiest one to measure of the three. It is usually measured with a paper and pencil test in which the person describes how he or she would behave. For a number of years, there has been a long-standing debate on whether attitudes predict overt behaviors. But the relationship has been substantiated over years of research (Shaver, 1987). The research now focuses on how an attitude is formed. It has been found that attitudes formed as the result of direct experiences are more likely to be sustained and are more predictive of future behavior than are those based on indirect experience. Previous exposure to an attitude object, as well as personal experience also may have an impact on the relationship (Shaver, 1987).
Faculty members’ attitudes and opinions can influence the attitudes that students with disabilities hold toward themselves. Faculty and students form attitudes toward each other. These attitudes are revealed in classroom interactions, which, in turn, strengthen the self-attitudes of the students and the attitudes of others toward them (Home, 1985; Shaver, 1987; Junco & Salter, 2004). Explanations of four-year college faculty attitudes have been mixed. For example, Newman (1976) and Baggett (1994) indicated that many college faculty members possess negative attitudes toward blind and other disabled students, and some may feel that these students are incapable of benefiting from college training. Other references (Vasek, 2005; Skinner, 2007) have suggested that college faculty members are not negative toward these students; rather, they may “lack adequate knowledge of the nature of blindness and other disabilities and the accommodation needs of these students to serve them appropriately” (Baggett, 1994, p. 3). Vasek (2005) evaluated the knowledge, experience, and attitudes of faculty towards students with disabilities at a four-year private institution. The findings indicated that faculty have relatively little contact with the students with disabilities population, nor were many aware of the DSS office’s existence or its services. Consequently, the DSS office incorporated a faculty education area in its website.

Skinner (2007) also examined the willingness of postsecondary instructors to provide accommodations to students with learning disabilities. Results of the study revealed that the willingness of instructors to provide accommodations changed according to function of school affiliation, rank, and the accommodation requested. Programmic suggestions aimed at facilitating the provision of academic adjustments for students with learning disabilities in postsecondary institutions were provided. Roy (2000) conducted a study on sixteen
successful college students with blindness and visual impairments. These students reported positive attitudes on the whole. Some reported good experiences with all lecturers and others reported good experiences with most. The attitude of their faculty was a contributing factor to their success.

The Newman study, conducted in 1976, was one of the first studies to look at issues such as the impact of faculty attitudes on serving students with blindness and other disabilities. The study surveyed 816 full-time teaching faculty members at the University of Pittsburgh. Of those surveyed, a total of 57% returned questionnaires that were appropriate for analysis. The Newman study intended to answer two basic questions: (1) have there been, or would there be problems in admission of students with disabilities in certain departments? And (2) what type of admissions policy would faculty prefer to see developed? Newman’s results indicate that 78% of the professors believed the university should have an unrestricted admission policy. However, only 60% favored an unrestricted admission policy in their department. 3% of those surveyed preferred a closed admission policy for the university, and 2% preferred this policy for their own departments.

The survey also asked faculty to rank a list of disabilities from most limiting to least limiting. 86% of the responding faculty members selected blindness as the most limiting disability. In addition, 19% of faculty who responded preferred a limited admissions policy for the university, and 76% preferred this same policy for their own departments. Rating the disabilities separately, more faculty members supported restrictive admissions for blind students (24%) than for any other disability.
Students with mobility impairments also encountered problems as they attempt to establish a network of supports and services. A dilemma frequently cited was faculty and peers who dispute they have the stamina required to fulfill university expectations (Burbach & Babbitt, 1988). West et al. (1993) reported students experienced feelings of “isolation, scorn, and ostracism” (p. 462). Students who have experienced difficulty in establishing a rapport with their nondisabled peers felt that this could be due to preexisting attitudes commonly maintained by those attending institutions of higher education (Burbach & Babbitt, 1988; Kelly, Sedlacek, & Scales, 1994; Stage & Mills, 1996).

Branker’s (1997) qualitative study explored the personal beliefs, attitudes, feelings, and accommodations used by students with learning disabilities at a southeastern college to determine what faculty beliefs, attitudes, and comfort levels influence and affect the learning disabled students' success in school. This study suggested that students with learning disabilities can define, with confidence and surety, why they are successful. The researcher's interpretation of this formula for success is that: When students with learning disabilities (a) define their learning disability as merely a "difference" rather than a "debilitator," (b) determine their success by "what" they learn rather than the obtained grade point average, (c) have a supportive family rather than a non-supportive one, (d) utilize extended test time and priority scheduling rather than not, and (e) are taught by faculty who are knowledgeable of and comfortable with teaching those with learning disabilities rather than those who are not, then students with learning disabilities will be as successful as other students within the university.
This research examines qualitatively the culture that is created when students with learning disabilities are part of a college campus. The findings suggest that perceptions, on both the parts of students, and faculty, are generated as a result of awareness. Thus, awareness serves either to impede or promote the education of students with learning disabilities depending on its lack or abundance.

Students interviewed by Burbach and Babbitt (1998) felt that they were subjected to “discrimination, stereotyping, and/or prejudicial attitudes” (p. 17). Attitudes such as these are frequently constructed through cultural experiences. Discriminatory attitudes can be quite significant in a university environment that will generally include student and faculty members representing a diversity of cultural etiologies. Therefore, it is not unusual for expectations regarding the competency of individuals with disabilities to be a product of those persons’ cultural identities (Grant & Sleater, 1989; McDermott & Vareene, 1995).

**Stereotypes and Misconception Issues**

Students’ college experiences are affected by the cultural beliefs and values held by others within the university environment. There are many barriers that continue to exist across American colleges and universities. Students with disabilities will often experience difficulties in living up to the expectations others have for the typical college student. For example, within the college community, there are still many misconceptions regarding the ability of students with blindness to perform within the academic environment. Some instructors might presume that since a student is not able to visually conceptualize the graphic material presented during a lecture, then he/she must be incapable of satisfactorily fulfilling the course requirements (Hodge & Preston-Sabeen, 1997). As best stated by
Wistock (1968), “It is never easy to break with traditions, especially when they are so deeply rooted in our culture as the old stereotypes of blindness and blind persons” (p. 80). U.S. Department of Education (1991) reports that Section 504 prohibits discrimination at the postsecondary level, yet, it is inevitable that many of the decisions made across the university setting are a product of the cultural etiologies regarding disability-related issues. The perseverance of many individuals will be required before a transformation of values and beliefs will transpire.

Frequently, students with disabilities are confronted with attitudinal discrimination (Burbach & Babbitt, 1988; Hodge & Preston-Sabeen, 1997; Stage & Mills, 1996; Tuttle & Tuttle, 1996; West et al., 1993; Wiseman, Emory & Morgan, 1988). In a study by Stage and Mills (1996), eight students with learning disabilities were interviewed to obtain information regarding their attitude, perceptions, and college experiences. Topics included: a) a general description of students’ collegiate experiences; b) students’ experiences with professors, peers, and tutors; c) how they perceive themselves in comparison to fellow peers; and d) methods they implemented in their studies. In some instances, students were able to establish a positive rapport with the university faculty. This was usually accomplished through face to face interactions. However, there were other students who reportedly received minimal faculty empathy or support. This group of students reported that their professors were unwilling to provide accommodations for testing, written work, or for other arrangements they had requested at the beginning of the semester.
Key Research on College and University Support Services and Accommodations to Students who are Blind or Visually Impaired

Special support services and accommodations represent one perspective of social support and campus climate that may be vital to the academic success of students with disabilities. Postsecondary institutions have created support programs in response to the increase of students with disabilities on college campuses. The major influence for establishing such programs was the enactment of Section 504 of the Rehabilitation Act of 1973. According to Heyward (1992), those responsible for complying with Section 504 of PL 93 112 are still debating basic issues with regard to how services and accommodations for students with blindness and visual impairments should be administered. These issues include: “(a) Who are qualified handicapped persons? (b) What are reasonable accommodations? (c) How does the enforcement agency exercise its right to investigate charges of discrimination? (d) What does the responsibility to provide program access mean for the recipient of federal financial assistance?” (p. 2)

Legislative Support Services and Accommodations

With the passage of key legislative mandates, individuals with disabilities have been guaranteed not only the right to an education, but also the support services that are necessary to facilitate their participation within a college environment (Fichten, Goodrick, Talgalatis, Ansen, & Libman, 1990; Hodge & Preston-Sabeen, 1997; Stage & Mills, 1996). With such transformations, there are a greater number of students with disabilities attending colleges and universities nationwide (West et al., 1993). It is important to understand the significance of such mandates and the impact they have had upon the evolution of postsecondary
educational supports and services that are available for individuals with disabilities. The Education of Handicapped Children Act (PL 94-142) of 1975 guarantees the right to a free and appropriate public education within the least restrictive environment (U.S. Department of Education, 1996). Through this legislation, children ages three to twenty-one are guaranteed the right to an education that includes the provision of the related services to meet their needs at public expense. This law was later amended and became known as the Individuals with Disabilities Education Act (IDEA, 1990). Since the passage of this legislation, there has been an increasing level of services, including transition programming, that must begin by the age of fourteen to sixteen years. The purpose of such programming is to prepare students for their years following graduation. This mandate is similar to that of Section 504 with the major differences arising between service delivery and the college student becoming personally responsible for the procurement of such services (Scott, 1991).

Technology-Related Assistance for Individuals with Disabilities (1998) is legislation that provides comprehensive federal funds made available for the development of assistive technology programs. These funds are to be used by programs designated for students having functional deficits or disabilities. The resources can be used for the purchase of technological equipment, in-service training programs, or the implementation of projects to increase public awareness (LaPlont, 1993). This legislation has provided college programs with fiscal resources to purchase an array of technological devices, thereby providing students with disabilities the tools required to fulfill academic expectations. Additionally, the funds have been most effectual in providing training programs to the staff employed in campus libraries, computer labs, and resource centers. Section 504 of the Vocational
Rehabilitation Act of 1990 is frequently referred to as the “basic civil rights provision” (Scott, 1991). The legislation states that “no otherwise qualified handicapped individual in the United States shall solely by reason of his handicap be excluded from the participation in, be denied the benefits of, or be subjected to, discrimination in any program or activity receiving federal financial assistance” (as cited in Heyward, 1992, p. 2). Through Subpart E of the rules and regulations, the legislation addresses the provision of postsecondary educational services and requires that programs be accessible to students with disabilities. Additionally, this act provides a classification of disabilities into the four areas of physical impairments, sensory impairments, specific learning disabilities, and psychiatric/addictive disorders (Brian, 1996).

The Americans with Disabilities Act (ADA) 1990 protects individuals with disabilities from discrimination in the areas of employment, housing, education, transportation, health services, telecommunications, and access to public services. Furthermore, the legislation addresses education as being a fundamental right of persons with disabilities. The ADA requires postsecondary institutions to comply with the law in expanding the provision of services to individuals with disabilities (Postsecondary Education Planning Commission, 1991). As a result of Section 504 and the Americans with Disabilities Act, students are assured access to higher education in programs that are nondiscriminatory in providing “reasonable accommodations” as defined by the legislation (Hodge & Preston-Sabeen, 1997). Through the Carl D. Perkins Vocational Applied Technology Education Act (1991), emphasis has been placed upon the use of resources for improving educational and vocational programs to prepare individuals with disabilities for employment in a
technologically advanced society. The law was designed to provide services to those defined as educationally disadvantaged. Those considered as such include individuals with disabilities, economically disadvantaged and those served within correctional programs. The Higher Education Act of 1992 provides assistance to students with disabilities due to disadvantaged backgrounds or those underrepresented at the postsecondary level of education. This legislation mandates that instructional accommodations be implemented for students who qualify for admission in colleges and universities.

Each of the legislative mandates previously cited has been significant in protecting the educational rights of an increasing proportion of students with disabilities now qualifying for college admission (Vogel, 1983; Wilsensky & Gillespie-Silver, 1992). Yet, we continue to see violations of such mandates, as was demonstrated in the Elizabeth Gookanburger versus Boston University landmark decision of 1996 (Boston University Case). In this particular case, students with learning disabilities brought a class action lawsuit against the university and its administration resulting from policy changes enacted by President John Silber. The students claimed that policies regarding documentation of disability accommodations and the opportunity for course substitutions resulted in “discrimination by denying equal access to the educational opportunities available to students without learning disabilities at Boston University” (p. 2). As a result of this case, it was decided by the Court that educational institutions cannot make “wholesale changes to accommodation policies and procedures without warning thus having the effect of delaying or denying an accommodation” (p. 1). Furthermore, it was stated that it is the responsibility of postsecondary institutions to make accommodations in “good faith” and not for the purpose
of bias from individuals serving “personal agendas.” The Court concluded that the Boston University accommodation policy was in violation of the ADA and Section 504 during the academic year of 1995-96 (Boston University Case, 1996).

Historically, parents and educators have fulfilled the role of advocating for the needs of students with disabilities. This movement had a positive impact on the passage of legislative mandates in the improvement of educational services (Wilson, 1997). However, it has not provided students with a “voice” or the skills required to become an active participant in the planning process (Wilson, 1997). At the postsecondary level, it is necessary for students with disabilities to realize they are responsible for becoming informed participants aware of the supports and services available to them on campus. Once a student has been accepted into a postsecondary institution, it is expected that he/she will function as an independent adult advocating for the supports and services required to accommodate his/her disability-related needs. Unlike former years of education, there will no longer be parents and special educators advocating on their behalf. During college, they must be prepared to engage in what is otherwise known as self-advocacy (Wilson, 1997). To facilitate this process, the student will need to use effective problem-solving strategies in an effort to anticipate the occurrence of problematic situations and then consider the various solutions that can be effective in solving or circumventing the dilemma. At present, it is not at all unusual to find individuals with disabilities representing approximately 8.8 percent of college freshmen (Henderson, 1992). These estimates may, in fact, be conservative, since students are not required to identify themselves as having a disability during the application process. Therefore, it is possible that an even greater number of students with disabilities are currently
attending institutions of higher education. In reaction to this trend, colleges have begun to provide various supports and services needed to facilitate students having a diversity of needs; however, it is important that one remain cognizant of the many limitations yet imposed upon qualified students as they engage in the pursuit of their inalienable right to an education.

College and University Support Services and Accommodations

There are many differences in how support services are provided to individuals with disabilities attending institutions of higher education, but they typically include three general types of accommodations: counseling, instructional, and administrative.

_Counseling support services and accommodations._ Colleges and universities usually provide personal or social counseling, academic counseling, and career counseling. In an effort to ameliorate the social isolation some blind and visually impaired students feel, there are some colleges that provide support groups, peer mentor programs, and counseling services to students with disabilities (Dalke & Schmitt, 1987). Groups such as these can also serve an effective vehicle in providing students with referrals to other social organizations. As students engage in social interactions, they can increase their opportunities for establishing friendships with students who share some of the same collegiate experiences within the campus environment.

_Instructional support services and accommodations._ Instructional accommodations often include test modifications or support services such as study groups and centers to provide assistance in the area of writing skills or math and sciences, tutors, note takers, taped textbooks, and readers. Although these programs can be helpful to students with disabilities,
such services are often provided by peers who are untrained to work with students who have unique learning styles. In 2005, Fichten, Jorgensen, Havel, and Baril conducted a study involving 138 current and recent college graduates with disabilities on their self-perceived individual and environmental correlates of successful academic outcomes. The findings were that students with disabilities indicated that disability-related accommodations were important to their academic success. They include the following: priority course scheduling, having a quiet room for taking exams, having note takers in class, and having policies that permit students with disabilities to take a reduced course load and remain classified as a full-time student. Furthermore, the findings were that college students with disabilities perceive that good teachers, the overall college environment, the availability of computers on campus, the availability of support and help, and tutors were facilitators of success.

In research conducted on the academic success of college students with learning disabilities, Murphy (1992) discovered that students used a number of techniques to succeed academically. These techniques, while observed in a community of students with learning disabilities, are equally applicable in the blind and visually impaired population. Murphy categorized the techniques used by these students as formal and informal. Formal techniques were defined as accommodations designed to minimize instructional, social, and environmental barriers and to equalize opportunities for social, academic, and vocational success. This included extended time for examinations and course assignments, tutoring and proofreading services, use of tape recorders in class, text on tape, and reduced course loads. Informal accommodations included the manipulation of educators and the use of parental and
peer assistance. Murphy (1992) reported that although these accommodations were clearly covert, they were as critical to student success as formal accommodations.

The most frequently cited formal accommodation, according to Murphy (1992), is the untimed examination. College students described this as the most helpful, because it “neutralized slow reading habits, comprehension difficulties, and written composition” (p. 50). Almost all students in Murphy’s (1992) study used this accommodation and sanctioned its helpfulness. Many complained, however, that test-taking distractions were significant problems. They expressed that they were unable to take full advantage of a time extension unless they were in a quiet location in which to take the test. Finding the quiet location and the instructors’ unwillingness to make these arrangements proved to be extremely frustrating.

Murphy (1992) also observed that students with learning disabilities took advantage of free tutoring. They used the tutors for problem courses or problem course requirements, such as writing papers. The overall reviews on tutors were mixed. Some students with learning disabilities felt that tutors were not particularly helpful, because they received very little pay and did not often share the same major area of study or classes. Many students with learning disabilities viewed the tutors as indifferent to, and unaware of, the problems facing individuals with learning disabilities. In the majority of cases where students benefited from tutors, they did so because they had very specific ideas about services they wanted from the tutors, and because they carefully managed their tutors (Murphy, 1992). Many students in Murphy’s (1992) study felt that they needed tutorial assistance, but rejected the idea of tutors. One reason given for not taking advantage of the free tutorial service was that some students with learning disabilities felt stigmatized if they used tutors to the extent they were needed.
In a study by Stage and Mills (1996), results indicated that students with blindness and visual impairments frequently viewed tutorial services in a negative light. According to one participant:

they just give you a list and say here you pick them out yourself. It’s hard to find out who I’m going to need. They have no screening program for anybody … I have been to the educational building picking up tutor’s names off the bulletin board and it’s just people who are looking for an extra penny. (p. 435)

The extent to which students can successfully participate within the academic environment will depend upon their effectiveness in working with faculty, staff, and services providers to develop a network of essential support.

About one-third of Murphy’s (1992) interviewees mentioned textbooks on tape as helpful. Students used recorded texts in numerous ways. Some read along with the tape, while others only listened. Some students found the books on tape a nuisance. Many books were unavailable on tape and others were difficult to find. A complaint heard often was that the texts had to be ordered months in advance because they took so long to arrive.

One-fourth of the students with learning disabilities interviewed in the study conducted by Murphy (1992) reported that, at one time or another, they tape-recorded their classes. Some students taped classes that were particularly troublesome, whereas others recorded only specific lectures. Most of the students that recorded their classes rarely listened to the tapes, if ever. Many students reported taping classes as much for psychological as for academic reasons. One student noted: “I tape my classes but I rarely
play back the tapes. It calms me down and I get more out of class. In case I miss something, I know it’s there, like a crutch” (Murphy, 1992, p. 54).

Several students mentioned that they took fewer classes per semester because they needed more time than other students to complete the assignments and papers. This was possible because students with learning disabilities are allowed to have a reduced course load and still retain the full-time status that is important for obtaining financial assistance (Murphy, 1992). Some students informed the interviewers that nine or twelve credits were their limit per semester, and they never registered for more. Other students with learning disabilities reported that they usually signed up for a full fifteen-credit load and retained those credits, if possible. Many reported that if a course became too laborious, they dropped it and re-enrolled in that course the next semester. Some students told their professor that they were unable to complete requirements of the course and requested an incomplete.

It appears that the Murphy (1992) study is consistent with other studies presented. That is, it focuses primarily on accommodations that will facilitate academic success. The study does not address those nonacademic factors that are critical to success in college.

Administrative support services and accommodations. The availability of support services and accommodations is most often determined by the administrative decision regarding the allotment of fiscal resources to finance such resources. It is the amount of funds allocated to resource centers that determine the type or extent of support and services that will be available to students with disabilities.

Additionally, there are others who believe that faculty and staff, in some instances, remain unaware of the services that have been mandated by Section 504 (Hodge & Preston-
Sabeen, 1997; Stage & Mills, 1996; Vasek, 2005). In-service training has been identified as one method to alleviate these attitudinal misconceptions (Stage & Mills, 1996; Vasek, 2005). West et al. (1993) verify that faculty and staff feel they can benefit from in-service training to develop empathy for disability-related issues. It appears that administrative decisions supporting the provision of in-service programs will not only have a positive impact upon students with disabilities, but could result in an improvement of faculty performance as well.

Access issues

Students with disabilities may not have access to information in alternative formats (West et al., 1993). Senge and Dote-Kwan's (1995) survey of California campus directors of disability accommodations, for example, reported that 9 of the 18 schools in the California State University system did not provide an alternative to printed newspapers or campus voting materials, and programs for sports or theater events were not altered at 12 and 13 schools, respectively. In the California State University system, live readers were the primary source of such information. A second access issue is the inability to drive. Both Corn and Sacks (1994) and Crews and Long (1997) found that students with visual impairments were limited to activities and locations accessible by mass transportation or asked friends or relatives for transportation.

Chapter Summary

In this chapter, the author described the prevailing legal and medical definition of blindness and visual impairment that has guided policy making decisions at postsecondary institutions in the provision of educational services for this student population. Following the discussion of the legal and medical definition of blindness and visual impairment, he
presented a historical discussion of major federal legislation that has undergirded policy, and which promulgated regulations stipulating the nature of equal access and accommodations. Next, he described the conceptual framework that guided the course of this study along with supporting studies that focus on key aspects of the conceptual framework. The chapter then concluded with a discussion of those supports and services that postsecondary institutions employ to ensure equal access to higher education by this student population.
CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

The purpose of this chapter is to present the study design and methodology. This qualitative case study (Stake, 1995) was conducted with college students with blindness and visual impairments located at several four-year public institutions of higher education in the southeastern United States.

Qualitative research allows for a naturalistic approach to this study. The researcher dialogues with blind and visually impaired college students about their collegiate experiences, the natural setting, and the interactions of college students with blindness and visual impairments (Bogdan & Biklen, 1998). Because the students were in their natural collegiate environment, the researcher had the opportunity to see first-hand what was occurring. He interviewed students with blindness and visual impairments regarding their collegiate experiences that support their success (Spradley, 1979). As the investigator, the researcher is the research instrument. The researcher’s role as the researcher is portrayed in terms of the coexistence of his professional and personal life. Therefore, he designed a study that is meaningful for him and reflects the ethics of researching college students who are blind and visually impaired. To ensure the trustworthiness of the data (validity and reliability), he addresses the issues of credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). He questions the credibility of his findings to internally validate what he thinks he will find. He accomplishes this through multiple interviews and various avenues for data review.
**Study Design**

Case study methodology provides an opportunity for the researcher to rigorously examine college students with blindness and visual impairments who are registered with Disability Students Services (DSS) (Bogdan & Biklen, 1998). He purposefully pre-selected this group of students because as Merriam (1998) notes, "purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned" (p. 61). The researcher selected these sites due to his intrinsic interest in groups of students who are blind and visually impaired and registered with DSS at large public universities.

**Research Questions**

The following questions guided this study:

1. What are students with blindness and visual impairments' understandings of blindness and its relation to their success?
2. How do students with blindness and visual impairments define their academic success?
3. What factors do students with blindness and visual impairments identify as the most influential in their academic success?
4. What are students with blindness and visual impairments' perceptions as to how they are viewed, treated, and respected by faculty, staff, and/or administrators?
5. How do students with blindness and visual impairments perceive the impact of these key authorities on their academic success?
Bias and Background of the Researcher

The experiences of this researcher as a graduate student who is blind and as an advocate for those who are blind have predisposed him to do research that allows active involvement with people, places, and conversations regarding the experiences of students at institutions of higher learning who are blind and visually impaired. The researcher was born in a small, rural community located in the northeastern part of the state. While growing up, he was taught the value of faith, discipline, and education. Around the age of ten, he became blind. This life-changing event presented many challenges, yet new opportunities also arose. One of these was the opportunity to attend the Governor Morehead School for the Blind located in the capital city. He was both academically and athletically successful during these years of elementary and secondary education, and as a result of his experiences and those of other individuals with blindness and visual impairments at this school, his attitude toward this population evolved from a generally negative to a positive one.

Upon graduation from high school, the researcher began his college education at one of the large, four-year public institutions of higher learning. While attending this university, he faced many challenges from some students and faculty who possessed negative attitudes toward individuals with blindness or visual impairment. He participated in workshops in the campus community committed to disability awareness in hopes of altering these negative attitudes. It was at this time the researcher determined that part of his responsibility was to educate the public about these issues.

After graduating from this university and working in the public sector, the researcher returned to the university to receive an advanced degree. While attending this university, he
began to focus his research on issues related to individuals with blindness and visual impairments attending the university. His research revealed that despite major legislation such as the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, the attrition rate for college students with blindness and visual impairments remained extremely high. Therefore, the researcher deemed it necessary to investigate those college students with blindness and visual impairments who were successfully negotiating college.

Although this researcher is blind, this fact strengthens his research because it could have facilitated the interaction between researcher and subject. It also could have facilitated the interview process by creating an open and honest dialogue that might not exist between a sighted researcher and a blind or visually impaired subject. Moreover, it could have facilitated the task of asking the right questions in an open-ended interview process, whereas a lack of experience with blindness might limit the sighted researcher’s abilities to foster this same dialogue. The researcher is sensitive to the potential for bias because of his tendency to view people with blindness or visual impairment in a generally positive manner; however, this awareness can serve to mitigate this possibility.

This researcher’s interest was to look at the topic in a way that would allow him to understand the college student with blindness and visual impairments from his or her own frame of reference and to report those understandings in a manner that is rich in description. It was important to him that the data were collected through sustained contact with students who are blind and visually impaired in settings where they spend their time: the campus. During the phases of this study: data collection, analysis, and write-up, the researcher sought to mitigate the potential for bias by using a peer debriefer. The peer debriefer and the
researcher interacted during this study to ensure that the students' voices and beliefs were the basis for this research.

The Setting

Four four-year undergraduate public universities in North Carolina were the sites for this study: East Carolina University, North Carolina State University, the University of North Carolina at Chapel Hill, and the University of North Carolina at Charlotte. East Carolina University began as a teacher training school in 1907 and has since grown into a national research university, focusing on distinguished programs in education, health care, and the fine and performing arts. ECU awards Bachelor’s, Master’s, specialist, and doctorate degrees. Enrollment at ECU is nearly 26,000 with a faculty of 1,711 (East Carolina University, 2007). North Carolina State University is located in an urban capital city in the southeastern United States. The University, a land grant college located in Raleigh, has a student population of 33,879, a faculty of 2,132 teaching and 316 field faculty, and a College of Veterinary Medicine. It is a national center for research, teaching, and extension in the sciences and technologies, in the humanities and social sciences, and in a wide range of professional programs (North Carolina State University, 2009a).

The University of North Carolina at Chapel Hill is the first public university established in the United States, chartered in 1789. UNC-Chapel Hill enrolled 28,567 students in fall 2008 with a 3,400-member faculty. The university offers Bachelor’s, Master’s, Doctorate, and professional degrees in health sciences, liberal arts, basic sciences, social sciences, business, and law, among others. The campus is located in a residential town (University of North Carolina at Chapel Hill, 2009a). The University of North Carolina at
Charlotte was one of several universities founded after World War II to provide evening classes for veterans. In 1961, the then Charlotte College moved onto its current 1000 acre campus 10 miles from the downtown of a metropolitan area. The University enrolled more than 22,300 students in the fall of 2007. UNC-Charlotte is a doctoral and research intensive university with more than 900 faculty members. The institution offers degrees in Architecture, Business Administration, Education, Engineering, Information Technology, and Health and Human Services, among others (University of North Carolina at Charlotte, 2009a).

Office of Disability Services for Students

At these four-year public universities, any student enrolled in classes who has a documented visual impairment is eligible for services and accommodations. Services for these students are handled by the coordinator for students with blindness and visual impairments through Disability Services for Students (DSS). The following statement in the brochure for the office of DSS at North Carolina State University is representative of statements for all the DSS at the four selected public universities. It states that "admission to the University is determined on the basis of academic qualifications. Persons with disabilities apply and are considered for admission in the same manner as any other applicant. There is no pre-admission inquiry regarding disability and no exception to admission policy is made based on any disability" ("DSS Selected Facts,” 2004). Students with blindness or visual impairments must contact the coordinator for students with blindness or visual impairments for assistance in receiving appropriate services and accommodations.
It is the responsibility of these students to present appropriate documentation. This includes an ophthalmological report written within the last three years by a medical doctor.

Services provided by DSS at the four public universities chosen for this study are based on the individual student with blindness or visual impairment's particular needs and circumstances. The following services are currently available at all four DSS: priority scheduling, testing accommodations, reader or taping services, note takers, tutors, student advocacy, counseling, and a peer support group for all students with disabilities. The office of DSS will modify or develop services to accommodate new needs as they are identified.

Mission Statements of Disability Services for Students

All four universities espouse a commitment to equal educational opportunity and do not discriminate against students based on race, color, national origin, religion, sex, age, or disability (East Carolina University, 2009; North Carolina State University, 2009b; University of North Carolina at Chapel Hill, 2009b; University of North Carolina at Charlotte, 2009b). The commitment of the universities to the provision of equal access to educational opportunities for students with disabilities is made manifest by the mission statement of the office of Disability Services for Students (DSS). The primary purpose of Disability Services is to facilitate the persistence of students with disabilities in achieving their academic goals. The following mission statements describe the commitment of the universities considered in this study regarding the academic and social integration of individuals with disabilities into university life. All services are committed to academic integration of students with disabilities.
North Carolina State University. The mission of the Disability Services Office (DSO) at North Carolina State University is to support the ongoing development of an accessible university/workplace that embraces and celebrates diversity. The DSO pursues this mission by facilitating effective reasonable accommodations for students, faculty, and staff, educating the campus community, and promoting equal access and opportunity. The DSO also attempts to understand the issues of accessibility for all campus constituency groups, and where feasible, attempts to create a climate of cooperation. The Disability Services Office is a unit of the Office for Equal Opportunity and Equity. The DSO facilitates accommodations for students, faculty, and staff who disclose a disability, request accommodations, and who meet eligibility criteria. Each request for accommodations is judged on a case-by-case basis, and the presence of a disability does not always justify the need for an accommodation. The University is committed to equality of opportunity within its community. North Carolina State University does not practice or condone discrimination in any form against students, faculty, staff or applicants on the basis of race, color, national origin, religion, sex, age, veteran status and disability (North Carolina State University, 2009b).

University of North Carolina at Chapel Hill. The University of North Carolina at Chapel Hill is committed to providing equal educational opportunity to all its students including those with disabilities. The Department of Disability Services (DDS), a part of the Division of Student Affairs, works with departments throughout the University to assure that programs and facilities of the University are accessible to every student in the University community. Additionally, DDS provides reasonable accommodations so that students with
disabilities who are otherwise qualified may, as independently as possible, meet the demands of University life (University of North Carolina at Chapel Hill, 2009b).

*East Carolina University.* East Carolina University is committed to providing equal educational opportunity to all of its students, including those with disabilities. The mission of the Department of Disability Support Services (DSS) is to provide to individuals with disabilities support services that will enable them to access programs, services, facilities, and activities of the University; to enhance disability awareness among students, staff and faculty; and to provide academic courses (East Carolina University, 2009).

*University of North Carolina at Charlotte.* The University of North Carolina at Charlotte is committed to providing equal educational opportunities to all its students, including those with disabilities. The mission of the Office of Disability Services (ODS) is to ensure access to academic programs and campus facilities of UNC Charlotte for all individuals (University of North Carolina at Charlotte, 2009b).

**Sample Population**

Students with blindness and visual impairments were selected from those students registered with DSS at these four public universities to participate in the qualitative study. The participants in this study were undergraduate students who attended the university in the fall semester of 2004.

After obtaining approval from North Carolina State University’s Institutional Review Board to conduct the study, the researcher contacted the institutional review boards of the other three universities. Each university recognized NC State University’s review board approval and subsequently approved this study to be conducted at its institution. The
researcher composed and then gave DSS a recruitment letter requesting the undergraduate students with blindness and visual impairments’ participation in this study (see Appendix F). The office of DSS sent the letter via email to the potential participants to ensure that the anonymity of the student was respected until he or she decided to contact the researcher individually.

In the letter, the students were given the telephone number and email address of the researcher and were told to contact him or provide a contact number if they were interested. The researcher then informed the students of the research process and what would be done with the findings during the initial telephone call or email. At the end of this conversation, a day and time for the individual interview session was set for each of the participants.

Profile of Study Participants

In this section, the profile of each study participant is presented to provide the reader background information for context and insight into those influences on their experiences as college students with blindness or visual impairment. In order to provide anonymity and confidentiality for study participants, they were afforded the opportunity to select pseudonyms for themselves. Each person provided her or his name for the study.

Angela

Angela is a 32-year old European-American female who became blind following a closed head injury resulting from an automobile accident. Until this point, she was a traditional college student, in that she resided on campus fully engaged academically and socially. As a consequence of her accident, she had to discontinue college in order to engage in rehabilitation and adjustment to life as an individual with blindness. Learning how to walk
again, regaining her cognitive skills, and learning how to talk were very challenging for her, but knowing that she was totally blind was also a major challenge and it was very frightening to her. For example, she said, “being blind was very scary for me, because I could no longer do for myself in terms of reading, writing, and doing the basics such as feeding and dressing myself.” Following rehabilitation and adjustment as well as counseling, encouragement, and support from her church family and immediate family, she began the process of recovery and regaining lost skills and confidence. Instead of returning to college as a traditional student, she decided to become a commuter student at the local community college, where she achieved academically and graduated with a 3.98 GPA. While remaining a commuter student, she matriculated to one of the large four-year public universities, and majors in psychology.

Barbara

Barbara is a 22-year old European-American female college student who is a senior majoring in psychology. She is an individual with a visual impairment from birth. She attended the local public school where she was academically accomplished and active in campus activities such as debating teams, the school newspaper, and a national honor society. While in high school, she received much support and encouragement from her family. Additionally, her parents instilled in her the value of hard work and the belief that despite “my visual impairment I can achieve my goals.” As a traditional college student, she lived on campus for three years, where she continued working hard both academically with faculty and staff and socially with her peers. In her senior year, she married and moved off campus,
where she either accesses public transportation or her husband drives her to campus for classes and extracurricular activities.

*Bob*

Bob is a 30-year old African-American college student who is a senior majoring in sociology with a 3.5 GPA. He is a student who became blind as an adult. While in high school, he was academically successful and athletically accomplished, as demonstrated by his playing the center position on his varsity basketball team. Throughout his entire life, he received support and encouragement from his family. Additionally, having a Christ-centered life was also emphasized and the importance of faith and the acknowledgement of God as the source of strength and support during challenging and stressful times. No matter the situation, all is to be done for the glory of God. After graduation from high school, he continued his educational pursuits as demonstrated by his attendance in the local junior college, where he earned an associates degree. Meanwhile, he married and began having children. Around this time, life dramatically changed. At age twenty-four, he became blind. Life as he knew it was over. From now on, he would be identified as a blind man, which, for him, meant that many things that he could do before losing his sight, he could no longer do. Through this long struggle, his faith in God and his family support and encouragement sustained him through the process of adjustment to life as a person who is blind. He has returned to school as a commuter student, who is achieving academically with students and faculty on campus.
Edward

Edward is a 20-year old African-American student who is a sophomore majoring in recreation management with a 2.91 GPA. Edward was born visually impaired, but became totally blind as an elementary school student. Although he became totally blind in elementary school, his mother continued to allow him to be educated in his local public school rather than enrolling him in the specialized school for the blind. Throughout his life, his mother emphasized the importance of achieving educationally, the sustaining power of God, family support and hard work. While in high school, he worked hard to maintain excellent grades and also worked athletically to become the first high school student who is totally blind to participate and compete in track competition. Edward, following graduation from high school, began his education at the university, where he continues to work hard academically, and where those values of hard work, faith, and determination serve him well in every aspect of college life.

Helen

Helen is a 21-year old European-American female who is a junior majoring in recreation therapy with a 3.89 GPA. While active in extracurricular school activities and successful academically, Helen was born visually impaired. She attended the local public school, where she became very active in school activities, such as the Beta Club. Throughout high school and college, she has been encouraged by family, friends, and teachers to work hard, value the importance of an education, and speak up for what she believes. She is both persistent and assertive in her work and interactions with faculty, peers, and friends.
Jackie

Jackie is a 24-year old European-American female, who is a senior majoring in organizational communication with a 2.21 GPA. She is an individual who was born blind and who attended her local public school. As a child, life was a struggle for her, because she was both abandoned and abused by her parents, who did not want her because of her blindness. Additionally, her grandparents, who raised her, were ashamed because of her blindness and thus did not believe that she could succeed educationally in elementary and high school. Yet, despite these obstacles, she was able to graduate from high school and attend college, where she is achieving academically. Because of her experiences at home and at school with some of the other children, she experienced feelings of depression, loneliness and low self esteem. While in high school and college, she has undergone counseling, which has proven to be beneficial. Although an introvert, she has made an effort to become involved in extracurricular activities, such as religious clubs. Making friends has been somewhat difficult, because sighted individuals are not comfortable with being around individuals with blindness or visual impairment. Part of it, she acknowledges, results from her being shy and reluctant to befriend her peers. As she has advanced in her academics at college, she has become more outgoing, especially with her professors concerning her work.

Jerry

Jerry is a 21-year old European-American male who is a junior majoring in psychology with a 2.7 GPA. Jerry was born sighted, but became blind when he was a small child in elementary school. After restorative surgeries proved to be unsuccessful, he then began his continued education at the specialized school for the blind, where he learned to
read Braille and developed independent living skills techniques. Throughout his early life, Jerry received much emotional support and encouragement from family as well as learned the importance of reliance on God for strength not only during times of challenge, but also during times when life situations are positive. Because of the focus on the importance of education, he worked extremely hard to make excellent grades in school, while seeking involvement in campus activities such as wrestling and track, serving in leadership roles in organizations such as student government, and remaining active in religious activities. While in college, he made an effort to become involved with his peers and faculty with respect to his academic work. In short, despite the challenges of university academic coursework, his college experience has been educating and rewarding to him in many ways.

Kim

Kim is a 28-year old African-American student who is a senior double majoring in social work and psychology with a GPA of 3.4. She is a nontraditional college student, in that her entire college education has been completed as a commuter student, interrupted only with her having worked on a full-time basis, married, and had a child. Kim became blind as a sophomore in high school. After it was medically determined that she would remain blind, she enrolled at the specialized school for the blind, where she continued to be accomplished academically. She was positively and significantly impacted by family, friends, and teachers, who always talked about the importance of education, hard work, and remaining dedicated and committed to achieving one’s goals despite struggle and setbacks. These attributes have served to facilitate her remaining in college.
Lady Voyager

Lady Voyager is a 32-year old African-American student who is a senior majoring in sociology with a 3.0 GPA. She is a nontraditional commuter student, in that she completed her first two years of college education at the community college before matriculating to the university. She was born visually impaired and thus attended the specialized school for the blind before transferring to the local public school to complete her high school education. While attending high school, she became totally blind. Consequently, she experienced feelings of isolation and negative attitudes from teachers and peers because of their lack of understanding and discomfort with something they had no experience. Through all of it, her faith in God, family encouragement and adjustment and acceptance of her blindness sustained her and fortified her. While in high school, she was accepted by some peers and developed lasting friendships. Following graduation from high school, she married and began raising a family, yet she retained the desire and motivation to complete her college education. Thus, she began this process through her graduation from the local community college and subsequent matriculation to the university. While adjustment to the university has had its challenges, she has made the necessary adjustments through hard work, persistence and collaboration with faculty and staff that has resulted in her having positive experiences at the university.

Larry

Larry is a 25-year old African-American student who is majoring in speech communications with a 3.2 GPA. Larry is an outgoing individual who was born visually impaired. He attended the specialized school for the blind, where his entire educational
experience occurred. While attending, he was very active in school activities. For instance, he ran track, served in student government, and served on the Beta Club. Meanwhile, he was academically accomplished in that he was salutatorian of his graduating class. Upon graduation from high school, he began his college education, which he acknowledged was at first a struggle, especially keeping up with the academic fast pace. Throughout the challenges that he experienced during his first year with adjusting to the nature of academics and the social environment of college, he continued receiving support from family and friends as well as academic administrators.

*Mike*

Mike is a 23-year old European-American student who is majoring in psychology with a 3.6 GPA. He is an individual who was born blind and who attended the specialized school for the blind. While growing up, his parents encouraged him and treated him as normally as possible in that he received no special breaks because of his blindness. Also, he received support and encouragement from parents. While in high school, he received reinforcement of this support and encouragement from his teachers. Consequently, he involved himself in many campus activities, such as academic and religious organizations. When heading off to college, he made an effort to involve himself with groups and peers in activities associated with his department and with peer counseling organizations. He acknowledged having challenging times, yet the fact that his parents, friends, and faculty have always been there for him has made college an ongoing rich experience.
Terry

Terry is a 22-year old European-American student who is a senior majoring in speech communications with a 3.3 GPA. He is an individual who was born blind and who also attended the specialized school for the blind. While in high school, he learned not only from his parents but also from his teachers that education and hard work were the keys to success not only in school but life in general. While in high school, he was very active in campus life with respect to his serving in leadership positions not only in the Beta Club, but also in student government. Additionally, he was also active on his wrestling team. During his years in college, he still receives much support and encouragement from family and faculty and he remains active in extracurricular activities on campus, such as intramural wrestling. Throughout both his years at high school and college, he remains proactive in pursuit of his education, ensuring that his educational experience remains as positive as possible.

Tonya

Tonya is a 22-year old African-American female traditional college student who is a senior majoring in psychology with a 2.5 GPA. She is an individual who was born blind and who attended her local public school, where she was very active with her peers. While in high school, she worked hard to get excellent grades. Because her teachers and family members, such as her mom, encouraged her during times of struggle because of non-acceptance of her by some students, she learned to be outgoing with others. When she began college, the fast pace of college challenged her, in part because of her less than adequate study habits. After developing improved study skills and becoming more proactive concerning her needs as a student with blindness, she began noticing improvement in her
academics. From the beginning of her first year in college until her senior year, she acknowledges the importance of involvement in many aspects of campus life. Her participation in these student activities, which have resulted from her desire to get to know others and to develop positive relations both inside and outside of the class, added to her having a richer, fuller experience at college.

Waterfall

Waterfall is a 22-year old European-American female traditional college student, who is a senior majoring in anthropology with a 3.8 GPA. She is an individual who is now blind, but was visually impaired at birth. Despite her blindness, she attended her local public school rather than enrolling in the specialized school for the blind. Her experiences both at home and in high school were challenging. Many of her peers were not accepting of her as a blind student. Thus, she was not involved with them socially. At the same time, her parents, while supporting her, were almost excessively focused on her achieving academically, which proved emotionally stressful for her. Consequently, when deciding which college to attend, she accepted an out-of-state university to assert her independence. Even though she was academically successful in high school, the first year of college was a major adjustment and somewhat of a struggle because of the demands placed on her as a college student who is blind. During these three and a half years of college experience, she has increasingly become active in campus religious organizations and department organizations, which serve to help integrate their students and transition them to college life. During the process of adjustment, her study skills, hard work, and proactiveness served to facilitate her transition to college and have resulted in her having positive experiences with faculty, administrators, and peers.
Research Design

The qualitative research methodology chosen for this study is the intrinsic case study (Stake, 1995). In brief, this methodology allowed the researcher to develop an in-depth understanding of the phenomenon of each case investigated. The intrinsic case study was selected for this study, because it allowed the researcher to develop a comprehensive understanding of the research data from the perspective of the participant. According to Stake (1995), the intrinsic case study researcher is one who attempts to acquire an empathic understanding of the person or persons being studied. While engaging in intrinsic case study research, the researcher not only records what is being observed, but attempts to interpret or understand data from the position of the participant.

Data Collection

The researcher used student interviews for data collection (Bogdan & Biklen, 1998; LeCompte & Preissle, 1993). The researcher individually interviewed students at the beginning of the study (see Appendix A), facilitated a discussion group with the students locally, and facilitated a discussion group over the phone with those out of the area (Appendix B). As he gathered data, the researcher compared the information for analysis and interpretation (Charmaz, 1994). He read and re-read data, wrote memos about the data, and summarized after each interview. As a result, data collection, analysis, and interpretation was integrated and simultaneously occurred. He initially coded the data using potential classes of codes derived from the literature. As the study progressed, the researcher established new codes that were informed by the data. The final codes evolved through constant review and analysis to represent categories and their supporting themes. Any
potential change in codes resulted from data analysis and memos that he recorded during data collection. The researcher coded the data according to how the common themes seemed to be emerging, while at the same time he looked for cases that might support the patterns and those that may not in order to test the integrity of the codes.

*Interviews*

Investigating the perceptions of individual college students with blindness or visual impairment is more congruent with the methods used in qualitative research. Of these methods, eliciting perceptions from college students who are blind and visually impaired through interviews provide information as to their perceptions of their own academic success and their ability to negotiate the college experience in general. According to Fontana and Frey (1994), "interviewing is one of the most powerful ways we use to try to understand our fellow human beings” (p. 361). The interview process, where individuals or a small group of individuals share their opinions about a particular set of topics, can be sensitive to the context and judgments of the participants. This type of data collection also allows the researcher to participate in the interview process and to become aware of individual college students with blindness and visual impairments’ perceptions and understandings of their college experience.

In an individual interview, the researcher asked an interviewee questions (see Appendix A) that pertain to a specific topic. Patton (1987) argued that the advantage of the individual interview is that participants have an opportunity to explore thoroughly a particular subject. This heterogeneous group of college students with blindness or visual
impairments was asked to reflect individually on questions about what factors contribute to their success at his or her university.

The researcher conducted semi-structured interviews with probes at a time mutually convenient to each person (Bogdan & Biklen, 1998). Interviews are valuable for this study because, "each story represents reality to the teller" (LeCompte & Preissle, 1993, p. 161). All interviews were scheduled for at least one hour, tape-recorded, transcribed by a professional transcriber, and were provided to students for review. At the beginning of the study, the researcher reminded participants of the process and insured confidentiality. Before beginning the interviews, he noted the potential of emotionally difficult areas of discussion and reminded participants that they could end the interview and study participation at any time and could choose not to answer some questions. He also informed participants that they would be given a copy of their transcribed interviews to review for accuracy and to insure that he recorded what they intended during the interview. As the interviewer, the researcher was careful not to invade the privacy of the study participants. He was respectful of their responses (Merriam, 1998) and privacy.

The first interviews were conducted individually in a conference room mutually agreed upon by the researcher and the interviewee. Five interviews were conducted face-to-face and the remaining ten interviews were teleconferences. This interview guide (Appendix A) served as a checklist to keep him focused upon the relevant topics he wanted to address with each respondent (Patton, 1980). The interview guide presented questions that were tentative. New questions were not only possible, but emerged as data collection progressed. The interview questions were open-ended to promote a more descriptive response.
The second focus group interview involved the group of student participants at a convenient time and location. One of these interviews with five participants was conducted face-to-face in a conference room on campus for approximately an hour and a half. This first focus group was limited to those who were in the area of the researcher’s campus. The second two interviews were conducted via telephone with two groups of five made up of those students unable to come to the campus. The purpose of the group interviews was to explore the researcher’s hunches and to confirm the emerging categories with the students to see if he found what he believed he thought he found.

Member Checks

Member checks give students a chance to determine if their intentions were recorded and reflected, to correct errors, to stimulate participants to recall things that were not mentioned initially, to prevent his misunderstandings, to provide an opportunity for summarizing, and to confirm data points (Lincoln & Guba, 1985). According to Lincoln and Guba, member checking is "not only the test for factual and interpretative accuracy but also to provide evidence for credibility" (1985, p. 374). Students received a transcribed copy of both their individual interviews and the focus group interview. The researcher asked them to read and make any corrections or points of clarification. The final group interview was also used for member checking. This interview provided him with a way to explore his hunches about the patterns that appeared to be emerging in the data, and to address the study's credibility.
Data Analysis and Interpretation

Data analysis is a process of organizing, arranging, and synthesizing material for a greater understanding of phenomena (Bogdan & Biklen, 1998). This analysis involves working with the data, organizing them, breaking them down into units that are manageable, synthesizing them, looking for patterns, discovering what will be important and what will be learned, and deciding what to write or what to tell others.

The process of data analysis was implemented during the phases of data collection and interviewing and writing the findings of the study. In qualitative research, it is difficult to separate the procedures of data analysis and data collection. Data analysis occurs continuously through several points of the research design. According to Miles and Huberman (1994), data analysis occurs in the field as data are collected. At that level, the purpose is to guide subsequent data collection, during a single interview, from interview to interview on a given day, from day to day, in a single site unit, and in the search for relevant documents. At the second level, data analysis serves, in part, to organize the data, and to bring them together under a taxonomy. The third and critically important level of data analysis occurs during the process of writing the case study report. During data analysis, both Weiner's and Tinto's theoretical framework were used as the first lens, or template, through which the observational data that resulted from the interview transcriptions was organized and interpreted. Through member checks, the researcher also worked to validate data gathered from the interviews and then compare data with components of the theoretical models.
The researcher also transcribed his interpretations of the interviews and asked the participants to review the transcriptions to confirm the accuracy of the information to provide further input. The process of data analysis guided the types of information that were collected during the phase of participant interviews. Analysis of the information involved "examining, categorizing, tabulating and otherwise recombining the evidence to address the initial propositions of the study" (Yin, 1994, p. 102). After reviewing the data, the researcher began categorizing the data and coding the data that were collected. The researcher initiated this process by examining the interview transcriptions. Also, while reviewing the data, the researcher coded the data to clearly delineate the events that were recorded. The researcher then examined the codes more closely to identify themes that emerged across the sets of data. Then the researcher identified relationships between the codes which were used to categorize themes and determine how this information related to the research questions. Following the identification of themes, the researcher shared them with the peer debriefer to ensure the significance of the information that was collected.

As the researcher analyzed the study data, he looked for interrelated concepts using data collection techniques (i.e. coding, memos, and constant comparisons) to offer explanations (Charmaz, 1994; Glaser & Strauss, 1967). This was a continual process in which the researcher inductively developed constructs that considered the diversity within the data through constant comparisons. Glaser and Strauss agreed that "by comparing incidents, the analyst learns to see his [her] categories in terms of both their internal development and their changing relations to other categories" (p. 114). Through the constant comparative method, the researcher analyzed and interpreted data throughout the study,
which provided him with a way to have an ongoing conversation with the data that loops back into the study to guide the inquiry, observations, and interpretation. The constant comparative method was a research design based on the accumulation of data. In other words, the formal analysis began early in the study, and was nearly completed by the end of data collection (Bogdan & Biklen, 1992, p. 72). This method was used to cull categories of factors and to generate explanations and emerging factors that were not typically included in literature that deal with how and why college students with blindness and visual impairments are successful.

Stake (1995) regards this as "vigorous interpretation" (p. 9), a process of refining or substantiating meaning as a simultaneous activity of recording what is happening while also examining its meaning. The researcher addressed data analysis and interpretation through: (a) emerging categories, patterns, and themes; (b) data consolidation and saturation; (c) negative case analysis and alternative explanations; and (d) peer review.

As soon as the student interviews were completed, tallies were made in categories pertaining to the information reported. The audiotapes made from the interviews were transcribed using an American Printing House for the Blind Standard Cassette Transcribing System. These transcriptions were conducted on the same day of the interviews. After transcription, data were coded to summarize the findings. Following that process, the researcher reviewed the codes to determine those patterns that emerged from these data. The collating of this information then involved searching all texts for specific classifications. Comments were then categorized according to those beliefs and experiences that support the success of blind and visually impaired college students. Again, in this study, the researcher
was most interested in students with blindness and visual impairments' beliefs and experiences that support their college success.

*Trustworthiness of Data*

Trustworthiness is the ability of the researcher to persuade others and self that the research findings are worth attention and consideration (Lincoln & Guba, 1985). By asking questions of truth, applicability, consistency, and neutrality, conventional researchers have been able to respond to validity and reliability issues of their studies. Lincoln and Guba, however, assert that the conventional terms of validity and reliability are inappropriate for qualitative research, and "provide alternatives that stand in more logical and derivative relation to the naturalistic axioms" (p. 301). Through this paradigm shift, Lincoln and Guba establish qualitative inquiry as rigorous research that is defined in a naturalist's equivalent terms—credibility, transferability, dependability, and confirmability.

*Credibility*

Credibility, known conventionally as validity, is the extent the researcher finds what he thinks he finds. The researcher expects that perspectives will emerge as this qualitative research progresses (Patton, 1980). Patton argues that "in the end, all we can provide is perspective. The perspective gained through careful qualitative analysis is not arbitrary, nor is it predetermined, but it does fall short of being Truth" (p. 327). Establishing confidence in the "truth" of research findings is one quest of the conventional paradigm (Lincoln & Guba, 1985). The focus according to LeCompte and Preissle (1993) is to address the issue of "whether conceptual categories understood to have mutual meanings between the participants"
and the observer are shared" (p. 324). To answer this question, the researcher relied upon the
time and effort that he will spend interviewing and pursuing various avenues for data review.

Transferability

The extent to which this study is externally valid depends upon its generalizability to
other settings and participants, and an inferred causal relationship (Lincoln & Guba, 1985).
The focus, therefore, "depends on identifying and describing characteristics of phenomena
salient for comparison with other, similar types" (LeCompte & Preissle, 1993, p. 349). For
naturalistic researchers, this is tentative and derived from working hypotheses based upon the
descriptions of time and context (Lincoln & Guba, 1985). It would therefore remain to be
determined if these hypotheses would hold up in other contexts. As Lincoln and Guba assert,
it is the researcher's "responsibility to provide the database that makes transferability
judgments possible" (p. 316). The researcher’s responsibility is to provide thick description
of the setting and participants, so that another researcher could contemplate its transferability.

The researcher describes the setting and participants of this study, to offer a
framework of differing historical conditions and emerging patterns (LeCompte & Preissle,
1993). The researcher cautions that cross-group comparisons might not be appropriate
considering the individuality of participants, situations, and conditions. College students
with blindness and visual impairments are prevalent throughout the United States; however,
their profiles will differ depending upon the nature and occurrence of their visual
impairments.
**Dependability**

The question of consistency focuses upon the extent to which this study could be reproduced; a conventional issue of external reliability (Lincoln & Guba, 1985). The goal of this study was to describe and to explain in rich detail the experiences that support the success of blind and visually impaired college students in the collegiate environment. The intention is "not to produce a standardized set of results that any other careful researcher in the same situation or studying the same issue would have produced. Rather, it is to produce a coherent and illuminating description of and perspective on a situation that is based on and consistent with detailed study of that situation" (Schofield, 1990, p. 203). More consistent with this study is the idea of a discourse that reflects many voices and reconceptualizes the language of generalizability. Schofield notes that there appears to be an emerging consensus among some qualitative researchers to reject generalizability as a way to produce laws that are universally standard. However, these researchers still maintain that studies in one situation that rely on thick description can be used to talk about or form a judgment about other situations.

The focus of ensuring data that are comparable relies upon addressing various research issues. Instead of trying to offer a way to replicate this study, which LeCompte and Preissle (1993) argue is an impossible task for qualitative researchers, the researcher directed attention to recognizing and descriptively addressing five critical problems. First, the researcher clearly identified his role within the study group. LeCompte and Preissle argue that conclusions reached by a researcher in a site are "qualified by the social roles investigators hold within that research site. Other researchers would fail to obtain
comparable findings unless they develop corresponding social positions" (p. 334). Second, because "each individual informant has access to unique and idiosyncratic information" (p. 335), the researcher provided a description of the informants that identifies their individual characteristics in order to delineate the kinds of participants selected for the study and how they were selected. Third, the researcher described the social context and conditions in which data were collected. Specifying the setting allows for situating and recording the function, structure, and features of a fluid environment. Fourth, the researcher acknowledged the concepts that guided this study in ways that outlined the theoretical framework and defined the constructs that informed and shaped the study. The researcher explicitly presented the analytic constructs and the assumptions that guide the use of methods of analysis. Finally, the researcher described the strategies utilized to collect and analyze data. The researcher clearly articulated data collection processes, how data were recorded, stored, analyzed, and checked. This process and the outcomes were reviewed by the peer debriefer to check for study and data dependability (Lincoln & Guba, 1985).

**Confirmability**

Determining whether or not other observers agree about what happened in a study is the basis for establishing internal reliability (LeCompte & Preissle, 1993). This idea of neutrality is the focus of objectivity in a conventional research paradigm (Lincoln & Guba, 1985). Schofield (1990) argues that it would not be expected for other researchers to independently determine precisely the same conceptualization; rather, it is more important that "other researchers' conclusions are not inconsistent with the original account" (p. 203). Thus, differences will be reported, but will not dis-confirm the data. To establish
confirmability of the study, the researcher contracted a reader who reviewed the data to examine the extent to which the patterns claimed are evident. Additionally, the researcher tape-recorded the interviews, which preserved the original data. Further, coding and re-coding of data was based on the theoretical framework of the study. For Wolcott (1990), this is "rigorous subjectivity" (p. 133), or achieving the satisfaction with the balance, sensitivity, fairness, and completeness of data and the interpretations.

Chapter Summary

This chapter provided the study’s research design and methodology. The researcher explained the rationale for his choice of a qualitative methodology and case study design. After providing the research questions that focus this project, the researcher described the background and biases he brings to the study. Next, this chapter provided a description of the four universities and the office of Disability Students Services that will serve as the settings for this project. Following a description of each university’s commitment to equal access as made manifest in the mission statement of each office of Disability Students Services, the chapter described how the sample population was obtained and provided the profiles of all the study participants. The researcher then explained how he collected data for the study by using semi-structured interviews, focus groups, and member checks. After data collection, the researcher then transcribed and categorized the data using several data collection techniques and with consultation from his peer debriefer. The chapter concluded with an explanation of the four qualities associated with trustworthiness of data, including credibility, transferability, dependability, and confirmability.
CHAPTER 4: FINDINGS

This study explored how undergraduates at four public universities who are blind and visually impaired perceive their academic success and those influential factors that impacted those experiences. In this study, fifteen participants shared their understandings of their experiences in undergraduate studies and the impact of institutions, faculty, and staff on the academic success of the participants with blindness or visual impairment. This study extended research on academic success to a new context (four public universities) and explored a new area related to undergraduate students’ perspectives by examining students who are blind and visually impaired. The specific research questions that guided this study were:

1. What are students with blindness and visual impairments' understandings of blindness and its relation to their success?
2. How do students with blindness and visual impairments define their academic success?
3. What factors do students with blindness and visual impairments identify as the most influential in their academic success?
4. What are students with blindness and visual impairments' perceptions as to how they are viewed, treated, and respected by faculty, staff, and/or administrators?
5. How do students with blindness and visual impairments perceive the impact of these key authorities on their academic success?

Because this study explored students with blindness and visual impairments’ own understandings of their lived experiences, it was rooted in the qualitative research genre.
Consistent with qualitative research, participants were encouraged to go beyond the interview questions, expound on their own ideas, and share their own understandings of academic success.

Six main categories of findings emerged from the data that correspond to the constructs found in the conceptual frameworks of the study. Key findings regarding understandings of blindness; institutional commitment to academic success; positive and challenging undergraduate experiences; mentorship and supportive families, administration, and staff; and academic success and academic purpose are presented in the following sections. Section one presents participants’ understandings of blindness and their adjustment to it at the time of the study. This section corresponds to the first research question. The second section of the findings reports on the third research question by describing the undergraduate students’ questioning of their institution’s academic accommodation and integration accomplished through policies and procedures of the office of Disability Students Services (DSS). In the next section of the findings which responds to research questions 3 and 5, the participants report on their positive undergraduate experiences by describing those support systems that facilitate academic success. Undergraduate students explain in the fourth section of the findings the challenging experiences that they confronted during their college years. This section also corresponds to research questions 3, 4, and 5. The fifth section reviews the participants’ positive and negative perceptions of mentorship and the support of administration and staff. This section addresses research questions 4 and 5. The final sixth section concludes by responding to the second research question. This section
provides the definitions of academic success and academic purpose as described by these students.

Understanding and Accepting Blindness

Understanding blindness appears to be essential for the empowerment of the student who is blind or visually impaired. Participants believe that the more informed they are about their blindness, the more likely they are to ask for help when necessary. Self-awareness acts as a protective factor in helping the person with blindness to manage life, as is acceptance of one’s blindness and visual impairment. Participants mentioned that when they did push beyond passivity and when they did gain an understanding of their blindness, they were more likely to succeed. They believe that blindness and visual impairment impact their experience in the academic environment. After all, some participants believe that it is the educational system’s reaction to blindness that has played the major role in shaping and impacting their experiences in the learning environment.

The degree of self-understanding varied among the participants. Mike articulated his understanding of blindness as one that should be understood within the context of the environment with which he lives, where those perceptions and norms of mainstream or the sighted society ascribe the meaning of blindness and the response to it. His description typified those who have experienced blindness from birth. He stated that blindness is the only experience that he can relate to; therefore, it is normal for him. Negative experiences have been imposed upon him because of the perceptions of blindness and people with blindness or visual impairment by those in the sighted environment and because the environment is made, designed by, and for sighted individuals. According to Mike, his
“challenge is to make the necessary adjustments in order to survive in this sighted environment.” Mike stated:

Blindness is all I have ever known; therefore, it is normal. It is the reaction of sighted people to blindness and blind people that causes most of the difficulties. The negative attitudes and perceptions of the sighted toward the blind have also helped create the problems that we as blind people experience in college. The environment is created by and for the sighted. So, we as blind people must adjust to that sighted environment.

On the other hand, for those individuals who became blind later in life, their initial response to blindness was one of fear and helplessness. For them, blindness meant the loss of self and who they were as sighted individuals. They described their initial experience as a loss of control not only of themselves, but also of their environment. Then they began the process of adjustment to the new reality of blindness through independent living in order to regain a sense of control over themselves and a sense of mastery of the environment. Angela stated:

When I became blind, I was scared to death because I thought that my life was over. Here I was unable now to see, feed myself, clothe and bathe myself let alone doing those simple things of life that I had taken for granted as a sighted person. Of course, having gone through rehabilitation where I learned independent living and learning how to negotiate the environment as a blind person, I am now no longer afraid. I have surrounded myself with those supports that make the environment negotiable.
Transition to the University

All participating students with blindness or visual impairment attended a university because they wanted to participate in collegiate life. Their high school peers were progressing to college, several participants had parents with college degrees, and all participants felt that a college degree was an essential part of life preparation that they wanted to experience. They also indicated they enjoyed the intellectual stimulation of higher education.

For many of them, the shift from high school to higher education is one from dependence to independence. Independence has come more slowly for many of these participants, because the college setting initially placed them under considerable pressure. They had to adapt to a new environment in addition to developing coping strategies, while learning to rely less on parents and built-in high school support systems. Transitioning from the more closely monitored world of high school to the wide open spaces of college was initially challenging for them, where the number of hours of classroom instructional time is significantly diminished. They mentioned that in college more time is spent outside of class on school-related work, including independent study. Also, unlike high school, where accommodations are normally built into the program for them, participants had to be more aggressive in self-advocacy. Skills in self-advocating and expressing needs to others, particularly teachers, were essential to their initial survival and success.

Both Larry and Angela experienced severe academic difficulty during their first year. Angela particularly found the university setting a challenge. Although she already had a two-year college diploma in hand, she missed the close mentoring of her community college
counselor, whom she describes as being very approachable and willing to help her in any way possible. Whatever accommodations she asked for, he worked to get them. Although accepted at the university, she did not resonate with her counselor there. She felt he was unwilling to allow some accommodations besides extra time on tests. This rigidity, plus her sheer tiredness with having to cope academically, seems to have had an adverse impact on her initial experience at the university. She considered dropping out because of her struggles. However, because she was determined to continue, she sought and found support from another staff member at DSS. Angela remarked:

Before coming to the university, I began my college education at the local community college. While there, I had a very close relationship with my counselor at Disability Services, which provided me the opportunity to get those accommodations that helped me academically. However, when I first came to the university, the closeness with the counselor did not happen because things there were more structured and rigid. But later I did develop a more closer relationship with another counselor which helped me with getting accommodations more easily.

For Jackie, who had survived high school through grit and determination, initially the university presented challenging experiences, especially with having accessible textbooks in a timely manner, and keeping up with the fast pace of college academics. She decided to take action by contacting DSS at the university. The panic that she would be asked to leave due to poor grades precipitated what seems to be the first real initiative on her part toward active problem solving. It was Jackie’s determination to get help that caused the turn-around in her educational experience. Once she began operating with the assistance of Disability
Services, she experienced success academically, and she felt that someone understood her.

As her self-understanding has increased, so has her self-confidence. Jackie commented:

When I first began college, I had a problem with getting books on time and adjusting to the fast pace of college. I was struggling and I did lose a bit of confidence because of that and so I decided to contact the DSS office to get its assistance with getting books recorded in a timely manner. After getting the help from DSS and establishing a good working relationship with my counselor, I saw a great improvement in my academic performance.

Self-perception

While in their local public high school, after observing how easily their sighted classmates managed academics, all participants recognized that they functioned differently. In addition, almost all of those in the local public school felt that other students frequently ostracized them and that some of their teachers found them difficult and time consuming. Being unable to function in the same way as other students became isolating, which in turn reinforced negative thoughts about themselves. The following statement by Lady Voyager reflected their views:

While I was in public school, I remember feeling self conscious about being blind because I had to take my exams separate from the other students with my resource teacher because she would enlarge the exams so that I could read them and some of my teachers were not that comfortable with having a visually impaired student in the class. They acted as though they did not know what to expect of me or how to act. . . . Also, many times I did not feel like I belonged with the others. I felt that many of the
other kids did not want to associate with me because I could not see as well as they could.

How one views and feels about one’s self is important. Students with blindness and visual impairments who understand and accept their blindness have a more positive sense of self. Upon reflection for those participants who experienced education through their local public schools, having to do things differently in terms of their academics made them feel different from their classmates, especially on those occasions when it appeared that the teacher had no idea what to do or appeared uncomfortable with having blind persons in his or her class. They were isolated when they were told that they had to receive instructions from a resource teacher. On the other hand, for those participants who had their experience through the specialized school for the blind, they felt included in the instructions from their teachers because classmates were exposed to the same printed or Braille materials. Their teachers expected them to succeed academically. Terry’s remarks summarized the views of those who attended the specialized school for the blind: “I recall that while in high school my teachers always impressed upon me that they expected me to do well. There were no excuses, especially since all the materials were provided to us in Braille or print, depending upon our needs.”

Some participants in local public schools experienced a sense of lower self-esteem from being unable to participate in certain extracurricular activities that sighted students could, such as athletic activities. Joseph stated:

When I was in high school, I was not able to participate in activities such as baseball or football like my sighted peers and that really affected how I felt about myself.
Until I began participating in other activities such as our high school United Nations Club and the debating team, then I began feeling good about who I was as a blind person.

By contrast, those participants enrolled in the specialized school for the blind experienced a positive sense of self on a social level and their educational experience was positive. Teachers expected them to do well; they were encouraged by teachers, and they participated in sports. In short, they did not differ in their perceptions of overall academic and social self-worth. Outside of the classroom, they viewed themselves to be just as worthwhile as the next student. What is important is that their self-perceptions were not fixed attributes, but did change because of new experiences. Angela most dramatically exemplifies this change that can occur. She now thinks of her blindness as a strength and sees herself as a strong person capable of achieving much.

Throughout the interviews, it became increasingly obvious that there exists a connection between participants’ perceptions of well-being and their sense of being in control of their lives. With these successful students, control was identified as the key to success. The following comment by Barbara summarized their view. Students with blindness and visual impairments “spent their lives deciding and learning how to take control of their existence.” For Angela, in particular, getting control of her life has been a significant benchmark. It was her psychologist who assisted her with gaining control of her life so that she feels that she understands her blindness “in every aspect.” For each of the participants, the school experience had become increasingly more positive, though not necessarily easier, as they progressed up the academic ladder. This was the result of having significant mentors
who by now were lending a hand as they negotiated academia. They mentioned that as students with positive self-perceptions, they always had at least one person in their lives who accepted them unconditionally. This often was support from a parent or family member or occasionally an unrelated adult.

**Relationships**

All participants are grateful for their college friends. Several participants who experienced high school in the public school setting remembered excruciatingly friendless periods during high school years when they felt rejected by and isolated from their sighted peers. Perhaps it is because of their formerly friendless days that they placed high value on their current friends, who provided a normalcy that their academic environment did not. Meeting with friends outside academic settings created a level playing field. It served as a stress reliever, where participants could be themselves.

Helen, Waterfall, Barbara, and Joseph said they have many friends and felt both comfortable and confident in social situations. Helen especially reveled in having an audience. She admitted she can melt into almost any social situation. Helen socialized with friends on weekends as a way to forget about academics. Helen remarked: “on the weekends I visit with my friends to get relief from school work. We meet at their apartments just to hang out or go to the movie or just whatever.” On the other hand, Jackie mused that when she should have been developing relationships, she did not have the confidence, and now that she is reconciled about being blind, she may drive people away because she *likes* to talk and educate people about blindness. At the same time, she yearned for friends and observed that she may tend to shut people out because she fears a lack of acceptance. Jackie commented:
“Since I have accepted the fact of my blindness, I desire to educate sighted people about blindness and what it means to be blind; however, I believe that has sort of turned people off. So, they do not want to be around me which makes me feel like I do not belong.”

**Family**

All families appear to have accepted the disability of the participants. The participants acknowledged that their family engaged high school staff and teachers in problem-solving, both those who attended the specialized school for the blind and those who attended their local public school. Some participants who experienced the specialized school for the blind were not provided sufficient independent living skills training. Larry recalled that his mother had to insist that he receive independent living training before graduating, because these skills were essential to his overall independence and success while in college. Furthermore, he noted that she also had to insist that he receive part of his high school education in public school in order to become acclimated to the sighted world. As a result, he attended the local public school during part of the day. Larry commented:

While at the specialized school for the blind, doing the laundry and household chores were done by staff. There, I never had to do those things, but my mom insisted that I learn to do laundry as well as chores such as cleaning the floors because these were things that I would have to do when I started college. She also insisted that I attend the local public school as part of the mainstreaming program so that I could learn how life was among the sighted.

Similarly, participants recall that their parents, especially their moms, mediated on their behalf. Joseph, Lady Voyager, and Waterfall mentioned that their mothers had to
communicate to school administrators the importance of providing Braille textbooks in a timely manner to ensure that they were receiving an equal education to their sighted peers. Frequently, textbooks were not provided in a timely manner, which meant that a family member had to read the material to them until the textbooks were received. The following remarks by Waterfall summarize their view:

Many times while in high school my Braille books did not come on time; therefore, my parents had to read the material for me so that I could keep up with my class work. Meanwhile, my mother had to meet with the principal regarding this situation, telling him that it was not fair to me for me not to have my Braille books on time. This delay with getting my books meant that I was not getting the same education as the sighted kids.

Similarly, their parents had to intervene with the school with respect to the provision of physical education, because school administrators wanted to exempt them from sports due to fear of injury or because the instructor would not permit their participation in physical education activities. The following comment by Edward summarized their view:

The PE teacher did not want me to participate in any physical education activities because he was afraid that I would injure myself. So, my mom had to intervene in this matter, insisting that I have the opportunity to participate in as many activities as possible. If I did get injured, then the injury would be no worse than if a sighted kid was injured.

After transitioning from high school, all were much less dependent on their families except for encouragement and moral support. Participants mentioned that they did receive
financial support from family members, although they aspired to become totally independent of their family. All of them spoke fervently of independence, perhaps because they have had to depend on others for help during much of their academic lives. This much-desired independence is part of the longing often felt by persons who are blind or visually impaired. The following remarks by Helen summarized their view:

   After I started college, my parents continued to give me moral support and encouragement. While I appreciate all of the support that my parents have given me, the sense of independence that I have experienced, especially with managing my own schedule and time and all other aspects of my life, has been wonderful.

The University and Academic Integration

After transitioning to college from high school, students begin a new phase of social and academic adjustment in their new environment. The university they attend also engages in the process of introducing the students to the norms, behaviors, and expectations of the campus environment to facilitate the academic and social success of its student population. For those students with disabilities, the university promulgates its methods for accomplishing this goal through the policies and procedures of its office of DSS. These policies and procedures are guided by the mission statements of each office, which describe the university’s commitment to the provision of equal access to educational opportunities for students with disabilities. The offices of DSS at all the study universities are committed to academic integration of students with disabilities.
Academic Accommodations

Each university prescribes a set of specific procedures that all students with a disability are expected to follow in order to access those accommodations that will facilitate their academic success. Upon their acceptance to the university, students with disabilities are required to register with the office of DSS, provide medical documentation of a disability, and a list of those accommodations that they believe will facilitate their equal access subject to the approval of the academic counselor of disability services. As an example of these experiences, Joseph noted the following:

During my visit to the university prior to my admission, I was told that as soon as I received my letter of acceptance that I needed to schedule a meeting with the counselor so that I could register for accommodations and services so that I could have access to counseling services, extended time on tests, readers, tutors, notetakers, scribes, as well as other services that may be needed to do my class assignments. As part of this registration process, I was told that it was essential that I provide medical documentation of my blindness. Furthermore, I was told that I would be expected to attend weekly meetings with the counselor in order to make sure that things were going well and to handle any problems that might arise.

Among the key services provided, individuals offered predominant discussions regarding counseling services, caring people, extended time on tests, alternate testing sites, time management, study skills, tutoring, technology, and early registration. They also reported on the sense of security and self-advocacy skills that the office of DSS provided students.
Counseling meetings. Many participants viewed counseling meetings as a significant benefit to them, especially in the beginning of their college experience. In order for the meeting to be the most useful, they mentioned that the counselors needed to see them in a global perspective. This includes assessment in both the academic and social life. The main purpose in assessing these areas was to pinpoint the specific areas that needed additional work. Some pertinent areas that were reviewed included: 1) effective use of accommodations to succeed academically, 2) effective communication of needs, 3) sense of campus community, 4) financial issues, and 5) creating leisure. Some students with disabilities might be deficit in these areas and need reinforcement. The benefit of a counselor was voiced in these terms. "[My] counselor is there for me when I am having trouble in class. He helped me get my feet on the ground when I first started college." Another student commented: "Through weekly meetings with [the director] I underwent extensive training. I have shown dramatic effects not only in the class, but socially as well."

Caring people. Most participants responded that caring people were important to them. Many times students who are blind or visually impaired perceive the college environment as being hostile and not understanding. Having a place of refuge where caring people are always available to listen and understand is crucial for the academic survival of blind and visually impaired students. As Jackie put it, the staff at the office of DSS provide a very close-knit support system; they realize that you have needs that must be met and they will work hard for you, if you work hard for them. Not only have I relied on Disability Services and its staff for my academic needs, but for personal
needs as well. Being so far away from my own family, I have felt comfortable knowing that there is always a caring someone in whom I can trust and confide.

*Extra time.* Almost all of the participants felt that extra time on their tests was a vital component of the classroom accommodations, which supported their academic success. Helen said the accommodation "makes me feel more relaxed about tests because I'm not worrying the whole time if I'm gonna finish or not or that everyone around me is going much faster. It gives me a chance to succeed." Barbara said, "Having extra time on tests has been such a help. Sometimes I don't even use the extra time. However, knowing that I have it eliminates the stress so that the grade reflects my knowledge of the material."

*Alternate testing site.* Some students responded that taking a test away from the classroom was beneficial. An alternate testing site may be as simple as a quiet room or as detailed as providing a reader, or allowing students to answer questions using methods other than writing (such as orally, taping, or typing). These accommodations require an alternate site so as not to disturb others taking a test. Nevertheless, it is crucial for the students who need this accommodation. Kim used the alternate site. She explained: "Disability Services has helped me the most by providing me with a quiet place to take my tests where I am not distracted by other students leaving the room or making noise." Another student who needed a reader commented that "my reader is available when I need her with the alternate testing site being especially helpful." Larry said, "Disability Services made it as convenient as possible for me to obtain time on my tests and feel free to request a computer when I needed one. This time and a spell check helps me concentrate more on the subject matter of the test."
Time management. Most students emphasized mentoring in time management as beneficial to them. When students have difficulty with organization and prioritization, it can be detrimental to their class management, study skills, and academic performance. Participants identified ten top difficulties they have faced. The top four encompass issues of time: being unprepared for responsibilities, managing free time, being overwhelmed by workload, and learning time management skills. Therefore, they place a high priority on learning time management skills. Among student statements, they noted: "I have benefited from my sessions with [director/counselor] by learning how to manage my time properly and keep up-to-date in all my classes." "Disability Services has helped me stay organized and on track. It’s helped me to keep up with my schedule." "They are there to help you get organized, study, stay on task, and be responsible."

Study skills and tutoring. Almost all participants responded that study skills training along with subject tutoring were essential keys to their success. A disability support program that focuses on providing skills in learning strategies can lead to student independence and academic success. Disability Services provides study skills training based on an assumption that students with blindness or visual impairments have not already developed these skills, which are necessary to independence (Mc Broom, 1997). The student has to learn how to receive, organize, keep, and then use information. Study skills can be implemented with the help of tutors adept in the content knowledge of subjects as well as teaching strategies.

Students report the benefits of learning study skills and tutoring. Jackie remarked, "Disability Services has helped me so much with study habits and tutoring. Also, the only way I passed math was from the help of [a tutor]." Another participant also noted the
assistance of math tutors: "A [tutor] helped me study and learn the math problems in a way that I would understand." The following student noted a correlation between development of study skills and performance on tests, remarking, "I was able to work on my study skills and I finally had confidence when I went to take a test." Another participant explained, "Disability Services is also there for me when I am having trouble in a class. They helped me get my feet on the ground when I first started college by tutoring me and teaching me study skills."

Technology. The availability and improvement of assistive technology can change environments to a significant degree, increasing the accommodations for students with blindness and visual impairments by adding to the number of options available to them. Technology can assist students who face the challenge of the pace and volume of required reading and writing, whether it is in the form of notetaking, assignments, or test performance. One participant noted: "There are many wonderful assistive-technology devices now available that ease access and increase productivity." Improvements in voice recognition software, wireless technology and other mainstream technology developments in particular have a tremendous impact on accessibility and academic success for students with blindness and visual impairments. Some participants commented about technology. A typical report was that "the computer lab is very convenient and nice to have available to me when I need it."

Early registration. In addition to accommodations for course work, students also had the opportunity to register early. Since the auxiliary aid of a taped textbook necessitates sending the name, author, and publisher to the agency taping the texts in a timely manner,
students must know their class schedule and textbook requirements early. Also, the disability support provider can match learning styles of students with teaching styles of professors and make sure that they are able to get into the appropriate classes. Students frequently take advantage of early registration and the assistance in planning a balanced schedule that takes into account disability-related concerns that affect their educational program. Many students noted this accommodation that they utilized. "The office gives me the advantage to register early for my classes, which enables me to get into the classes with the teachers that would be best for my style of learning and are more accommodating for my disability." Another participant remarked: "I use [Disability Services] to register early. This helps me so much in knowing that I can set my schedule so that I can better organize my time." A third student mentioned, "I love being able to register early. It has been such a blessing to ensure that I get the classes and times that I need."

Sense of security. Students with blindness and visual impairments had to develop a thorough understanding of the difficulties they would face in college. To face these difficulties, they had to develop self-advocacy skills. This, for some, was a daunting challenge, but the Disability Services office was there to provide care and security as the student acquired these new skills. Students commented the most on this subject. They made the following remarks, such as: "Everyone in the office has been so kind and patient."

"They care how you are doing and how well you are doing in school." One participant noted that it was an "incredible relief to know that there were people out there who care and are willing to help me succeed," and another: "[The office of Disability Services] means a lot to me right now, because they are more caring.” The following student felt that the DSS office
was attentive and understanding: "[The Disability Services office] provided me with an understanding group of people who will listen to me when I run into problems related to my blindness and accessing the programs of the campus."

They considered the DSS office as a secure available place to come to and as the most crucial environment to their navigating through the early college years, as reflected in the following observations: "I feel calmer knowing that just in case, there are people who care." "To me [the office] was a little extra security in a place that was totally new and different to me." One student mentioned: "I have felt comfortable knowing that there is always someone in whom I can trust and confide." Another said, "The facility is very conducive to learning and I feel welcome there." The following student noted that the office showed respect for his autonomy by stating, "The office personnel really care about a student's independence."

*Self-advocacy skills.* Some students with blindness come to college unprepared to approach teachers about their needs for accommodations, since their high school systems are set up to foster parent involvement in Individual Education Plans (IEPs). They are unprepared to be assertive, since they are accustomed to the high school structure of dependence. Disability support offices can provide self-efficacy tools like letters of accommodations and other strategies so that students can approach faculty with confidence. For many students, they believed that DSS offices need to place a high priority on facilitating self-advocacy skills. The need was expressed succinctly by this student: “Being a freshman, I was nervous about talking to my professors about my problems.” Several students also recognized the value of the DSS office in training them to communicate with professors. One participant noted that “The office provided me with guidance towards the proper way to
approach my professors about my disabilities." The following student described the importance of receiving this training during the first college years: "When I first came to the University, I was intimidated by my professors. The [Disability Student Services] office helped me overcome this intimidation because they require me to give each professor a letter explaining my accommodations." This student mentioned that "The letters that I give to my teachers at the beginning of each semester enable me to open the conversation up with the teacher about my disability, what gives me trouble, and what helps me to do well. Before, I had trouble getting the courage up enough to bring up the subject."

Several participants noted that at the beginning of the semester they received permission from their professors to announce that they were seeking readers to assist with reading textbooks and other assigned material. Some participants also mentioned that they took the opportunity at the beginning of the semester to secure the assistance of notetakers who could provide copies of lecture notes. From these actions, they suggested that they were able to study with their readers and notetakers for exams and work on group projects together.

**Questioning Academic Accommodations**

The site universities of this study suggested academic requirements and related integration of its students through stated expectations and behaviors expressed in policies and procedures at each institution. However, the students often questioned this integration process. In the case of the students with blindness in this study, they began to question their academic accommodations by the third year of their college experience. Some of these participants started to view their required meetings with the counselor as less significant as
they progressed academically. First, they began questioning the effective use of accommodations as prescribed by Disability Students Services, and second, they began questioning the meaning of “equal access” as described by DSS. Some students then used their self-advocacy skills to negotiate for accommodations that they felt would facilitate their academic performance and equal access.

*The efficacy of accommodations and academic success.* After meeting for some years with their counselors, some participants began questioning procedures for the effective use of accommodations, as prescribed by DSS. Specifically, DSS expected students to adhere to a set of prescribed procedures when accessing accommodations. Participants mentioned that Disability Students Services require the student to use the reading services provided by a Disability Services-approved reader in order to have a reader accommodation, and that the reading must be provided in one of their reading rooms.

Also, they mentioned that DSS required them to scan their own classroom assignments with the exception of assigned textbooks. They began questioning the narrow application of this accommodation by asserting that the limitation on what course materials could be scanned precluded their academic success rather than facilitated it. This common experience by these participants was expressed by Bob:

> The director of Disability Services expects us to meet with her on a weekly basis to determine if there are issues related to our academics that we need to discuss with her. Well, I do not have a need to meet with her each week; however, I take issue with the procedures that she expects us to follow regarding two main accommodations that I use, which are readers and scanning material that has been assigned by the professor.
As it stands now, we have to use the readers that Disability Services assign to us and also we must meet with the reader in the reading room at the office. I believe that I am in a better position to decide who should read for me and at what time and place that should occur. It has been frustrating for me because of the fact that too many of the readers that have been assigned to me are not the best. You get what you pay for. Too often, readers are freshmen and they are not good readers. I should be able to, for example, interview and hire readers. Disability Services can pay them. In addition, classroom assignment materials cannot be read by the readers. I have to scan that material. It can take hours for me to scan the material because Disability Services has purchased low-end scanners which take a long time to scan items. Of course, there are high-end scanners that can scan a textbook in thirty minutes or less depending upon the length of the book. These high-end scanners are only for the use of office staff who may be involved in scanning a textbook.

*Equal access and academic success.* The university communicates to all of its students throughout the campus community that it is committed to providing equal access to all. Through Disability Students Services, the university expects all to accept those procedures as prescribed by that office. This office presumes a specific set of understandings of the nature of equal access, which is defined in terms of the university, and which then defines tools and supports that will facilitate academic success. Some students question academic accommodation as prescribed by the office of DSS. These participants began questioning the office’s definition of the tools and supports students with blindness or visual impairments need for equal access by comparing what constitutes equal access between
sighted and blind students. This view expressed by Jerry was common among these participants:

As I have progressed through college, I have expressed to my counselor at Disability Services that I do not agree with how equal access for the blind is to be accomplished at the university through the simple provision of tools to make academic success possible. As a point of comparison, my sighted classmates can get classroom material already available for him to read; whereas, for me, after getting the classroom material, I have to scan that material before I can begin reading it. To me, something is inherently unequal about that. Having to spend time in the production process of making material accessible is very frustrating and time-consuming. In the library, I am faced with the same situation. When I attempt to get an article, someone might help with retrieving it, but I am told by the staff that the technology room where a low-end scanner has been placed is available for me to scan the article for use. I can’t but reiterate the fact that a sighted student can go to the library and retrieve the article already in a readable format, whereas I do not get it in a readable format.

Negotiating accommodations and equal access. Some participants have sought to use their self-advocacy skills by negotiating with departmental staff to facilitate equal access and to employ their own readers to assist with reading material. They mentioned that they requested the assistance of their department to aid in making classroom material accessible and that they employed their own readers so that they could utilize their reading services at a time and place convenient to their schedule. Bob stated:
After it became clear that the Disability Services staff were insistent upon the appropriateness of the method through which it would facilitate my academic success through providing the tools for me, I decided that I would speak with my advisor explaining my situation and seeking the department’s assistance with making material accessible. My advisor agreed with my explanation of the nature of equal access at the university by assigning one of the secretaries the responsibility of scanning material. Also, I began recruiting my own readers so that I could determine who would read and the schedule that they would follow. As a client of the Division of Services for the blind, I was provided with the financial resources to compensate my readers. My frustration with accessing classroom material has been significantly reduced, which has allowed me to devote more time to my studies. I might add here that my grades have greatly improved.

Positive Undergraduate Experiences

The participants of this study provided several factors that they attributed to positive academic experience and which have led to their success and academic retention. Several students mentioned that moving to a new region to pursue their undergraduate education brought them enlightenment and "added knowledge." Many of the students interviewed also talked about the positive influence their peers had on them, particularly other students with blindness and visual impairments and students without disabilities. Other positive influential factors included having: (1) the resources to build community in diverse and supportive departments; (2) professors and mentors to help them in their intellectual development; (3) scholarships; (4) financial opportunities; and (5) a sense of belonging to the campus
community. Many students who are blind and visually impaired were successful because they asserted themselves in their college environments.

Exposure to a New Region

Some of the students talked about the positive aspects of being exposed to a new region of the country or state as they left their homes to initiate their undergraduate education. Not all students with blindness or visual impairments leave home; some remain close to home where they have family and community support. The benefit of moving from home represented for many intellectual development. First, one student who is visually impaired moved out-of-state because she viewed the new political and regional landscape as an opportunity to learn a new intellectual discourse. Waterfall explained: “The positive about leaving home is that I have been exposed to a whole new region. Coming to this school has exposed me to [this state]. Also, intellectually, I see it as a new and different type of intellectual discourse.” This participant mentions that moving to a new region also widened his horizons. Joseph stated:

Coming to the university has exposed me to different perspectives because there is much diversity among the student population. There are liberals, conservatives and independents. I have gained a greater appreciation for this diversity of thought because it has expanded my understanding and made me a better person.

Mike remarked that meeting others with different beliefs changed his perspective of other people: “I came from a very conservative family with conservative cultural views. When I was exposed to others, I learned the importance of respecting others and that other views are just as legitimate as mine.”
Positive Peer Influences

Another important aspect of integration comes about through one's peers. Because the ratio of instructors to students means that professors must limit the amount of individual attention to their students, one's peers help with intellectual development and academic performance. In typical situations, advanced undergraduate peers can be a base of support and one's means of survival by providing an established, supportive, and accessible community for new students. This section is an example of undergraduate students' positive experiences with their peers, and how they survived the college experience because of this support base.

Some students mentioned that their peers provided them with the opportunity to build collegial relationships across race and ethnic lines. However, other students who are blind and visually impaired stated that diversity awareness of their peers was instead the most important aspect of getting collegial support and building lifetime relationships. One student could not find community until she sought and found it outside of her department, in the visually impaired student community. Tonya stated: “Fortunately I found visually impaired friends through the university; I created a community outside of my department. And I do not know, that might be the same for all of us blind and visually impaired students in our own departments, so that has been tough.” Another participant finds community within the blind and visually impaired student community in her department and credits their support for completing her Bachelor of Science degree in a timely manner. But her survival is mostly attributed to her desire to succeed despite discriminatory experiences. Jackie stated:
The first year of college was a difficult experience. I would have left that very first semester if it hadn't been for [meeting two] really good friends. . . . We spend so much time together, plus we were taking the same classes, and so we ended up becoming really good friends. . . . And that was the only reason I came back, because I was really frustrated that I thought, ‘I do not need to go through this. I do not need to deal with this hostile environment or this ablism.’

Jerry was befriended by a sighted student in his department. Although he likes the novelty of having a sighted friend after growing up and going to school where he had no sighted friends, he expresses feeling isolated and wanting to create community with students with disabilities. He said:

I never thought I'd find myself in a position [of having a sighted friend], since that I never had sighted friends, because of where I went to school. . . . It's not like we did not have any sighted people [where I went to school], but it's just that now I see that it was very segregated. . . . And I could not tell [my sighted friend] that I wanted somebody to identify with, to talk with about my experiences.

Another participant finds community within the more advanced undergraduate students in her department. They work together on class projects. Tonya remarked:

[The] very first year was difficult. Had it not been for my blind and visually impaired friends outside of the department, I would not have stayed in college. It was because of peers that I had the strength to tolerate faculty not making accommodations and saying that I could not do the work. . . . Having peer validation made me realize that
I belonged. . . [They told me,] ‘Let's work together on [project X]! Let's collaborate on studying.’ And with their encouragement I co-presented.

Supportive Departments

Undergraduate students with blindness and visual impairments most noted supportive departments as a factor in their collegiate success. Students talked about their departments having diverse student populations, which created welcoming environments. Others talked about the department supporting their continued studies and respecting their work. Some saw their departments as vehicles to help them in their academic preparation, and credited department leadership for their success. For departments with a diverse faculty, students saw this as an indicator of support. But the most important aspect of supportive departments mentioned had to do with how well the participants were welcomed and affirmed by other students. One student felt supported in doing her senior research by the department. Waterfall stated:

As I pursue my studies in anthropology, they seem to be receptive, encouraging, and supportive of the fact that I want to study anthropology, which is primarily visual, and do my senior research using an ethnographic method. While this is an uncharted area not only for me but also for them, since I am the first blind person in the department, they are open to working with me so that we can complete the research and enhance their teaching experience.

Another participant felt his department is supportive, because there is a faculty member who is blind. Jerry remarked:
Having a faculty member who is blind in the department says to me the department is very supportive as expressed by bringing on this well-qualified individual as a faculty member, and its interest in issues related to blindness, which I believe will be a unique one, because the perspective of this faculty member probably differs from the other faculty members of the department.

Barbara feels respected by the faculty in her department because of her academic accomplishments as she nears the end of her undergraduate education. She mentioned:

As I approach the end of my senior year, I have received much validation from my professors through their compliments and encouragement, especially as it relates to my going to graduate school to pursue a masters and maybe even a doctorate. I have worked hard academically and they tell me my senior research has promise.

Professorial Support

Another important socialization factor that students found was essential to their success is having the support of their professors. This is an essential component of student success at the university, especially in undergraduate programs, because students do work closely with faculty. The following are examples from interviews of students who are blind and visually impaired about the importance of their professors to their success and intellectual growth.

This student with a visual impairment values her “progressive” professor, who she thinks is a great instructor because he pays attention to class dynamics. Kim said: “[I have this professor who's] open, insightful, and conscious of not only himself and his intellect in how he approaches new things, and aware of the class dynamics where there are social
tensions. He holds discussions, makes everyone feel that they can speak, and that it's okay to think differently.”

Another participant feels that much of her success is due to her blind professor, and all her past struggles are negated by the positive experiences she had working with him. Jackie stated:

My undergraduate experience has been very positive. . . . From then on it has been very positive . . . in the respect that I have an advisor who I trust implicitly, who I know is there for me 100%. He has been very supportive, and once you have that one person in your corner, I feel that's pretty much all you need because no matter what anyone in the department thinks, or treats you, as long as that one person is there and advocating for you, you have a certain sense of security.

This student described the relationships with the faculty in her department as friendly. She credits the success of the department on its ability to attract faculty who are good at mentoring students. Barbara explained:

In my department you have less hierarchical student-professor relationships; it's very different; I have gotten very close to many of the faculty in my department. . . . Any type of activity involving the department they invite students. And so the relationships have become much more than merely student-teacher. They are genuinely concerned about us as individuals as well as students. It is more than going into the classroom. It establishes relationships in different ways. And that is what the department has done successfully. That is what attracts students to the department.
Financial Opportunities

Since many of the participants interviewed wanted financial assistance for their education, some sought employment and funding opportunities at their institutions. Kim received financial aid through a scholarship upon the recommendation of the director of Disability Services. She mentioned: “In my second and third year at the university, unknown to me, the director of Disability Services recommended that I receive a grant because of my academic success across the campus community.” Another participant’s parents accepted her leaving the state to attend undergraduate school because she told them about the financial opportunity the institution would provide her through a work study program, making it possible for her to work as a customer service representative. Lady Voyager remarked:

I had friends who were already attending the university and had an opportunity to gain work experience through work study. The university was great with providing that opportunity, because it made the work site accessible for me as a blind student through providing adaptive technology where I could access the database of material by using my screen reading program.

Helen accepted an internship in her undergraduate program. When she communicated her major to her advisor, she received full-support from her professors and the institution, and that has made her undergraduate experience extremely positive. She stated:

When I decided upon my major, I was informed by my advisor that the university was beginning an adaptive physical education program for persons with disabilities. I was given the opportunity to work an internship to help with the planning of activities and
assisting the director. This experience has really given me the work experience that I need, which will prove very beneficial when I apply to graduate school.

_Welcoming and Diverse Campus Environments_

All the excitement of moving to new regions, having supportive peers and professors, being well-integrated and supported by departments, and having scholarships and financial opportunities is only part of the story of success for students who are blind or visually impaired. Without a diverse and welcoming campus environment, departments serve only as safe havens for students, because sometimes they are the only place in the institution where students find openness and progressivism. Welcoming and diverse campus environments also provide positive experiences for blind and visually impaired students. The following examples tell stories of student interactions with people on their campuses, and how these interactions add to their positive thinking about their undergraduate experiences and campus environments.

This student has initial good impressions of the university upon visiting prior to enrolling, and attributes the helpfulness of a professor as representative of the welcoming campus climate. Helen remarked:

When I walked onto the campus of the university for the first time, I showed up and I did not know exactly where I needed to go. . . . So I walked into the wrong office, and a professor was really nice; he sat with me and asked me what I wanted to do. He even walked me up to the fifth floor, introduced me to the secretary, told her what I needed to do, and who I needed to call. . . . So that made a big impression with me because I’ve heard many people say they get lost. And I thought it was pretty nice
that he took his time and walked me up. That pretty much sold me on going to the
university.

Another participant, Larry, found a community through a university-wide organization for
students with disabilities, and this amplified the meaningfulness of his undergraduate
experience. Larry stated:

It was my second semester as an undergraduate student when I met my visually
impaired friends and some other people from the student organization for people with
disabilities. And then I was better—I had friends that I could have fun with. I did not
have a social life before. . . . And back home, I always had friends. . . . Since then, it
has been a much more pleasant experience, and I feel better about being here, and I
have something to do on the weekends other than my homework.

The following optimistic student feels her undergraduate experience has been a good
opportunity, given her rural background. Her change of location has made her put her
experience in perspective and feel that while the campus environment is not very welcoming,
she still feels comfortable. Angela stated: “Being at the university is difficult, particularly
being a blind student and the only one. But the more I understand about higher education, I
understand it to be the case in most places, so maybe I just concede to that . . . ‘it could
always be worse’. Therefore, that is why I tell it more positive.” Tonya, another participant,
talked about being at a campus where she sees people of diverse ethnic backgrounds, and this
added to the value of her undergraduate experiences. She said, “It is exciting living on a
campus where many things are taken for granted, the fact that many cultures are present
reflecting the diversity of the campus.”
Challenging Undergraduate Experiences

While some students with blindness and visual impairments had positive academic experiences, for others it was more challenging. Challenges that will be talked about in detail in this section include: (1) having to move far from home to pursue undergraduate school; (2) dealing with institutional discrimination based on disability; (3) learning to master institutional politics; (4) lacking financial opportunities; (5) having discriminatory professors; (6) experiencing a sense of isolation in campus environments; (7) handling classroom experiences that are biased; (8) coping with an unwelcoming physical campus environment; and (9) dealing with unsupportive peers.

Part of the survival of these college students who are blind or visually impaired depended on adapting to certain aspects of academic accommodations that "clashed" with their values and beliefs. Integrated in the presentation of the challenges encountered by these students are their methods of successful and unsuccessful adaptation to the academic community. Sometimes they spoke directly of their non-integration into academic culture, and other times they talked about struggles that they encounter and work to overcome. For most, this adaptation was part of the process by which they converted challenges into opportunities and success. But for others, they expressed their concerns about certain aspects of integration into academic life, and they remained isolated and segregated in their departments, only hoping to finish the experience and move into the next stage of their life. Of these, some wanted to leave the university altogether, because they saw the challenges experienced at the undergraduate level as exemplary of the nature of college life. Other participants lost their voice in the process of experiencing college as an undergraduate and
became more introverted and isolated, and some of them even developed a dislike for the university and its culture.

**Being Far from Home**

Often students who are blind or visually impaired really have a difficult time leaving home, because it is a strong base of familial support. Some talk about being homesick and needing to call home often to keep connected. Other participants say that having to leave home was one of the most negative aspects of pursuing an undergraduate degree. Some talk about being connected to their parents and siblings to the extent where they would prefer situations in which they are close to home and their families. The following are examples of these far-from-home experiences.

First, one student talked about being homesick and needing to call home often. Tonya explained:

> I never thought that I would get homesick because I began my college education at the university only fifty miles from my parents, and the worse thing there was living in the dorm. I have to talk to my parents at least two to three times a week. And then there will be times when I am just looking around and I have to call them to see what they are doing or what is going on, or just stay in contact.

In another example, a student saw moving away from home as a negative consequence of getting her undergraduate degree, because she is away from her family and community. Barbara said:

> In being a college student you are getting cut off from your community both because you are physically at the university, but also the constraints that being a college
student puts on you cuts you off from your community. . . . I mean, my family is still in another state and I know it could be worse because they are not that far away, but when you are used to seeing your parents and your siblings each day, seeing them three or four times a year just is not the same. That is the negative aspect of being a college student.

The Discriminatory Academy

The discrimination that students with blindness or visual impairments feel in the academy can be overwhelming, stressful, and disheartening. The examples in this section will focus on documenting the discrimination that participants felt on the basis of disability.

One student expressed being disappointed about the false perception that students who are blind or visually impaired have better support at his institution because of its expressed commitment to the campus community through equal access to programs and services. Some of his sighted peers that he met at a debating team competition held the idea that he did not need support because the university had a department responsible for ensuring campus access. In the following example, he talked about these false perceptions, and criticized his institution for its rhetoric on valuing diversity. Bob remarked:

Having a disability at this university can be difficult. There is this myth that exists here that if you are visually impaired or have a disability you have all this support . . . But being blind on campus is problematic. . . . Actually, there is a struggle for resources to provide assistive technology in a meaningful way across the campus computer labs for this campus, period. But it is not only about resources, it is about
attitudes too. You can put the Bandaid of diversity on a university, and that is exactly what is going on.

Another student talked about the hostile ablism dynamics at her institution, and how she was confronted by them upon initiating her undergraduate education. There was the lack of individuals with blindness and visual impairments in her classes and how as the only person who was visually impaired she was expected to speak for the entire blind population. Because of this unwelcoming experience, she became disillusioned with the sighted people in her undergraduate program. She didn’t know how to respond to this hostility, which in essence was a type of non-integration by her peers. She eventually responded by building coalitions with all students, particularly students who are blind and visually impaired, because she believed she could survive the hostile environment with these coalitions. Jackie stated:

Every time in classes there were really strange disability dynamics . . . just by the way that some of the professors were talking, and the way the class seated itself. I mean, there were two people with disabilities, and all the rest were sighted. . . . People were like, ‘You are a blind person. You got to speak for them! You got to tell us!’ And I was like, ‘Are you joking!’ They were ridiculous. I was really disillusioned, because these people are supposed to be open-minded, and they ask such narrow, absolute asinine questions. . . . I could hear people talking about me, and I did not want to be pigeonholed as only hanging out with people who are blind because I knew that could hurt me in the long run.
A third student did not have as negative of a reaction to her undergraduate program because she had already experienced enough prejudice in a previous education institution. She instead expected the worst and planned against added prejudice. Here she talks about a metaphorical shield that she brought with her to protect her from the sighted students she would encounter. But this shield also limited her ability to build community with her sighted peers. Before even beginning her undergraduate education, she stated she set her goal of finishing "as fast as possible.” Jackie remarked: “I came [to school] with a shield. . . . I felt like I needed something to protect me because I am going into a school where I knew it was going to be almost all sighted, and I was not sure how I was going to be perceived by other students. Therefore, I needed to protect myself.”

*Perceptions of the University as a Challenging Environment*

Many students found the university to be a challenging environment. As a result, they developed several strategies to facilitate their academic success. They talked about their progression through college in terms of “survival.” Surviving the university requires a fine balance between submitting to undesirable academic pressures and finding ways to prevent loss of individuality. Some also described negotiating the undergraduate academic system as a game that has to be played successfully, and "winning" means undergraduate completion, which comes with benefits. Another described the university as a business that needs to improve the "product" of educational delivery, and therefore must integrate the disability experience into the process. The following examples describe these experiences in greater detail.
Waterfall suggested that while the university is “challenging,” she has made networks that have made the undergraduate experience worthwhile. She also described the university as an institution that one must survive, particularly for students who are blind and visually impaired at the university that have been systematically pushed out before completing their undergraduate degree. She perceived the university as unfair to persons who are blind and visually impaired, because it does not accept them for who they are through their unique experiences on campus. Rather, they are interested in molding them into who it wants them to be, as it does with all of the other students. Waterfall explained:

I have met some students interested in the type of concerns that I have regarding the university. Therefore, it has been good to get to know them and learn their concerns. Those few friendships that I've created have been worth the experience, and had it not been for those people that have connected with me, I would say that it would have been even harder to identify a ‘best experience’.

Another student, upon his read of the socio-political climate at his institution, perceived the academy as a game, which he must play well to survive and succeed. He suggested that he finds his voice in "playing the academic game," because it's something he has learned to do well. However, he said there is a cost to playing the game, which includes: (1) political maneuvering, (2) strain on the process of information attainment, and (3) a loss of his unique voice and related perceptions of a hostile and competitive environment. Bob stated:

Now I am a better student because I have learned about the politics and I am not as timid about asking people this or that. . . . Because you go and ask somebody
something, and they think maybe you are not studying. So, everything you do is a reflection on you as a student. . . . I know how the political game works, and I play the game well. . . . I do not like it, but I know what to do. . . . You got to know the rules so I don't step on anybody's toes. I go with the flow. I am not the objector. If I have an opinion, I either keep it to myself or I discuss it with my brother, or discuss it with my family . . . to not put any kind of kink in the road. My reputation is, ‘He does not do anything against the grain!’ So, that can be frustrating.

Jackie described her entire undergraduate experience as a strong integrating force that she's trying to avoid and survive. For example, she avoided departmental social events, because she felt their purpose is to integrate her into becoming "like everybody else." She perceived her environment as ultra-hostile and liberal. She stated:

I have tried to fight against much of those things that I see, like the social events. I do not go to them. I run like hell from them, and that's made it even harder to participate in class or have any type of relationships with people on campus. I mean, I could speak with a few people, like in random places that I hooked up with because I felt like I could. There are only a few people in my classes that I feel could relate to. . . . The program is about trying to socialize everybody into becoming and thinking the same way, and that is why I try to avoid everyone as much as possible.

*Isolation in the University*

Undergraduate students with blindness or visual impairments have difficulties building community with other students in the university who are blind or visually impaired due to their numerical under-representation. The stories told by interviewees illustrated their
isolation in the university. Furthermore, a small minority of these students were in departments that had a faculty member who was blind or visually impaired. The following examples highlight some of the struggles that come with being underrepresented in the academe.

One participant, Terry, was so isolated he was contemplating dropping out of his undergraduate program. Social isolation made him become conscious of the forces that were trying to socialize him. He believed that non-integration was the only way to survive the academy. He remarked:

The only blind student that I have heard of that had been here, I have heard of all the terrible experiences that he has had. There was one blind student just last semester who had it out with a mathematics professor, and it was so terrible it was a communication problem they could not resolve. This was a person who had begun the semester and he was so devastated by the experience that he leaves the university. He did not quit. He interprets it as, ‘Forget this, I am resisting! I do not have to take this! I am out of this class and program!’ That was his attitude. And when I heard this story, I thought, ‘They defeated him. Why did he leave the program?’ But then I took a step back and I understood he felt very alone. He was the only blind in that program. I am the only blind student in my program right now. . . . So I can understand why he left the program. I am getting ready to leave, too.

Another student initially did not want to be involved with other students across the campus who are blind or visually impaired in an attempt to integrate better within her own department. But when she suffered isolation within her department anyway, she did begin to
socialize with the student group for the blind and visually impaired on campus. Despite her initial experiences, she remains committed in her pursuit to survive the university. She has begun to understand and accept that she can survive regardless of her academic isolation.

Tonya explained:

In the department I learned how to be one of the only blind students, being one of the very few, and learned how to deal with situations. It is about learning how I feel, and it is weird because the first year I would not talk in class. I just did not know how to handle the whole thing of being the only blind student.

She resorted to activities of campus organizations to build community with individuals who were blind and visually impaired. Tonya stated: “The emotional and moral support that I get now is at meetings and activities of the blind and visually impaired or when I meet with the one blind professor on campus.”

**Perceived Dual Expectations**

Undergraduate students who are blind or visually impaired believe that there are dual expectations for academic success. They also voice their disagreement to such expectations. While the expectations of undergraduate education are high for all students, students who are blind or visually impaired perceive their expectations to be unjust because either they are directly asked to do more than other students, or they belong to a system that makes them feel they must do more in order to just be equal.

In the following examples, participants talked about the following perceived dual expectations they encountered as undergraduate students: (1) having to work twice as hard because of their visual impairment status, (2) having to work to make the academic
environment accessible, and (3) having to represent students who are blind on issues. The most talked-about perceived expectation that participants experienced was working twice as hard merely because they were blind or visually impaired. Sometimes this was reinforced by professors who advised them what must be done to survive academic discrimination. These double standards were part of the participants’ academic experience, and as a result, some developed animosity towards the system.

In the following example, Barbara was told by her professor that she needed to be better than everybody else because she was blind. While her professor claimed to be trying to protect her from a discriminatory academy, the professor was inadvertently setting up dual expectations for Barbara to perform in an intellectually "superior" stance. Barbara stated:

Since I started going to school, my mentor always told me I have to be twice as good and try twice as hard as anybody else because I am who I am, a blind student, and I would always be questioned about how I got here, and so I always have to work harder. Pretty much she always said, ‘It only takes one blind student to mess it up for the rest of us, that's just the way it is.’

Bob also noted the dual standards that are set up for students who are blind and visually impaired. He stated:

Across the university, as a blind or visually impaired student, we are expected to make journal articles accessible by scanning them ourselves as well as other classroom material, which is provided to sighted students already accessible. For my friends who have enough vision to read large print, they are expected to photo copy the material so that it can be made larger for them to read. Additionally, when I go to
the library to retrieve journal articles, the staff may assist with retrieving it, but I am expected to copy and scan it. Again, the sighted student only needs to retrieve it and it is readily accessible.

Limited Accessibility of Campus Facilities

The campus facilities, conceptualized as the physical environment of the university, such as building, department offices, and the aura of the university's physical space, provides challenges to students who are blind and visually impaired. In the following examples, students talked about how they became conscious of limited access to some facilities on their campus. Many times they realized these campus facilities would offer challenges prior to stepping on campus through their knowledge of mainstream sighted institutions, and through campus visits where other students with blindness informed them of these specific challenges with access. The following examples present some of these hurdles.

Prior to beginning her undergraduate program, this student went on a campus visit. She said that before the visit she had high expectations because the university marketed itself as being one of the most diverse and accessible in the nation. But during the visit, she realized that it was not as accessible as portrayed. She decided to attend anyway because she had several friends already there who told her the campus was diverse and accessible, and she knew that with her friends she could find support. Kim reflected:

What I liked about the university was the students were truthful, because I met a couple and . . . they did tell me good aspects of the school, but they also told me, ‘We do boast diversity and all accessible.’ So I appreciated their honesty. And in my
head I was thinking, ‘If issues of accessibility exists at this university, then how might it be at others?’

Several of the participants mentioned that navigating the elevators and corridors of many of the buildings posed difficulties because elevators were not labeled in Braille. Also, classrooms did not have Braille next to the door for identification. Other participants noted that while classrooms were numbered, the numbers were placed above the door, which they could not see, because it was written in small print. Furthermore, many of the classrooms and offices were poorly lighted, which made it difficult for them to see. Edward’s comments were common among the participants. He remarked:

When I first arrived on campus, I saw that many of the classroom and office buildings did not have the elevator panel labeled in Braille so that I could identify the appropriate button to press for the floor on which I wanted to go. Also, the classroom doors were not labeled so that I could identify which was the right one to go to.

Barbara recalled a similar experience. She stated: “When I arrived at the university, many of my classroom buildings and classes had poor lighting, which affected my ability to see in class.”

There were several stories that described how the mere presence of buildings that were associated with access discrimination created psychological hostility for students. For example, one student transferred programs to survive. Another student talked about modifying her walking route to avoid a building that housed her previous department and its unwelcoming faculty. This type of challenge was exemplified by Angela’s comments:
There are two buildings that house my department. I am supposed to be in one building, but I am not. I requested to be in another building so I can be away from everybody, because I could not handle being in the middle of those unwelcoming faculty and that inaccessible building. I also lived on campus for almost two months of the semester. I had to move off campus because I hated living there. And when I have to go to the university, I try to get out of there as fast as I can. And in the first two months, if I would have a break, I would leave campus and go somewhere off campus, because I just could not be there. . . . It was torture every single day. So when I started commuting, every time I came onto the campus I would physically get sick, I would get a stomach ache, because I could not handle being on campus.

The emotional experience of being in a physical space that creates feelings of hostility was also shared by one student, who noted that the academy is not a place for her to build community. She feels like an outsider at her institution, and always has one foot out the door in case she decides to leave at any point before finishing her undergraduate education. Tonya said:

I feel like an outsider, and I am [at this institution] for only four or five years because it's in an area of the state where I would never settle. I know only of one other blind student, but I have not met her. Also, I have attempted to build a sense of community with peers in my program. However, for whatever reason it has not happened. I guess that it is in part because of the discomfort that many sighted individuals have with interacting with blind individuals.
Peer Integration Issues

Peers presented another challenge for students who are blind and visually impaired. Some of the challenges included being treated as "other" because of their disability. One example best represented the peer challenges that participants faced. Jackie believed that her strictly sighted peers saw her as an outsider, and she constantly had to force herself to try to fit in. She was not invited to their gatherings, and this disconnect with her peers was slowly creating isolation in the department as she fought against it. She had only recently stopped her efforts fitting in with her sighted peers, because she has found social support with peers who are blind and visually impaired across the university. But she still would like to establish friendships with some of the peers in her department that can accept her for herself. Jackie stated:

My program has some awful people in it. I have not really connected with my peers very well. Actually, not at all. I do not understand what's going on, and I am not sure. I do not think it is a personality issue, because I think that I really try to go out of my way to make friends, involve myself, and invite myself if something is going on with them, and I have not been that successful. . . . It just feels like with my peers I have to go out of my way to say, ‘Hello! How are you?’ And that is hard for me to do. But I recognize that that is my own personal inability to be real extroverted, but I really try to go out of my way. And they get together, have picnics and dinners, and I find out about it second hand. . . . I mean, I do not need them to create community for me or to be my social outlet, but I recognize that I need to make alliances in the department with my peers.
The Academic Support System

Throughout the interviews, participants discussed the support mechanisms that facilitated their academic performance as they progressed through their college years. These included their experiences with mentors, family, administration, and staff.

Mentoring and Academic Success

Transitioning to college and adjusting to the university can present challenges to undergraduate students (Edmonds, 2002; Lee, 1999). Participation in mentoring programs tends to support the academic performance and success of undergraduate students (Edmonds, 2002; Lee, 1999). Similarly, college students who are blind or visually impaired expressed the positive impact of participating in a mentorship program on their academic performance and success (Enburg, 1999).

By the time they reach the last year of their undergraduate education, students with blindness or visual impairments have experienced many positive and negative mentoring situations. They have talked with professors, advisors, and parents who have taken interest in and helped them in their academic success. Secondary mentors were faculty that were outside of their departments or faculty they considered to be their friends and advisors. Some mentors also included their peers. The following discussion provides details about the study participants’ definitions of a mentor and their positive mentorship experiences. In the process of integration into the academic system, mentorship experiences serve as one aspect that facilitates academic success (Edmonds, 2002).

Meanings of mentorship. The study participants had a variety of definitions of mentorship. Many based their definitions of mentorship on the experiences of previous
students who were blind or visually impaired, the so-called “pioneers,” and their interaction with mentors. In some instances, undergraduate students had no recollection or knowledge of previous students with blindness or visual impairments or faculty who had come before them at the departmental or university level. These students believed that positive and negative mentorship experiences included engagement with other undergraduate students. Regardless of their educational achievement, a few participants had difficulty identifying mentors who had been instrumental in their academic success. Sheer will and commitment to academic survival seemed to be the only guiding forces for some college students who were blind and visually impaired and who were pessimistic about the academic environment.

For some students, a mentor was someone who took a legitimate interest in you, your life, and your achievements. This understanding seemed to be the most comprehensive and idealistic definition of a mentor—someone who provided a balance between academic and social support. Most of these types of mentors were professors in part because they had a better understanding of the needs and issues of their students. As one student suggested: “I have had mentors who are both men and women professors. A blind professor was another person I got to work with, and he totally kept up with me. . . . He had a special kind of commitment to me.”

Two other students also gave comprehensive definitions of mentor that included some aspects of having an academic and personal connection. In the following quote, a student talked about a mentor being someone who challenged you, but also took interest in you. Barbara suggested:
A mentor is somebody who legitimately takes a genuine interest in you, because anybody can direct you to a website or a brochure, but a ‘mentor’ is someone who legitimately cares about whether you are happy and developing. Academics are important and everything, but they have to know you personally too. A mentor just takes the time to ask and be concerned about that personal side of your life.

This student defined a mentor as someone who is your friend. Jackie remarked:

My mentor actively sought me out from day one, which does not usually happen. You usually have to go and seek out mentors, and for me that is hard to do because I am a very introverted person. But she actively sought me out, emailed me, took me out to lunch. She engaged with me on a personal level. . . . And I feel like she is not just a mentor.

Getting Mentored. One participant shared her mentoring experience with her professors. She mentioned that they were available to her to assist during challenging times at the university and expressed a variety of views on how she might respond to these challenges.

The best mentors for me have been . . . the professors that were available to meet with me when I was going through my most difficult experiences at the university. And for me, the hardest times going through academia have been emotional, where I've felt very frustrated, depressed, isolated, maybe even hopeless about continuing on this path. . . . And my mentors have been diverse in opinions on how they resolve things-some being more sophisticated in how they negotiate through the academy, others being more confrontational, and older ones who feel, ‘If you do not wish to continue,
don't. You do not have to be there. This is not the end. This is not the only possibility of how you can be successful!’ They have been available, always, twenty-four hours.

*Positive experiences with primary mentors.* College students who are blind and visually impaired mentioned having positive mentorship experiences with primary mentors who were racially and/or ethnically diverse and of both genders. Primary mentors were their most influential professors. The majority primary mentors of the interviewed group were males. They were characterized as individuals who provided supportive and nurturing mentorship. For example, one student stated that her mentor was always there for her, but she had to be proactive to receive her mentorship. Waterfall explained:

> My mentor is my senior research advisor. He has also been my assigned advisor in the department. Therefore, definitely, he has been a very supportive person in my life. But, I am the one knocking at his door telling him, ‘I need this’ or ‘This is what I'm doing.’ It has always been on my initiative. But I have to say that when I have gone to him, he has always been there.

Some participants also discussed proactive types of mentors. One student said that the confidence her mentor had in her intellectual abilities provided her with the confidence to be successful. Helen mentioned,

> My mentor really made efforts to reach out to me. He recruited me to work on the adaptive physical education project directly under him, and really gave me autonomy and encouragement, and that was very helpful in terms of having somebody outside of the department who believed and respected me, and had faith in my abilities.
The positive aspects of these participants’ primary mentorship experiences included being proactive in the relationships and providing social support. This student talked about how her mentor sought her out for mentorship and friendship before she even arrived at the institution to begin her undergraduate education. Kim related:

My mentor is a faculty member in our department. . . . She first contacted me when I was in the process of waiting to hear about my acceptance to the program. I got the letter that I was in and she contacted me the day after. And from there she's actively sought me out, which doesn't happen. I mean, you usually have to go and seek out your mentors. . . . I feel like she's not just a mentor and faculty advisor, but a friend.

Another student talked about the support she's received from her mentor, whom she greatly admires. Barbara stated: “My mentor is a woman who I totally love and admire. She is very knowledgeable and someone that I would love to be like. I call myself her disciple. She was one of my sounding boards as far as, ‘What am I doing right? Am I going in the right direction?’”

Secondary mentor support. Secondary mentors represented both faculty and students. One student explained that her secondary mentor provided support. Lady Voyager remarked: “I have had really great mentors. Presently this professor outside of my department has just been great and supportive. He just gets really excited when I get a chance to go visit him.”

Individuals with visual impairment also served as mentors. One student noted that she actually chose to attend the institution because she wanted to work with a particular professor who was visually impaired at that university who could uniquely relate to the undergraduate experiences of the student who is blind and visually impaired. Tonya stated:
Through my mentor at community college, I met my present blind mentor at the university. I saw that he was a really nice man, and he knows my two other mentors well. So, when I chose the University, it was because I wanted to work with him. It helped that I came all recommended, or that he knew me as a person, and so that helped open the doors to him. That is why I went to the University.

Another student noted that she developed a particularly important relationship with her mentor, who was her counselor at the community college she attended before the university. This relationship was also special, because her mentor was also visually impaired. Jackie commented:

My counselor, she has a visual impairment, and she is traveling much with a job, and she has been responsible for my adjustment and development at the university. So when she left the college to take a job elsewhere, I cried the whole day. And I was trying to dissect it and why it was so powerful, and it was because she was my entire support, and the only person who really understood me, and the only other blind with a Ph.D.

Despite the counselor’s departure from her institution, Jackie described how the two still remained in contact as Jackie continued with her education at the university. She stated:

One of my mentors is my community college counselor from several years ago. We are still very close. I could call her cell phone, and when I was having a hard time, my first year in the program, I would call her crying. I call her at home, in the middle of the night, and she understands because she had similar experiences when she was a
student. Therefore, she understands. And that's the one person I consider to be my mentor. I look up to her.

**Positive experience with peer mentors.** Many students who are blind and visually impaired identified their peer mentors (i.e., advanced undergraduate students) as being among the most important people in their negotiating the undergraduate experience. It was through peer mentors that they learned to find departmental financial aid opportunities and which classes and professors to take. In the following, one student talked about becoming integrated into the student community through her peer mentor, a community that secured her survival in the department. Waterfall mentioned:

> [In the autumn of my second year] I assisted another woman in the program who was in her third year. I do not even think she realizes she was an unbelievable mentor to me. She did it so freely, she just was my friend. And it was easy, because even though we were from completely different cultures, she just treated me as a person. . . . She was just more aware of the world, and did not ask, ‘What do blind people think?’ I learned an incredible amount from her. And then she brought me into her circle of friends, who were an older group, all people of color, and it was there where I found my home. . . . I felt such a relief that I was not in this alone.

Another student talked about how she learned all the "informal" knowledge from her peer mentor. Mostly, she learned that she could also survive the academic system like her peer mentor. Barbara remarked:

> In just the short amount of time that I've been in my undergraduate program, [my peer] has been a huge mentor because she really tells me about the informalities that
nobody ever tells you about, and it is those things that are most crucial for getting through the program. For example, she told me where and how I could get money for school. So it has been that informal information that is so valuable that mentors pass on. And she is also an example of success, having just completed her senior research project.

*Positive experiences with parents as mentors.* There were several visually impaired students who had problems identifying mentors. Two were advanced undergraduate students, and a third was finishing her first year. When further probed, two students identified their parents. One mentioned, “As far as my being mentored, no, I cannot say I have been, other than my parents taking a really strong interest in my education. They both have a bachelor’s degree. We have the same goals. . . . They are really good at motivating me by not saying anything. . . . They are my mentors. Their mentoring is great because we have the same goal.”

*Supportive Families*

While some students with blindness or visual impairments received financial support from their families, most received moral support. Many of them also said they received much family support to pursue educational goals. Immediate families, partners/husbands, siblings, parents, and grandmothers were all mentioned as being supportive and part of the reason students had been academically successful.

In terms of financial support, some students who were blind said that this assistance made it possible for them to get an undergraduate degree. As Kim related,
I came from a family that is very supportive. They are poor, but they would deposit twenty dollars in my bank account to help me survive. And they never knew the actual expenses of living alone, going to school, or buying a book that cost eighty dollars. Twenty dollars were a drop in the bucket . . . little bit more. They come, they visit, they understand.

Bob said that he gained greater support from his family for his academic endeavors as they learned more about the academy. He explained:

My family did not understand why I wanted to go off and do the undergraduate degree. They thought, ‘You have got it made,’ because I had an associates degree and a job. They thought, ‘I do not understand why you are going back to school.’ And that is the thing that I noticed that has changed when I talk to my family now. When I recently went home, everybody was ‘That is great that you are doing this!’

The family of this student who is visually impaired saw their daughter's sacrifice as their own. She shared that they loved and supported her in everything she did regardless of her academic accomplishments. Tonya mentioned that

My family understands that my going to school is a sacrifice we were all making, and so they are really supportive . . . . But before I left, I was crying and told my father, ‘I do not want to go!’ And he said, ‘You should not feel any pressure to go. You are successful here. . . . But if you want to leave to go do your bachelor’s, we will support you.’ And that is all I needed to hear.

Another blind student explained that her family only began to value and to understand her
educational accomplishments when she was accepted to the same university where their grandfather attended.

When I got into the undergraduate program, my family only knew I was going to go to school longer, and that is pretty much it. . . . They really did not understand too much what it was I was doing, and even to this day I do not know if they really know. And then, when I got accepted to the university, that is when it changed because that was the university where my grandfather attended.

Furthermore, the partners/wives/husbands of participants were also supportive. Several of the student interviewees said they were married, and most of them attributed their academic success to the support they received from their partners. For example, Joseph stated: “There are times where I will get assistance from my girlfriend with PowerPoint presentations for class projects.”

But the most important and stable family support came from parents. Sometimes their support was difficult, because many times they didn't really know what they were supporting. One student spoke about the support from her proud parents, which was meaningful for many reasons. This support was invaluable because of the minimal amount of formal education they had attained, but they still desired the best for their daughter. Lady Voyager remarked: “My parents are very proud of the fact that I am doing my bachelor’s, because each one of them only graduated from high school. I am first generation. They were very proud that I have almost earned my BA.”

In addition, siblings were also supporters of the student’s academic success. Many student interviewees mentioned having one or more siblings. The most supportive siblings
were those who were older or had also received some form of higher education, because they understood its rewards and sacrifices. As one student who was visually impaired stated, “My sister wanted to make this big deal about my finally coming to the end of my senior year.”

Last but not least was the support from grandmothers, particularly for the first-generation college-going students. Participants’ grandmothers offered them support, inspiration, and strength to excel academically. One student said:

When I was coming home from class hours after being accepted to university for my bachelor’s, my grandma called me. . . . She was crying on the phone, she was so happy. . . . And she was telling me how proud she was of me, and how she was happy that she lived long enough to see me do these things because of everything she sacrificed in her life.

Many of the students shared the sentiment that strong and supportive families were what initiated their academic success. In the case of one blind student, it was his mother who told him about the benefits of an undergraduate degree, having attained one herself. As shared by Edward, “I remember my mom told me, ‘college is great. You get to study exactly what you want to study and you will have a great time. So you should do it.’ So I thought, why not? My mom went and got her degree.”

In a second example, a student who was visually impaired talked about educational attainment being a type of family business. Both her brother and father have university degrees, and encouraged her to do the same, so that they can all work as high school faculty. Barbara said:
My dad and I talk about different theories and disciplinary things especially when I am home. We would sit, talk, and evaluate things. . . . Well, my dad has a bachelor's, and we have always grown up talking about and knowing these types of basic things about our academic discipline. While some kids were out playing, we were sitting around and hearing lectures from our father.

One student who was blind shared that she and her father read the same philosophy books, and all their dinner conversations were about academic topics. As shared by Waterfall:

My dad reads. My parents have always read. So they understand. Recently my father has started reading some of my philosophy books. My parents know much of the stuff that I've read, and the theories, and the philosophies. Actually, my dad just finished his degree. . . . My parents and I have always talked about things like the meaning of life, or just sat around and theorized.

*University Administrators and Academic Support*

Participants shared their understandings of the role that administrators have played in their academic success. They were instrumental in the decision-making process that provided the resources necessary for facility accessibility and assistive technology acquisition.

A shared experience among these participants when they initially arrived on campus was that many of the campus and office buildings were not accessible to students with blindness or visual impairments. They also mentioned that commonly used computer labs were not accessible to them. As they advanced to their second and third year academically, some of them, particularly Bob, Joseph, and Jackie, became active on their campus by
participating in accessibility and technology committees, where they interacted with administrators and staff willing to help address these issues. Joseph’s comments are typical of the group’s experiences. He stated:

A number of my blind and visually impaired friends and I talked about the fact that many of the buildings and offices were inaccessible to us because of the lack of Braille on elevators, floors and rooms, and the fact that we did not have access to computer labs. I decided that I would become active on our campus accessibility and technology committee. Along with the Director of Disability Services, we presented testimony to this committee regarding our problems with accessibility and technology. Many of the committee members expressed disbelief of this fact and requested a proposal be drafted which resulted in the university investing resources in making campus buildings accessible by providing that all classrooms and elevators be Brailled and large print as well as one audio accessible elevator. Moreover, a multi-year plan for making all computer labs accessible to the blind and visually impaired by providing speech and print enlargement software was required.

University Library Staff and Accessibility

Over the course of their academic career, participants mentioned that they had both positive and challenging experiences with library staff. A common positive experience expressed by many participants was the helpful attitude exhibited by staff. Kim reflected:

Whenever I go to the library, the staff is very positive about assisting me with retrieving articles, making copies, and guiding me around the site. While the library has been made accessible in terms of one of the computers with JAWS and Zoom
Tech, a couple of the staff members told me that they know how time-consuming it can be with trying to access the computer. They would retrieve the articles and make copies for me and even scan it, since they have to scan other materials for posting on the web.

On the other hand, some participants mentioned that they have also had challenging experiences with library staff. They commented that when seeking help at the library, some of the staff refused to assist with retrieving articles and books and making copies because they claimed that assistive technology was already in place to help them. When students requested help with the assistive technology, they were told to seek training with Disability Students Services. The following statement by Bob represents this experience. Bob remarked:

On several occasions, I have gone to the library to retrieve articles for my research paper along with getting assistance with retrieving books. Several members of the staff informed me that they could not assist with retrieving articles because a computer with both speech and print magnification were installed on the computer so that blind and visually impaired individuals need not receive the assistance of library staff. If I experienced any problems, then I needed to get training from Disability Services because they had been instructed not to give this help, since the university was now providing tools to make the material accessible.

*Writing Center Staff and Academic Success*

Participants shared their positive experience with the staff at the Writing Center, where they received feedback on papers written as part of class requirements. At the Writing
Centers of these four-year public universities, any student enrolled in classes is eligible for face-to-face sessions with a tutor. During the tutoring session, students work collaboratively with a tutor on any writing issue related to class assignments. The students of this study mentioned the staff’s willingness to read the document on the screen, assist with editing strategies, and making corrections. Edward mentioned that after completing a paper, he scheduled an appointment with one of the staff members so that she might provide feedback to him to improve his finished document. He stated:

After I complete a paper no matter which class, I schedule an appointment with one of the editors at the Writing Resource Center. They are very helpful with providing feedback and making punctuation and editing changes. Their assistance has had a positive influence on my writing and the subsequent grades on my papers.

*Success and Its Relationship to the Academic System*

All participants were extremely committed to succeeding in the academy by engaging in the behaviors and activities that would support academic success. Specifically, they talked about: (1) developing networks within their disciplines; (2) maintaining high grade-point-average; (3) proving their academic potential to others; and (4) finishing the undergraduate degree.

*Meanings of Academic Success*

All students defined success as finishing the undergraduate degree. One student suggested that the success of finishing will prove to everyone who has discriminated against her that she is capable of attaining the degree. Helen believed that: “Success for me is getting my degree and finishing with high grades so that I can prove to others that I am
smart, intellectual. I think I have been very hard on myself going through school very fast-getting my bachelor's in three and a half years.” Beyond proving the value and worth of the student’s strengths, it also reflected a belief of a different life.

At first, it was much about my proving people wrong, that I can succeed and graduate, which will soon happen. Now it is much more about having a balanced life. Let me not just have a degree, but close relationships with my family and friends. This is the time to enjoy life and not necessarily see success as this end, but more of a complex and continuous thing.

Some students with blindness and visual impairments thought academic success was inextricably linked to social success. This multi-faceted definition of success required balancing academic and social responsibilities. Barbara described her complicated daily life:

I juggle five activities all the time that are really important: family, spirituality, exercise, education/job, and fun/entertainment. And all those things are very important to me. And all of my priorities and all my decisions have to do with the five activities. So, even though I have no time to sleep, I make sure to take time to do non-academic things and have fun.

Another student's definition of academic success included being true to yourself. She credits her family with giving her the strength to overcome the demands of the academy and its definition of success based primarily on grades. Helen explained: “I am successful by the fact that I am happy at the end of the day. I try not to get consumed with things related to my academic life. So, that might sound so simplistic, but academic success to me is just being true to who you are, and at the end of the day being content with what you have.”
A third student modified her definition of success to be more holistic after going through a challenging academic experience. Barbara stated:

Many years ago I was really gung-ho with proving people wrong. And success to me was getting this degree. Now success is completely different: it's doing what I love, which is continuing to research the stuff that I like, working with young people, and teaching—if not in the academy, then somewhere in some way. . . . I feel like after having gone through this [challenging academic] experience, success has become just being at peace with where I am, who I am, and what I've become through this whole process. I believe success is believing that you can achieve what you want, regardless of what people might say to you.

These definitions of academic success show that students with blindness or visual impairments do not operate in an academic vacuum, and therefore their "complete" adjustment to the academic system is neither straightforward nor possible without describing their human agency to determine their own journey into becoming academics.

_Academic Purpose and the Academic System_

These college students who are blind and visually impaired shared their understandings about a broader educational purpose beyond getting an undergraduate credential. These understandings provided them support despite the many challenges they faced. These understandings represented the desire to: (1) become enlightened; (2) become self-sufficient; (3) increase one's opportunities; and (4) gain greater career and life flexibility, freedom, and autonomy. They noted that the end result should be intellectual enlightenment.
A common response among these undergraduates with blindness or visual impairments was that:

The purpose of my education is to become enlightened, aware, and educated in all facets, or in as many facets as humanly possible. . . . And I do not mean success necessarily being economics or even notoriety, but success in terms of making a contribution to society no matter how small it may be.

Other participants who had more individualistic goals suggested that the undergraduate degree will help them become self-sufficient. They state that for them it's about opportunity. While other people may speak about learning for the sake of learning, there must be many elements in place for them to get to that place of privilege to just sit in a corner and read a book for pleasure. For all of them, education is about gaining opportunities.

*Chapter Summary*

The first section of the chapter presented participants' understandings of blindness and their adjustment to it at the time of the study. The second section described undergraduate students' questioning of academic accommodation and integration provided by their university through the office of Disability Students Services. The third section presented the participants' positive undergraduate experiences by describing those support systems that facilitate academic success. The fourth section detailed the challenging experiences of these undergraduate students that they confronted during their college years. In the fifth section, participants presented their perspectives on mentoring, supportive
families, administration, and staff. The sixth section provided the meanings of academic success and academic purpose as described by these participants.
CHAPTER 5: CONCLUSIONS AND IMPLICATIONS

The purpose of this study was to explore how students with blindness and visual impairments experience their engagement in undergraduate studies in a university environment and perceive their own success. The retention rate for enrolled blind and visually impaired undergraduates from entry to graduation over a six year period at institutions of higher education is sixteen percent (U.S. Department of Education, 1998). This rate is far below the degree completion rate of 55% of all undergraduates in a six-year period as of the most recent statistics in 1995-96 (U.S. Department of Education, 2003).

In this current study, fifteen participants shared their understandings of their experiences in undergraduate studies and the impact of institutions, faculty, and staff on participants with blindness or visual impairments' academic success. This study extended research on academic success to a new context (four public universities) and explored a new area related to undergraduate students' perspectives by examining students who are blind or visually impaired. The specific research questions were as follows:

1. What are students with blindness and visual impairments' understandings of blindness and its relation to their success?
2. How do students with blindness and visual impairments define their academic success?
3. What factors do students with blindness and visual impairments identify as the most influential in their academic success?
4. What are students with blindness and visual impairments' perceptions as to how they are viewed, treated, and respected by faculty, staff, and/or administrators?
5. How do students with blindness and visual impairments perceive the impact of these key authorities on their academic success?

This chapter summarizes this study's findings, draws conclusions from those findings, and suggests implications for policy, for future research, and for practice.

Summary of Findings

According to the fifteen undergraduate students who are blind or visually impaired, a variety of factors contributed to their academic success. The participants’ beliefs and experiences were organized into six main categories that corresponded to the five research questions of the study. In the first section, students discussed their understanding of blindness and their adjustment to it at the time of the study. This section corresponded to the first research question. The second section of the findings reported on the third research question by providing the students’ reflections on their own institution’s accommodations and integration as promulgated by the policies and procedures of the office of Disability Students Services (DSS). In the next section of the findings, which responded to research questions 3 and 5, the participants reported on their positive undergraduate experiences and those support systems that assisted their academic success. Undergraduate students explained in the fourth section of the findings what their challenging college experiences were and how they met those challenges to their academic success. This section also corresponded to research questions 3, 4, and 5. The fifth section reviewed the participants’ views on the role of mentorship and the support of administration and staff in the success of their undergraduate education. This section addressed research questions 4 and 5. The final
sixth section focused on responding to the second research question by detailing the students’ definitions of academic success and purpose.

Summary of Participants’ Understanding of Blindness

The study participants’ understanding of their blindness differed according to when they became blind. Those students who were born blind described blindness as “normal,” and suggested that negative perceptions of blindness were instead imposed upon them by the sighted population because the world has been designed for sighted people. Those participants who became blind or visually impaired later in life, however, stated that they initially responded to the blindness with feelings of fear and helplessness. Many of these participants equated becoming blind with losing control over themselves and their environment, and subsequently their adjustment to blindness meant regaining this control and independence as much as possible.

All participants explained that their blindness impacted several areas of their life, including their transition to the university, their self-perception, their relationships, and family. Many of these students reported that their transition to college, which most of them categorized as a transition from dependence to independence, occurred at a slower rate, because they had to adapt to a new environment while learning to depend less on their parents and high school support systems. The participants found they had to learn self-advocacy skills at the university in order to access accommodations, which, at the high school level, were already integrated in the program. A few students found the new college environment really challenging, but were able to overcome their initial difficulties with determination and assistance from the office of DSS.
The participants’ perceptions of themselves also varied according to their early educational experiences. Those students who attended a local public school and who were amongst a majority of sighted peers described their early educational experiences as isolating. They immediately became aware that they functioned differently than their sighted peers and felt they were ostracized by them. When these students with blindness or visual impairment were not segregated from the rest of the group to go to the resource room, they often felt that some of their teachers found them difficult and time-consuming. These early experiences had a negative effect on their self-perception. On the other hand, students who attended a specialized school for the blind felt included in all instruction and activities. They reported feeling that their teachers expected them to succeed academically. These students stated they had a positive sense of self as well as a positive educational experience. In general, the participants’ comments demonstrated a connection between the students’ perceptions of well-being and sense of control over their lives.

All participants placed a high value on relationships, although the students’ perception of their ability to make friends differed amongst them. In addition, all participants acknowledged the importance of their family in contributing to their early educational success. Some students noted how their parents were particularly helpful in advocating for accommodations on their behalf or mediating between themselves and the school. While the participants acknowledged the support of their families early on in their educational development, they also noted that the support of their families decreased to emotional and sometimes only financial support once they were in college. Further, they emphasized the
importance of their independence at the university in relation to their interactions and potential later support from family and friends.

Summary of Participants’ Perceptions of the University’s Accommodations and Integration

Key accommodations identified by these individuals that were provided by DSS included: counseling services, caring people, test accommodations, time management, study skills training, tutoring, technology, and early registration. Several participants remarked on the benefits of their counseling meetings, but emphasized that the meetings and the counselors needed to keep a balanced perspective of the student that included both academic and social life. Most students also emphasized the significance of caring people in supporting their academic success. Because students who are blind or visually impaired often experienced the university environment as unsupportive and even hostile to them, caring people were particularly important to this sample population. Students also noted the importance of testing accommodations, from receiving extra time to complete tests, to taking the test at an alternative location or with alternative methods, such as a tape recorder or typing, rather than writing. Among the accommodations provided by the university, the participants also mentioned training in time management, study skills, and tutoring as particularly helpful to their academic success. They discussed how these services helped them to keep, organize, and understand course material. Developing these skills also provided the students with ways to foster their own independence at the college level. Technology advancements, such as voice recognition software and wireless technology, also had a tremendous impact on the students’ academic success. These students valued the multiple impacts of registering for classes early, which allowed them to order textbooks
scanned in time for the first day of class and to find instructors who best fitted their learning styles.

Most students valued the sense of security provided by the office of DSS as they proceeded through their educational careers at the university. They noted that the staff were caring and understanding, that they were attentive, and that they provided undergraduates with blindness or visual impairment a safe place to come to when necessary, among other aspects. Many students remarked that the office of DSS needed to put a high priority on teaching students self-advocacy skills, since most students would not have received, nor needed, this type of training in high school. Whether these skills included instruction on how to approach professors about their disability, how to seek the assistance of class peers as readers, or how to work out accommodations, several participants noted the significance of this training in supporting their academic success.

The individuals of this study did not always agree with the type and manner in which the university provided accommodations to them. They questioned most often the effective use of accommodations and the meaning of “equal access” promulgated by their institution. In particular, students questioned some of the policies and procedures for the use and choice of readers. They also noted that the policy that students who are blind or visually impaired scan their own course materials was detrimental to their academic success because of the lower quality of scanners available to students and the time involved scanning materials. Several participants disagreed with the university’s meaning of “equal access” as just providing tools to access. They suggested that because they have to scan their course materials in order to access them, they did not receive the same access to these materials as
sighted students. Some students then used their self-advocacy skills to negotiate with administration and staff for better accommodations for reader and scanning services based on their differing understanding of “equal access.”

Summary of Participants’ Positive Undergraduate Experiences

Study participants mentioned several factors that helped create positive educational experiences during their undergraduate program. They discussed their exposure to a new region, positive peers, supportive departments and professors, financial opportunities, and welcoming and diverse campus environments.

While many of the students with blindness or visual impairments in the sample population chose to remain close to their family and community support systems, some decided they wanted exposure to a new region. Those that chose to move to a new region to go to school often paralleled the move to their own intellectual development. One student found moving an opportunity to learn another “intellectual discourse” in a new regional and political environment. Others described the change of environment as an opportunity to “broaden horizons” and meet new people with differing viewpoints from their own.

Many of the students mentioned the importance of positive peer relationships in helping these students succeed academically, particularly when instructors’ time with individual students may be limited because of class size. The diversity of the peer population was also important to some students, who were looking for a supportive community outside their academic departments. A few of the participants attributed remaining at the university to the community they had built outside the department or amongst other students who are
blind or visually impaired. They pointed out that belonging to these types of communities made them feel less isolated on campus.

Students also noted the support they got from their departments and professors as significant to their overall academic success. They discussed the diversity of faculty members and how well the department supported their continuing studies as factors that encouraged them to continue. The departments that were viewed as the most supportive by the students were the ones that had students who were the most welcoming. Another important aspect of support came from professors who encouraged the academic success and intellectual growth of the participants. Students highlighted their professor’s attention to class dynamics, friendliness, and supportiveness as some of the most important qualities that contributed to their academic success.

Receiving financial assistance was also viewed as significant to these college students with blindness or visual impairment. Some students identified receiving financial funding as the main contributing factor in attending their college and the reason why one student left her home state. Other students mentioned work study and internship programs that helped them to survive financially while attending school.

As a whole, students commented the most on the welcoming and diverse environments that their institutions provided, attributing to this factor their positive experiences in an undergraduate program. One student detailed her experience with a helpful professor prior to enrolling at the university as what made her feel the institution had a welcoming and diverse environment. Another student found that the community of students with blindness and visual impairment at the university was the factor that made his campus
the most welcoming and diverse. Other students mentioned the diversity of the university environment as the reason why they valued their educational experience at the institution.  

*Summary of Participants’ Challenging Undergraduate Experiences*

As the participants proceeded along their academic paths, they encountered challenging experiences in addition to the positive experiences already mentioned. Some students chose to adapt to these challenges, some remained isolated in their departments, and some considered leaving the university altogether. How these students adapted to the challenges presented to them helped shape how successful they were academically. Of the challenging experiences the students discussed, the following issues emerged that contributed negatively to their academic success. They mentioned being far from home, discrimination in the academy, and perception of the university environment as challenging as factors that adversely impacted their integration into the academic community. The participants also mentioned their sense of isolation at the university, the perceived expectations of faculty and staff, limited campus accessibility, and peer integration issues.

Many of the participants discussed how difficult it was to pursue an education away from home. Some stated that leaving home was one of the most negative parts of obtaining a degree. Others talked about their homesickness and need to call home. Several students also discussed how feeling that they were being discriminated against hindered their academic success. One student mentioned becoming aware of the false perceptions that other students had that students with blindness or visual impairments receive more support from the university. Another student mentioned her frustration with the perception at her university that she represented and should speak for the entire population of students with blindness.
Many students described the college environment as challenging, or even hostile, at times. As a consequence, the participants developed different ways of perceiving this environment to help facilitate their academic success. One mentioned that she was attempting to avoid what she termed as her “conversion.” She avoided socializing at departmental events, because she felt they were trying to make her “like everyone else.” Another student saw negotiating academics as akin to playing a game. “Winning” the game means achieving his educational goals, but requires, among other aspects, that he engage in political maneuvering, through which he would lose his unique voice. Others likened the university to a business that needed to improve its “product” of educational delivery to better serve students who are blind or visually impaired.

Students in this study also explained the difficulties they had in establishing a community at the university, in part because of their numerical under-representation. The resulting isolation that they felt as they pursued their degrees was a negative factor in achieving their academic goals. One student noted that he felt so isolated he was considering dropping out of his program. His lack of interaction with some peers and lack of involvement in classroom activities were two environmental factors that caused him to reconsider his participation in the academic program. Other students remarked that they felt isolated within their academic departments, but were able to find enough of a community outside of these departments to continue on their academic path.

These students with blindness or visual impairments also perceived expectations that were placed upon them in addition to those placed on other students, and which hindered their academic success. These dual expectations were either directly requesting that they do
more (work harder) than other students, or they felt they were part of a system that expected they do more in order to have equal access. They felt these expectations were unjust. Many participants talked about expectations of having to work harder just because of their blindness or visual impairment. Some students were told outright by their professors that they needed to be better than others simply because of their blindness. While the professor claimed to be preparing the student for succeeding in a discriminatory academy, the result made the student feel that she needed to be intellectually superior just because she was blind. Other students commented on the expectation that they have to work harder to gain equal access to educational materials. Sometimes they were also called upon to “represent” the blind and visually impaired community, and they were expected to know all the perceived unique characteristics of the group.

Among the participants’ experiences of the challenging aspects of their educational experience, many commented on the difficulties presented by the physical environment of their institutions. Several students found it challenging to navigate elevators and corridors when they were not labeled with Braille. Sometimes classroom numbers were printed too small for those with visual impairments to see. Some students also mentioned that the buildings that became associated with access discrimination, meaning that they either posed significant physical problems for student access or housed persons with whom the students had challenging experiences, also represented a psychological hostility towards them. As a result, these students started to modify their walking routes to avoid the buildings they associated as hostile to them and their disability.
Students cited negative interactions with peers as another factor that limited their academic success. Sometimes these students felt they were treated like outsiders within their own departments. These students who are blind or visually impaired often found they were not invited to social events by other sighted peers within their program. They felt they had to work harder to integrate with their sighted peers, because many of their sighted peers viewed them as “other” because of their visual impairment or blindness.

**Summary of Participants’ Perceptions on Academic Support and Integration**

In the interviews conducted for this study, the participants often referred to other university support systems that aided them in achieving their academic success. These support systems included experiences with mentors, family, administration, and staff.

Mentoring programs were particularly important for students with blindness and visual impairments, since the transition from high school to college can be a challenging one, compounded by being away from earlier support systems. The undergraduates of this study related both positive and negative experiences with mentoring from a wide range of mentors. They talked about primary mentors, such as professors, advisors, and parents, as well as secondary mentors, or those faculty members outside of their department.

Mentoring had different meanings for the college students. For some, mentors were those who shared the same desires as them, and for others. Many of these students based their views of mentoring on the experiences of previous students, the so-called “pioneers.” A few of the participants could not identify important mentors in their undergraduate experience, but instead focused on their own will and commitment to complete the program on their own. Many students had an idealistic view of a mentor, as someone who took an
interest in the student, and not just in his or her academic work, but also provided social support. Most of these latter types of mentors were professors, who the students perceived had a better insight into the needs and issues of the student.

The participants valued mentoring which was available during challenging times and which provided a variety of viewpoints for the student on how to overcome the challenges. As a point of information, the student identified their primary mentors as those of both genders, although predominantly male, and of diverse ethnic and racial backgrounds. Most common positive qualities of the mentors were those who were supportive, nurturing, and displayed a confidence in the abilities of the student. The students’ self-identified mentors were proactive in establishing relationships with the students and provided social, as well as academic support. Participants also pointed out faculty and students as secondary mentors. Students also identified mentors who were blind and visually impaired, a few of whom were the reason some of the participants went to college in the first place. One student still remains in contact with her college mentor who had a visual impairment even after leaving the institution. Several students ranked older peers as their most important mentors while progressing through their program. From them, they learned which classes and professors to take, what financial aid opportunities to pursue, and other “informal knowledge,” as one participant described it. Peer mentors also helped students integrate socially into the university and their department. A few participants also acknowledged their parents as playing a positive mentoring role in their educational careers.

Some of the undergraduates with blindness or visual impairment of this study received financial support from their families, but most received moral and emotional
support as well. For some students, their family’s financial support made it possible for them to even attend college in the first place. Other students noted that their families became more supportive of their academic endeavors when they became more knowledgeable of their program and college life. Participants received support from partners, husbands, wives, as well as siblings; but they received the most support from parents. A few participants also noted the support of their grandmothers. Although support from families was not always positive, many students mentioned their families, and in particular their parents, as one of their primary influences in attending a university in the first place.

University administrators and staff also played a role in facilitating the academic success of the students in this study. A few of the participants noticed when they arrived on campus for the first time that many of the campus buildings and offices were not accessible to them. Some of the computer labs also were not accessible. Several of the students took it upon themselves to advocate for better accessibility. They collaborated with administrators and staff at several meetings to work towards improved technology and accessibility for the disabled on campus. Participants in this study had both positive and challenging experiences with staff, particularly library staff. While some students remarked that library staff was very helpful with accessing materials and using technology, others noted they experienced difficulty with some staff. These staff members had not provided training for these incoming students with blindness and visual impairments on assistive technology at the library, stating that they should go to DSS for such training. Other participants commented on the positive experiences they had at the Writing Center. The staff at the Center helped with editing and reading documents off the screen, among other services.
**Summary of Participants’ Perceptions on Academic Success and Purpose**

The participants’ understanding of academic success and purpose were similar to sighted students (Enberg, 1999). They noted the importance of (1) developing networks within their disciplines; (2) maintaining high grade-point-average; (3) proving their academic potential to others; and (4) finishing the undergraduate degree.

All of the students with blindness and visual impairments of this study defined academic success as completing their undergraduate degree. Some also saw completion of the degree as a means of proving their success or intellectual worth to those who may have doubted them earlier on in their lives. A few believed that success meant a different life. Many of the students defined academic success as maintaining a balance between academics and a social life. Another student’s definition of success was being true to oneself.

During the course of their interviews, the participants gave their thoughts on an academic purpose beyond the undergraduate degree. Their perceptions on academic purpose helped to motivate them throughout their educational journey. Their beliefs included the desire to: (1) become enlightened; (2) become self-sufficient; (3) increase one's opportunities; and (4) gain greater career and life flexibility, freedom, and autonomy. For them, the degree was more about gaining access to opportunity than learning for the sake of learning. Figure 5.1 on the next page depicts the interrelationship of all six categories the participants identified as contributing to their academic success and purpose.
Adjustment to blindness varies depending upon the developmental stage during which vision is lost (Tuttle & Tuttle, 1996). With all individuals moving typically through the developmental stages, there is a point during which people move from dependence to independence and interdependence. For people who are blind, reaching a point of independence/interdependence runs parallel to one’s level of adjustment to blindness. While the point of adjustment varies depending on when vision is lost, adjustment characteristics and subsequent societal engagement/participation expectations are similar. Students who are
blind develop positive interpersonal skills and self-esteem when included by their peers and
academic authority figures (faculty, administrators, and staff) rather than tolerated. Children,
with or without disabilities, learn much about themselves through their interactions with
others (Tuttle & Tuttle, 1996). A healthy image of being a student who is blind can be
fostered in academic settings that celebrate, encourage, and integrate differences in an
inclusive environment (Vaughan, 1998; Enberg, 1999; Getzel, 2008). Elementary, middle,
and secondary settings are where children begin the development of advocacy and leadership
skills (Gil, 2007). When viewed as different, difficult, and a burden, these concepts of self
become internalized, serving as psychological barriers to developing the academic and
personal skills needed for post-secondary success.

Findings from this study along with literature by Tuttle and Tuttle (1996), Vaughan
(1998), and Enberg (1999) concluded that the successful adjustment to blindness positively
impacts self-concept, self advocacy, and leadership and their connection to academic success.
In post-secondary academic settings, Disability Students Services provide access to tools and
serve as policy advocates ensuring equal access to education. DSS offices emphasize and
encourage counselors’ awareness of factors that can impact (positively or negatively) a
student’s academic engagement at the university (Graham-Smith & Lafayette, 2004). DSS
counselors are often focused on executing tasks to ensure students with disabilities are
treated to all exceptions and provided as equal an education as possible under section 504 of
the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, governing
education for students with disabilities (Baggett, 1994 and Fichten, 2005). Often, DSS
counselors are focused on adhering to the prescribed policies and procedures more than
understanding the individual needs of students. Findings of this study and current literature support the conclusion that participants believe that administrators at disability services tend to place more emphasis on procedures rather than the most effective way to ensure equal access. Nelson et al. (1993), Baggett (1994), Enberg (1999), and Graham-Smith and Lafayette (2004) concluded that often procedures for providing equal access tended to be inflexible, which resulted in more time being allocated by the student to making material accessible. However, when students fail to thrive in post-secondary settings, it is often the lack of support and those “caring” people that could have made the difference (Graham-Smith & Lafayette, 2004). In addition, some students who are blind or visually impaired have to learn how to integrate. Thus, the phrase equal access should not be viewed as a catchment for all accommodation strategies to be enforced as one-size-fits all solutions when a student who is blind requests services. Instead, equal access should be the guideline for addressing each student’s individual needs under the law with the final goal of academic success.

For students who are blind and visually impaired, building relationships is vital to academic success. These relationships nurture the student’s academic, professional, and personal development. DSS activities provide opportunities for these students to forge and strengthen relationships with faculty, staff, peers, and academic business partners. Findings from this study and literature by Roy (2000), Vaughan (1998), and Branker (1997) conclude that having quality relations with faculty, staff, and peers foster a successful academic experience. Students who are blind and visually impaired find post-secondary institutions that embrace diversity at all levels more likely to be successful learning environments.
Along with the advocacy power of DSS, mentors play a large role in the success and integration of students who are blind and visually impaired in post-secondary institutions. Mentors, whether instructors, staff, and/or peers, have the unique perspective of understanding campus expectations and believing in the abilities of their disabled mentee. As a result, they are able to provide guidance and support customized to the uniqueness of the individual. For students, this level of support positively influences self-esteem and self-image. Students who actively pursue mentorships find adjustment to post-secondary settings more manageable. These mentors can take on the role of family support, helping to fill the void created by separation from home. Findings from this study suggest that the mentoring received by participants had the likelihood of facilitating the persistence of students at the university.

**Connectedness**

One general conclusion of this study is that the connectedness between study participants and the university academic system is more likely to lead to the students’ persistence at the university. Findings from this study support this general conclusion, because participants had noted their belief in a sense of connectedness with the academic system of the university. They felt they were integrated into the classroom and the support services needed to facilitate their academic performance. Tinto (1975) suggests in his research that the greater the degree of student integration into the academic system of the university, the more likely the student will persist to degree completion. Other research by Fichten (2005) and Enberg (1999) suggest a similar conclusion. In this study, the following college environmental factors facilitated the connectedness between participants and the
academic system of the university: (1) disability services for students, (2) attitude of faculty and staff toward the blind and visually impaired, and (3) quality of peer relations.

Disability Students Services bare the primary responsibility for ensuring the connectedness of participants with the academic system of the university. DSS provides the accommodations and services across the academic system that facilitates continued persistence at the university. Findings of this study and literature suggest that because the university environment, especially the classroom, is designed by and for sighted students, DSS have to provide accommodations and services as a way to facilitate the connectedness of participants to the academic system of the university. Research by Fichten (2005), Enberg (1999), Branker (1997), and Baggett (1994) found that those accommodations and services provided through disability services integrated students with disabilities into the academic system.

Connectedness between faculty and participants at the university was made manifest through quality contact and collaboration. Findings of the study and literature support this conclusion. Student participants commented on the importance of quality contact with faculty both within the classroom and outside of the classroom during office hours. The willingness of faculty to work to ensure their equal opportunity to participate in classroom discussions and group interactions was also essential to their feeling a sense of being part of the class and involved in classroom activities. Roy (2000), Enberg (1999), Baggett (1994), Nelson et al. (1993), Murphy (1992), and Getzel (2008) found that contact with faculty and their willingness to work with students facilitated their connection to the academic system.
Connectedness of participants to the academic system was also made manifest through the attitudes of faculty, staff, and administrators toward students with blindness and visual impairments. Findings of this study demonstrated that faculty, staff, and administrators who displayed a willingness to accommodate students with blindness and visual impairments were more likely to enhance the connectedness between students and the academic system, which tends to facilitate their persistence at college.

Collaboration between study participants and faculty was likely to have had a positive impact on connecting the participants with the academic system of the university. Findings from this study relate to the literature, in that working together as students and faculty is viewed as essential to the successful negotiation of the academic system of the university. Vaughan (1998) and Roy (2000) commented on the significance of collaboration between participants, faculty, staff, and administrators as well as peers to the positive connection of all concerned to the academic system of the university.

Quality peer relations facilitate the connectedness between participants and the academic system of the university. Findings suggest that participants and their peers had developed positive collegial relations that resulted in creating a sense of belongingness on behalf of participants, working collaboratively on class work, and building friendships outside of class that enhanced their persistence at college. These findings support literature by Roy, (2000); Enberg, (1999); and Branker, (1997). They found that students with blindness or visual impairments and other disabilities who had positive relations with their peers were more likely to be academically successful in college.
Disconnectedness

Another key conclusion of this study is that during their period of university engagement, there was disconnectedness between participants and the academic system of the university. According to Tinto (1975), the less academically integrated into the academic system of the college, the less likely the student will persist. Findings from this study generally suggest that during the period of their academic engagement, the students’ disconnectedness with the academic system had a less than positive impact upon their college experience. The following collegiate environmental factors contributed to the disconnectedness between participants and the academic system of the university: (1) inflexible bureaucratic procedures at DSS, (2) attitudes of faculty and staff toward blind and visually impaired students, and (3) isolation from peers.

Inflexible bureaucratic procedures of DSS contributed to the disconnectedness between participants and the university academic system. As noted previously, DSS provided accommodations and services to facilitate an equal educational opportunity to students with disabilities. Along with this mandate, administrators at Disability Students Services created a set of procedures that tended to impede the facility of access to accommodations and services, such as readers and scanning material.

Findings from this study along with research by Fichten (2005), Enberg (1999), and Baggett (1994) found that participants with blindness and visual impairments had to expend much time in the processing of printed material to make it accessible by using low end scanners as well as having a rigid set of guidelines detailing what a reader could read and
where the materials could be read. Thus, these participants generally concluded that the inflexibility of procedures of DSS adversely impacted students’ academics.

**Attitudes of faculty and administrators contributed to the disconnectedness of participants to the academic system of the university.** Findings from this study along with literature by Enberg (1999) and Baggett (1994) support the conclusion that the negative attitudes of faculty and administrators adversely impacted their academic experience.

Participants mentioned that some professors and administrators were unwilling to provide assistance because they believed that doing so would provide an unfair advantage to these students who are blind or visually impaired. The study participants also stated that some administrators at libraries were unwilling to assist, because they did not believe that they had any responsibility to provide any special assistance to these students.

**Isolation from peers contributed to the disconnectedness of participants to the university academic system.** An essential aspect of college engagement is that students experienced a sense of acceptance and belongingness at college, which was facilitated by peers. Findings from this study and research done by Nelson et al. (1993), Baggett (1994), Enberg (1999), and Roy (2000) noted that participants felt a sense of isolation from their peers when they were not invited to participate in group projects in class or invited to participate in class outings. Figure 5.2 on the next page depicts the relationship between the factors of connectedness and disconnectedness that impact the academic success and purpose of undergraduate students with blindness or visual impairments.
Figure 5.2. Factors of Connectedness and Disconnectedness with the University that Contribute to Undergraduate Students with Blindness or Visual Impairments’ Academic Success and Purpose

Implications for Policy

Findings of this study have several major implications for policy and policymakers. While this study has provided policymakers with a look at the undergraduate educational experiences and academic success from the perspective of students with blindness and visual impairments, they need to respond in several major ways to enhance the retention of this student population. One major area of policy is focused upon technological tools which are vital supports in the academic journey of students who are blind and visually impaired. First, policy should provide sufficient additional funding for new technology-related assistance
programs, for up-to-date equipment, and the necessary training of personnel. Second, there is need for sufficient funding to ensure that computers with current assistive technology, such as JAWS (Jobs Access With Speech) and Zoom Tech, are made available across the campus at all computer labs, libraries, and resource centers, along with providing staff training for this software at these sites.

The next major implication for policy and policymakers is that they must provide additional funding for in-service training to faculty and staff regarding the intersection of the biological nature of blindness and its concomitant limitations, the nature of the sighted environment, and the attitudes of those toward blindness and visual impairment. This training would be focused on enhanced sensitivities and actions by faculty and staff towards creating supportive instruction and mentoring, collegiate classrooms, and campus activities.

Another major implication for policy and policy makers is to review current policy that designates a single unit at the university as holding primary responsibility for implementing disability-related policy. Instead, policy makers should study the feasibility of designating all units with responsibility for providing disability-related accommodations within their sphere of authority. This policy consideration for creating decentralized support and compliance across campus could create a stronger advocacy and support network and could provide greater environmental valuing and action in support of students who are blind and visually impaired.

One final implication for policy and policy makers is that funding must be provided for the establishment of campus-wide committees that consist of students with blindness and visual impairments as well as students with other disabilities and representatives from across
campus who have key facility and service responsibilities that impact students’ academic efforts. Thus, these committees could include individuals from the campus library, computer labs, facilities, housing, and the chancellor’s office and would be responsible for ensuring that all campus constituencies provide a truly accessible and welcoming university environment.

Implications for Future Research

This study has shown that there are other areas of research that are needed. As will be discussed in the following paragraphs, needed research includes four key areas. The first is the academic success of individuals who are blind and visually impaired and who are enrolled at the community college. Second is the academic success of graduate students who are blind or visually impaired. Third is additional empirical research on the academic success of undergraduate students who are blind and visually impaired. Lastly, researchers also need to address the social integration of these college students with blindness and visual impairments, beyond current studies of sighted college students.

First, although major findings of this study were applicable to the field of higher education at the senior university level, demographic data on students in higher education who are blind and visually impaired show that research is needed to gain further understanding into the experiences of students with blindness and visual impairments at the community college level. According to data from the U. S. Department of Education (1998) as well as Cowen and Brawer (1996), fifty-one percent (60,000) of individuals who are blind and visually impaired entering college following graduation from high school are enrolled at the local community college. There is need for more qualitative research on all college
students who are blind and visually impaired, because of the lack of descriptive understandings of this population and the reasons for their limited persistence in relation to other groups. Researchers need to gain further understanding into how their educational experiences relate to their academic retention and success.

The second is that there is need for research into the academic success of graduate students who are blind and visually impaired. Data show that graduate degree attainment is also lagging. Only four percent (150) of graduate students who are blind and visually impaired attain their degree (U.S. Department of Education, 1998). There is need for more significant empirical investigations on the graduate study experience across all fields and disciplines to gain an understanding into how they are succeeding academically.

Thirdly, further empirical research is needed on the educational experiences of students who are blind or visually impaired. This current study has helped to develop a descriptive understanding of the characteristics and areas of success at the undergraduate level from these fifteen college students with blindness and visual impairments. Future researchers can draw from this research to develop studies that expand research questions to differing populations, such as finding how the experiences of these fifteen students are related to the larger population of undergraduate students with disabilities. There is a significant need for further research in higher education to consider the particular academic journey of students with disabilities.

Finally, further research is also needed on the social interaction of students with blindness and visual impairments. According to Edmonds (2002) and Nora and Cabrera (1996), their study participants mentioned that their involvement in campus organizations
and extra curricular activities facilitated their integration into campus life. Because social interaction is a major element of academic persistence and success, there is need for research to gain greater in depth understandings of these involvements and the particular elements which foster integration and academic success of students who are blind or visually impaired.

Implications for Practice

Findings in this study also contain several implications for practice. In this context, "practice" is used to describe how institutions of higher learning can provide support that facilitates the connectedness of undergraduate students with blindness or visual impairments with the academic system at institutions of higher learning. Findings from this study showed the engagement of participants regarding their undergraduate experiences, and demonstrate how that insight can provide data that can help facilitate the persistence of undergraduate students with blindness or visual impairments with the academic system at institutions of higher learning.

First, higher education institutions should develop self determination and self advocacy programs that assist college students with blindness or visual impairments with transitioning more effectively from high school to college, which in turn can facilitate their connectedness with the academic system of higher education institutions. These programs can reduce the disconnectedness between undergraduate students with blindness and visual impairments and the academic system that often occurs early in the academic experience of these students. Second, higher education institutions should develop in-service training activities regarding students with blindness or visual impairments with other students and/or faculty members who are conversant on issues related to the emerging literature that
speaks to the intersection of blindness, the nature of the sighted environment, the attitudes of those in that environment, and their impact on the academic experiences of this population. These in-service training activities can lead to a better understanding of the disconnectedness faced by this population with the academic system of institutions of higher learning and the ways to enhance the integration of this population with the academic system of higher education institutions. Third, higher education institutions should establish formal mentoring programs that would involve both peers and faculty to serve as mentors to all freshmen and sophomore students with blindness or visual impairments to facilitate their connection with the academic system of their higher education institutions.

In spite of laws requiring post-secondary institutions to provide equal access and reasonable accommodations, students who are blind or visually impaired at times face prejudice, unreasonable expectations, and isolation that can lead to disconnectedness between these students and the academic system of higher education institutions. On a regular basis, DSS professionals must be included in required faculty and staff meetings. As adjustment to a disability is learned, the ability to be inclusive and to promote inclusion is also learned. People sometimes have an unrealistic view of their role with an individual who is disabled and that individual's responsibilities. These forums can allow faculty and staff to ask questions they may feel inappropriate to ask students. Likewise, these forums provide an audience to decision makers often unaware of structural barriers on campus. When at all possible, these meetings should include a student representative of the department, preferably a student from each category of disability represented on campus, with an agenda of collaborative concerns from peers working together to enhance the connectedness
of students with blindness or visual impairments as well as students with other disabilities with the academic system of higher education institutions.
REFERENCES


Boston University Case (1996). Boston University loses suit brought by LD students.


Dissertation Abstracts International, 58 (06A), 2097.


Remedial and Special Education, 9, 12-19.


Demographics update: Educational attainment of persons with severe functional limitations


Ferguson, R. J. (2001). We know who we are: a history of the blind in challenging educational and socially constructed policies: a study in policy archeology. Gaddo Gap Press, San Francisco, CA.


Junco, R., & Salter, D. (2004). Improving the campus climate for students with disabilities
through the use of online training. *NASPA Journal, 41*(2), 263-276.


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perceptions of their personal development during the first three years of college.


APPENDICES
APPENDIX A

Interview questions:

1. What does it mean to you to be blind or visually impaired? What was your reaction when you found out you were blind or visually impaired?

2. Please describe your college experiences and how they relate to your success.

3. What does it mean to be a successful student? How do you go about achieving that success?

4. What has helped you to succeed in other learning experiences, both formal and informal?

5. How have your other formal and informal learning experiences compared to your learning experiences at this university?

6. Have you ever thought about leaving the university? If yes, why? If not, why?

7. How did you or did you not overcome obstacles that confronted you during your time at the University?

8. What factor(s) has/had the most significant influence on your college success?

9. How do faculty influence your collegiate experience?

10. How do administrators influence your collegiate experience?

11. Describe your extra-curricular activities.
APPENDIX B

Focus group questions:

1. Why did you come to this university?

2. What advice would you give to incoming blind and visually impaired students?
APPENDIX C

Demographic Data Sheet

1. What is your gender?

2. What is your GPA?

3. What is your major?

4. What is your age?

5. What is your ethnicity?

6. What is the nature of your visual impairment? Is it partial or total?
APPENDIX D

North Carolina State University
Institutional Review Board for the Use of Human Subjects in Research
SUBMISSION FOR NEW STUDIES

Title of Project: Undergraduate Educational Experiences: The Academic Success of College Students with Blindness and Visual Impairments

Principal Investigator: Ricky Scott
Department: Department of Adult and Community College Education

Source of Funding (required information): None.

Campus Address (box number): 108 B Watagua Hall Box 21617 Raleigh, NC 27607

Email: rscott09@hotmail.com  Phone: 919-512-3240  Fax: None.

Rank:  □ Faculty
       □ Student:  □ Undergraduate  □ Masters; or  □ PhD
       □ Other:

If rank is not faculty (i.e. student or other), provide the name of the faculty sponsor overseeing the research: Dr. Carol E. Kasworm

Faculty Sponsor’s email: carol_kasworm@ncsu.edu  Campus Box: 7801  Phone: 919-513-3706

Investigator Statement of Responsibility

“As the Principal Investigator, my signature testifies that I have read and understood the University Policy and Procedures for the Use of Human Subjects in Research. I assure the Committee that all procedures performed under this project will be conducted exactly as outlined in the Proposal Narrative and that any modification to this protocol will be submitted to the Committee in the form of an amendment for approval prior to implementation.”

_____________________________________________  ________________
Principal Investigator’s Signature*     Date

Faculty Sponsor Statement of Responsibility

“As the Faculty Sponsor, my signature testifies that I have reviewed this application thoroughly and will oversee the research in its entirety. I hereby acknowledge my role as principal investigator of record.”
Faculty Sponsor’s Signature*                   Date

* electronic submissions to the IRB are considered signed via an electronic signature

PLEASE COMPLETE IN DUPLICATE AND DELIVER TO:
Institutional Review Board, Box 7514, NCSU Campus (lower level of Leazar Hall)
************************************************************************
For IRB office Use Only

Review Received:   ☐ Administrative   ☐ Expedited   ☐ Full Board

Review Decision:   ☐ Approve  ☐ Approve with Modifications  ☐ Table
                  ☐ Disapprove

Reviewer_________________________ Signature_________________________ Date _______
North Carolina State University
Institutional Review Board for the Use of Human Subjects in Research
PROPOSAL NARRATIVE

If at any time you have questions or difficulties while completing IRB forms, please feel free to contact Deb Paxton at debra_paxton@ncsu.edu or 919-515-4514.

In your narrative, please address each of the questions below. Keep in mind that the more details that you provide, the easier an IRB reviewer will be able to understand your research and reach a prompt decision.

A. INTRODUCTION

1. In lay language, please briefly describe your research, its purpose, procedures, and expected contribution to its field or to the general population.

   This study shall involve interviewing 15 blind and visually impaired undergraduates at NC State University. While conducting these interviews, if fewer than 15 students respond to the request for participation, then the researcher shall seek other blind and visually impaired undergraduates at UNC-Chapel Hill, UNC-Charlotte, and East Carolina University. The purpose of this study is to have blind and vision impaired college students describe those beliefs and experiences that support their college success. The procedure used to gather data will be semi-structured interviews that shall be conducted during the spring semester of 2005. These interviews shall be transcribed and stored in a secure location. The confidentiality of the students shall be maintained by assigning a pseudonym to each of the participants. At the conclusion of the research, all taped transcripts shall be destroyed. The benefit of this study is that the data gathered from these interviews shall provide knowledge regarding the success of blind and vision impaired college students, which can facilitate educators and administrators in the provision of educational services throughout the collegiate environment.

2. If this is student research, indicate whether it's for a course, thesis, or dissertation.

   Dissertation
B. Subject Population

1. How many subjects will be involved in the research?
   15

2. Describe how subjects will be recruited. If flyers, advertisements, or recruitment letters will be used, please attach copies of those documents.
   These students will be contacted via a recruitment letter which shall be sent from the Office of Disability Services.

3. List specific eligibility requirements for subjects, describe screening procedures, and justify criteria that will exclude otherwise acceptable subjects.
   The students shall be blind or visually impaired. They shall be undergraduate students and they shall be registered with the Office of Disability Services. The screening procedure that shall be used is that students will be registered with DSS and be undergraduate students. The scope of this study is to gain information from undergraduate students. Although there are blind and vision impaired graduate students, it is believed that their experiences are different, such that those experiences exclude their participation in this research study.

4. Explain and justify and sampling procedures that exclude specific populations.
   N/A

5. Disclose any relationship between researcher and subjects, such as teacher/student or employer/employee.
   There is no relationship between the researcher and the subjects.

6. Check any vulnerable populations that you will intentionally include in the study:
   - Minors (under the age of 18) – if you will involve minors in your study, you must make provisions for parental consent and minor assent to the research
   - Pregnant women
   - Persons with mental, psychiatric, or emotional disabilities
   - Persons with physical disabilities
   - Elderly
   - Students from a class taught by the Principal Investigator
Prisoners

Other vulnerable populations:

If any of the above are used, justify the necessity for doing so. Please indicate the approximate age range of minors to be involved. Since blind and vision impaired individuals are increasingly attending institutions of higher education, it is important to understand from their perspective their beliefs and experiences that support their college success. Since the attrition rate of this population is extremely high despite the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, it is important that research be conducted in this area to assist university educators and administrators with facilitating the success of this student population.

C. Procedures to be Followed
1. In lay language, describe completely and with good detail all the procedures involving human subjects that will be followed during the course of the study. Provide sufficient detail so the committee is able to adequately review the research.
   The researcher will provide the DSS administrator a recruitment letter which will describe the research procedure and the benefit to the individual and to the university. Specifically, the participants will be interviewed by the researcher at a time and place that is mutually agreed upon. He will provide the participants with an informed consent form that describes the procedures, confidentiality, and the benefits of the study.

2. How much time will be required of each subject?
   Each interview shall last at least 60 minutes. At the conclusion of the individual interviews, the researcher shall conduct a focus group interview, lasting an hour, with the participants to explore the themes that were discovered from individual interviews.

D. Potential Risks
1. State the potential risks from the research (psychological, social, financial, legal, physical, or otherwise). State how you plan to minimize these risks.
   There are no anticipated risks in this research since it primarily involves the participant providing information to the researcher.

2. Will there be a request for information that if accidentally made public could embarrass the subjects or reasonably place them at risk of criminal, social, or professional harm?
   No.
3. Could any of the study procedures or information collected produce stress, anxiety, or psychological harm? If yes, please justify the need for such procedures or information, and describe methods you will take to minimize the harm a subject encounters (e.g. you will provide or arrange for psychological counseling for those subjects who experience distress due to your study).

No.

4. Describe methods for protecting your subjects’ confidentiality. How will data be recorded and stored? Will any identifiers be collected? If so, how and why? If you will collect identifiers, will you destroy the link between subject identity and data at some point? If you are collecting audio or video recordings, do you plan to destroy the recordings after the research is complete?

Pseudonyms will be used to protect the identity of the subjects. At the conclusion of the interviews, all information, including taped interviews and transcriptions, will be destroyed.

5. If your research will be reported in a case study format, how will you protect individual subjects’ responses/information?

During the group interview, each participant will be asked to identify him- or herself by his/her pseudonym before responding to a question or comment.

6. Is there any deception of subjects in this study? If yes, please describe the deception, justify it, and provide a debriefing procedure.

No.

E. POTENTIAL BENEFITS

Please address benefits expected from the research. Please note that this does not include compensation for participation, in any form. Specifically, what, if any, direct benefit is to be gained by the subject? If no direct benefit is expected, but indirect benefit may be expected (i.e. to general society), please explain.

The potential benefit that the subject may gain is the knowledge that he or she will be providing information that may be used to facilitate the success of future blind and visually impaired college students. The other benefit is that this study may add to the body of knowledge of the literature that addresses issues related to the participation of blind and visually impaired individuals in college.
F. Compensation
Explain compensation that subjects will receive for participating in the study, as well as provisions for the withdrawal of a subject prior to completion of the study.

There is no direct monetary compensation that will be provided to the participants. However, they will be offered a copy of the report. Any participant can withdraw from the study, or not answer any question posed to him or her, without penalty.

1. If class credit will be offered for participation, list the amount given and alternate ways to earn the same amount of credit.

   N/A

G. Collaborators
If you anticipate that additional investigators (other than those listed on the cover page) may be involved in the research, list them here indicating their institution, department and phone number.

   N/A

H. Additional Information
1. If a questionnaire, survey, or interview instrument is to be used, attach a copy to this proposal

2. Attach to this document a copy of the informed consent document that you will use

3. If your study involves minors, attach a copy of the parental permission and child assent documents that you will use.

4. Please provide any additional materials or information that may aid the IRB in making its decision.
From: Debra A. Paxton, Regulatory Compliance Administrator  
North Carolina State University  
Institutional Review Board

Date: March 10, 2005

Project Title: Undergraduate Educational Experiences: The Academic Success of College Students with Blindness and Visual Impairments

IRB#: 060-05-3

Dear Mr. Scott:

The research proposal named above has received administrative review and has been approved as exempt from the policy as outlined in the Code of Federal Regulations (Exemption: 46.101.b.2). Provided that the only participation of the subjects is as described in the proposal narrative, this project is exempt from further review.

NOTE:
1. This committee complies with requirements found in Title 45 part 4 of The Code of Federal Regulations.
2. For NCSU projects, the Assurance Number is: FWA00003429; the IRB Number is: IRB00000330
3. Review de novo of this proposal is necessary if any significant alterations/additions are made.

Please provide a copy of this letter to your faculty advisor. Thank you.

Sincerely,

Debra Paxton  
NCSU IRB
APPENDIX F

Title of Study

Principle Investigator Faculty Sponsor
Recruitment Letter/Student

Undergraduate Educational Experiences: The Academic Success of College Students with Blindness and Visual Impairments
Ricky Scott
Dr. Carol E. Kasworm

You are invited to participate in a research study. The purpose of this study is to explore beliefs and experiences by blind and visually impaired students that support their college success. You will be interviewed twice during the semester for at least 60 minutes each at a time and location which are convenient for you. You will be individually interviewed by Ricky Scott at the beginning of the study. At the conclusion of the study, Ricky Scott will facilitate a group discussion interview with you and the other student participants. Both interviews will be tape-recorded and tapes will be transcribed by a professional transcriber. These interviews will take place during the 2005 spring semester.

There is no anticipated risk to you, since your participation is limited to exchange of information through interviews. You will have the opportunity through participation in this study to share information that will potentially benefit other students, administrators, and educators.

The information in the study records will be kept strictly confidential. No reference will be made in oral or written reports which could link you to the study. You will be referred to by a pseudonym in order to protect your identity. The consent form that you will sign upon your agreement to participate which links you with your pseudonym will be stored in a locked file at Ricky Scott’s home office. At the conclusion of this study, the audiotapes, identifiable only by your pseudonym and the key that relates your name with your pseudonym will be destroyed. Under this condition, you agree that any information obtained from this research may be used for publication or educational purposes of this researcher and the program only.

You will be offered a copy of the completed study in appreciation for your participation. Participation in the study will complement your experiences as a college student. The intrinsic value of knowing that through your participation you will help yourself and possibly other college students is a great reward. If you withdraw from this study prior to its completion, no compensation will be offered. You will, however, receive a thank you note and the opportunity to reenter the study if desired.

If you are interested in participating in this study or have any questions at any time about the study or the procedures, you may contact the researcher, Ricky Scott at 108-B Watauga Hall Raleigh, NC, 27607
APPENDIX G

Title of Study

Principle Investigator Faculty Sponsor
Consent Form/Student

Undergraduate Educational Experiences: The Academic Success of College Students with Blindness and Visual Impairments
Ricky Scott
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If you have any questions at any time about the study or the procedures, you may contact the researcher, Ricky Scott at 108-B Watauga Hall Raleigh, NC, 27607, or by telephone (919-512-3240. If you feel that you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Dr.
Matthew Zingraff, Chair of the NCSU IRB for the Use of Human Subjects in Research Committee, Box 7514, NCSU, or contact him at 919-513-1834.

Your participation in this study is voluntary; you may decline to participate without penalty. If you decide to participate, you may withdraw from the study at any time without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed the data collected from you, to that point, will be used in the study and will be destroyed with the other data at the conclusion of the study.

I have read and understand the above information. I have received a copy of this form. I agree to participate in this study.

Participant's Signature

Investigator's Signature

For persons assisting subjects with the consent form

If this form was read to the subject, please have the reader sign and date below, attesting their assistance, and witnessing the subject’s signature.

Witness Signature
APPENDIX H

Title of Study: Undergraduate Educational Experiences: The Academic Success of College Students with Blindness and Visual Impairments

Principle Investigator: Ricky Scott

Faculty Sponsor: Dr. Carol E. Kasworm

Reader Contract

I have agreed to read Ricky Scott’s dissertation transcribed interviews for peer debriefing. I understand that as the reader, I will investigate aspects of the data that might otherwise remain unexplored, question Mr. Scott’s analysis and provide an opportunity for him to explore his thoughts and emotions so that he is clearly focused and has the abilities to make sound judgments. I understand that I will read his transcribed interviews in two phases: once after data collection and again at the conclusion of the study. I will discuss the data with Mr. Scott after each review to determine if the themes that emerged from the data were actually substantially derived. I understand that if I identify discrepancies, Mr. Scott and I will discuss them and negotiate our logic for the theme development. I understand that these interactions will be recorded in the study.

I am prepared to provide Mr. Scott with a fair and impartial review of his data.

Reader's Signature

Researcher's Signature