

Having a Learning Disability: Its Effect on the Academic Decisions of College Students

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ABSTRACT

The purpose of this research was to explore how college students with learning disabilities perceived that their family environments and early educational experiences influenced their decisions in college. An additional goal of this study was to explore how these students understood their learning disability diagnosis and how that understanding affected their academic choices.

Participants had documented learning disabilities and used support services during the time of their enrollment at the university. All were students in good standing and had attended the university for at least three years. A qualitative method using unstructured, personal interviews was used. Interviews were analyzed according to broad themes reflecting the research issues. The study is organized according to the chronology of events in the students' lives and reflects their experiences before they attended the university and during the time they were enrolled.

The results of this study generally support research of college graduates with learning disabilities which indicates that early and continued personal support, accepting and understanding a learning disability, adequate academic preparation and personal characteristics of persistence, goal setting and extra effort are important components to academic success. This study's results also underscore the importance of transition planning that incorporates students' interests and skills when determining the best match for higher education settings. Implications for further research are included.

DEDICATION

To John

whose love and encouragement kept me going

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CHAPTER 1

INTRODUCTION

Overview

Since the Education for All Handicapped Children's Act was passed in 1975, learning disabilities has become the fastest growing category of students receiving special education services. In accordance with this trend, more students with learning disabilities are attending colleges and universities. Although the enrollment of these students in postsecondary institutions is increasing, the attrition rate is high (Sitlington & Frank, 1990).

This attrition rate does not seem surprising since many of the characteristics associated with the learning disability label are the antithesis of those needed for college retention and graduation. Individuals with learning disabilities frequently experience problems which contribute to poor academic performance, including those of: (a) organization (Field, 1996; Kahn, 1980), (b) written and oral communication (Blalock, 1982; Green, 1990), (c) comprehension (Alley & Deshler, 1979), (d) learned helplessness (Bryan, 1997), (e) poor academic and personal self-concept (Grolnick & Ryan, 1991) and, (f) impulsivity, short attention and low tolerance for frustration (Flicek & Landau, 1985; Morrison & Cosden, 1997). Any of these difficulties become serious obstacles to the type of independent, self-motivated learning required in higher education settings.

There are students with learning disabilities (LD) who graduate from college and lead full and productive lives (Reiff, Ginsberg & Gerber, 1995; Rogan & Hartman, 1990). Yet, not enough is known about this population. Answers are complex since the learning disability label itself encompasses a multitude of traits among a diverse group. It is important to consider if there are specific factors that account for some of the differences between students who persist until graduation and those who do not.

Often educators and families assume that high school students with learning disabilities can make successful transitions to adult life without extensive transition

planning or support services (Blalock & Patton, 1996). Yet, studies show that the majority of young people with learning disabilities have less success living independently and in postsecondary education settings than their non-disabled peers (Blackorby & Wagner, 1996; McGuire, Norlander & Shaw, 1990).

The transition from high school to postsecondary education, difficult for most young adults, can be especially trying for students with learning disabilities, and for their families. Support at this time is crucial. A satisfactory adjustment to this new environment depends on the mastery of very specific skills. Transition programs and services, now mandated by law, are intended to foster the skills and attitudes that young adults need for positive outcomes in employment, independent and community living, and further education. Because the population of those individuals with learning disabilities is heterogeneous, transition goals must address a wide range of services. Many transition goals and services are designed for students with more severe disabilities who require extensive support to succeed in postsecondary settings. Transition plans for these individuals focus on employment and community living and do not address the concerns of students with learning disabilities in continuing education (Reiff & deFur, 1992). It is essential that goals and objectives for students choosing higher education prepare them for that environment.

Legislation addresses the need to prepare students receiving special education services for their transition to employment or higher education. The re-authorized Individuals with Disabilities Education Act of 1997 requires transition planning to begin as early as age fourteen. For students whose goal is college, this plan includes a realistic appraisal of current abilities, and specific goals and objectives for developing skills that contribute to academic and personal success.

Certain factors seem to increase the likelihood of favorable adult outcomes. Whether in college or employment, many of these success factors support research findings on individuals with learning disabilities. Literature reveals that the skills involved with establishing long and short-term goals, persistence, self-acceptance and understanding personal learning styles impact upon retention and graduation rates of college students (Ellis, 1994; Longman & Atkinson, 1988). A desire to succeed, goal setting, and acceptance of the disability (self-acceptance) were common attributes of

individuals with learning disabilities who completed college and were successfully employed (Bryan, 1986; Reiff, Gerber, & Ginsberg, 1997; Vogel, Hruby & Adelman, 1993). In addition to these factors, the advantage of strong family support and effective educational programming were also identified as possible influences in the life satisfaction of college graduates with learning disabilities (Hartzell & Compton, 1984; Rogan & Hartman, 1990). Family support and strong academic preparation were also found important to success in the general population (St. John, Paulsen, & Starkey, 1996; Terenzini, Rendon, Upcraft, Millar, Allison, Gregg, & Jalomo, 1994).

Statement of the Problem

Learning disabilities are now understood as existing throughout the life span (Alley & Deshler, 1979; Gajar, 1992; Reiff et al., 1995). Problems may become more complex as young adults maneuver the demands of new roles and responsibilities. An ability to understand and adapt to the changing effects of this diagnosis through transition periods, is a prerequisite to positive achievement. Recent legislation (IDEA, 1997) addressed the need for effective transition programs. The students who graduated from high school during the 1990's were the first to have had access to a continuum of special education services throughout their schooling. How have they benefited? Has increased emphasis on transition planning eased their adjustment to college settings?

Research on the transition process of college students with learning disabilities is limited. Although there are many recommendations for transition initiatives, there is little empirical evidence on outcomes of transition planning and implementation of transition services (Gajar, 1992; Kohler, 1993). Past studies of college students with learning disabilities used survey and group methodologies (Vogel et al., 1993; Vogel & Adelman, 1992; Weiss & Repetto, 1998). Researchers identified personal characteristics and continuing problems of adults with learning disabilities, as well as the need for transition services (Gajar, 1992). Qualitative research is needed to understand the personal perspectives of college students with learning disabilities and to explore possible reasons for their retention and academic success. The personal experiences and understanding of the best strategies that support students with learning disabilities during

this time will provide recommendations for others as they make the transition to postsecondary education.

The goal of this research was to explore how the academic choices of college students with learning disabilities were influenced by their family environments and their educational programming. Understanding the strengths and weaknesses associated with the learning disability diagnosis is important to college success. Therefore, an additional goal of this study was to explore how these students understood their learning disability diagnosis and how that understanding affected the academic decisions they made. Specifically, this research explored:

Research Questions

- How do students with learning disabilities perceive that aspects of family support and educational programming influenced their academic decisions in college?
- 2. How does the understanding of their learning disabilities influence the academic decisions college students made?

Limitations

The following limitations are acknowledged:

- The information received from the college students interviewed was affected by differences between the researcher and participants. Respective ages, unfamiliarity with each other, and individual perspectives, determined the interpretation of both the questions and the answers.
- This study was limited to 8 volunteers, therefore the results can not be generalized beyond these participants

Definition of Terms

The following terms are used in this study. Definitions as used are provided for clarification:

Educational Programming- Educational services, including specific instruction, to meet the individual needs of students during their elementary and secondary schooling.

Family-Any on going social arrangement in which persons who care about and are committed to one another are able to have their basic psychological, social, physical, and economic needs met; cohabiting groups of some duration composed of persons in intimate relations based on biology, law, custom, or choice and usually economic interdependence (Zimmerman, 1992, p. 167).

Individualized Education Program (IEP)- A document developed by the teacher, school representative, and parent or guardian that includes: student's current level of performance; educational services to be provided and the extent of participation with non-handicapped peers; initiation and duration of services; annual goals and short-term objectives; procedures for evaluation; and a plan for transition for students 14 years or older (Individuals with Disabilities Education Act (IDEA) Amendments of 1997, P.L. 105-17).

Learning Disability - A disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. Learning disabilities include such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia. Learning disabilities do not include learning problems that are primarily the result of visual, hearing, or motor disabilities; mental

retardation; or environmental, cultural or economic disadvantage (Individuals with Disabilities Education Act (IDEA) Amendments of 1997, P.L. 105-17).

Postsecondary/Higher Education - An accredited institution of higher education, not specifically intended to prepare an individual for vocational readiness or a specific trade.

Student - An individual enrolled full time (at least 9 hours) in an accredited college or university.

Transition - A coordinated set of activities for a student, designed within an outcome-oriented process, which promotes movement from school to post-school activities including postsecondary education, vocational training and education, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation (Individuals with Disabilities Education Act (IDEA) of 1997, P.L. 105-17).

Retention- For the purposes of this study, it will be defined as a state achieved by students in their third or fourth year at an accredited university who are making successful academic progress toward a degree demonstrated by 2.0 GPA or higher.

Disability- The term “disability” means with respect to an individual (A) a physical or mental impairment that substantially limits one or more of the major life activities of such an individual; (B) a record of such an impairment; or (C) being regarded as having such an impairment (Americans with Disabilities Act of 1990 P.L. 101-336, 42, U.S.C.§ 12101 §101).

Reasonable Accommodation- The term may include: job restructuring, part-time or modified work schedules, reassignment to a vacant position, acquisition or modification of equipment or devices, appropriate adjustment or modifications of

examinations, training materials or policies, the provision of qualified readers or interpreters, and other similar accommodations for individuals with disabilities. [Americans with Disabilities Act of 1990, P.L. 101-336,42 U.S.C.§ 12101 §101. § 9 (B)].

CHAPTER 2

REVIEW OF LITERATURE

This chapter presents a synthesis of related research and a conceptual framework for issues relevant to this study. There are five main themes: (a) overview of learning disabilities, (b) The IDEA: basis for diagnosis and special education placement, (c) characteristics of individuals with learning disabilities, (d) transition services and supports, and (e) retention and graduation of college students with learning disabilities.

Overview of Learning Disabilities

Learning disabilities was not recognized as a separate category of students with disabilities in special education until the mid-1960s. In the intervening years, millions of children have been identified and placed in special programs to remediate deficits in learning that are not the result of “visual, hearing or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage” (IDEA, 1997).

About 2.6 million students are currently classified as having learning disabilities. This is around 53% of the total population of students in special education and almost 6% of the total school population (U.S. Department of Education, 1997). There may be several reasons that so many students are identified. Among these reasons may be: (a) public awareness that has led to more pressure to identify students and to provide services, (b) social acceptance of the LD classification has led to more identification among students who might previously been labeled emotionally disturbed or mentally retarded, and (c) decrease in funding for other programs (Lerner, 2000). Because of the increased identification of students with learning disabilities, the number of students with LD attending college is also increasing. The percentage of freshmen with learning disabilities increased to 41 % in 1998 (HEATH, 1999). This is almost one half of all students with disabilities in 2- and 4 year colleges and universities.

The Early History of Learning Disabilities

The concept of learning disabilities developed from research and theories within several disciplines including science and medicine. Some writers credit the early interest to James Hinshelwood (1895), an ophthalmologist who investigated a condition he categorized as *congenital word blindness* (Hallahan & Kauffman; 1997; Lerner, 2000). He noticed similarities among a group of people who had severe reading problems but seemed otherwise intelligent and without obvious visual impairments. He concluded that defective brain functions were responsible for the reading difficulties because he had seen the same types of problems in adults with brain tumors.

Critics of his theory cite both his lack of scientific proof and neglect of other possible influences which may have been responsible for the problems he noticed (Franklin, 1987; Coles, 1987). Yet his idea of brain dysfunction persisted. Samuel Orton, another influential figure in the early years of learning disabilities, developed techniques for working with dyslexics in the 1930s. Kurt Goldstein (1939), a physician who treated brain-injured soldiers after World War I documented behavioral characteristics now associated with learning disabilities; hyperactivity, impulsivity (Reiff, Gerber, & Ginsberg, 1997) and distractibility (McCarthy & McCarthy, 1971). Alfred Strauss and Laura Lehtinen (1947) continued Goldstein's work and categorized children exhibiting several of the traits now included within the LD label, as having Strauss *syndrome*. According to their definition:

A brain-injured child is a child who before, during, or after birth has received an injury to or suffered an infection of the brain. Because of such organic impairment, defects of the neuromotor system may be present or absent; however, such a child may show disturbances in perception, thinking, and emotional behavior, either separately or in combination (Strauss & Lehtinen, 1947, p.4).

New terminology originated from theories of suspected learning problems throughout the 1950s. These included the terms *minimal brain dysfunction*, *brain injured*, *strephosymbolia*, and *developmental aphasia* (Hallahan & Kauffman, 1997; Coles, 1987; Franklin, 1987; McCarthy & McCarthy, 1971). Research and suggestions for remediation focused primarily on children's learning problems. There was

controversy over labels, definitions and remedial techniques. Samuel Kirk introduced the term *learning disabilities* in 1963 to a meeting of parents who were searching for answers to their children's learning problems (Franklin, 1987; McCarthy & McCarthy, 1971). The idea was enthusiastically accepted. Soon after, this new disability was officially recognized as *specific learning disabilities*.

The IDEA: Basis for Diagnosis and Placement

There is now general acceptance of the term learning disabilities, but continuing uncertainty over the specific cause of learning problems. Most current definitions reflect the belief in neurological impairments, or differences, moving away from the original idea of brain injury. There are many interpretations of the disability. The definition as formulated in the Individuals with Disabilities Education Act (1997) shows the scope of possible manifestations:

Specific learning disability means a disorder in one or more basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not apply to children who have learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage (Individuals with Disabilities Education Act (IDEA) Amendments of 1997, P.L. 105-17).

By this definition, children identified with learning disabilities have normal intelligence and academic difficulty in one or more areas. Their learning problems are not caused primarily by another, known disability, or by environmental circumstances.

Broad definitions and criteria still make identification of specific learning disabilities difficult. Most definitions use a discrepancy formula that involves disparity between achievement and ability. Because of different criteria and interpretations, the

distribution of students with learning disabilities varies among individual states. For example, in the 18th Annual Report to Congress (1997), Rhode Island reported 63% of students in special education as learning disabled, while Alabama reported learning disabilities for 26%. Overall, the national prevalence rate is 51% of students in special education (USDE, 1997).

Referral, Diagnosis, and Placement

A student's suspected learning disability begins with a referral for a psychological evaluation. After the initial assessment, a multidisciplinary team of professionals and the child's parents make a decision of eligibility for special education services. Federal law regulates the process of special education referral, diagnosis, and placement. The Individuals with Disabilities Education Act (IDEA) of 1997 mandates the education for all children with disabilities until they leave high school. The IDEA requires that all youth with disabilities, from birth to 21, regardless of the nature or severity of disability, be provided a free, appropriate public education in the least restrictive environment. Procedural safeguards assure protections for students with disabilities and their parents.

An individualized education program (IEP) is developed for each child receiving special education services. This document ensures appropriate and individualized instruction, based on each student's needs, and is developed by a planning team that consists of the student, parents, teachers and school representatives. The IEP outlines an instructional program that contains: (a) the student's present level of performance, (b) annual goals, (c) short term objectives, (d) the type and duration of special education services the child will receive and, (e) plans for evaluating progress. For students 14 years of age and older, a transition component containing goals for adult outcomes in work, community, independent living, and further education, must also be developed (Hallahan & Kauffman, 1997). An IEP is reviewed at regular intervals and revised at the end of each academic year

A continuum of service options ensures that students are educated in the least restrictive environment. To determine what constitutes the least restrictive environment, IEP teams must first consider the student's placement with accommodations, in the general education classroom. Other placements may be recommended if the regular classroom is not appropriate. Placements range from special schools to fully inclusive

settings, and are based on severity of the student's learning disability and instructional needs. The majority of students with learning disabilities receive services in resource or inclusive settings (U.S. Dept. of Education, 1997).

Characteristics of Individuals with Learning Disabilities

Characteristics associated with learning disabilities differ among those categorized. Subtypes are included within the more general classifications of disorders in reading or math processing, written and spoken language, perceptual, or perceptual-motor deficits. Because the term comprises a broad array of problems, it is difficult to describe a typical profile. There is a variation among individuals, as well as "intraindividual variation" (Hallahan & Kauffman, 1997). Strengths in one area may be counterbalanced by weaknesses in another. Several problems may occur concomitantly. Social and emotional problems frequently co-exist with learning disabilities. It is uncertain whether they constitute a separate disability or result from problems associated with the diagnosis of a learning disability (Gresham, 1992).

Many children, and their parents, are unaware of learning problems until they begin their formal education. The academic and social skills required for successful school achievement may disclose previously undetected problems of attention, memory, language, or organization. The early hypotheses of learning disabilities supposed that dysfunction or differences within a child's brain or perceptual processes caused learning problems. This theory is still viable as the search for a more definite cause continues.

Academic Problems

Problems with visual and auditory processing, memory, and attention are associated with academic achievement problems. Difficulties in listening, speaking, reading comprehension, word recognition, spelling, and writing all comprise the more general category of *language disorders*. Written language involves proficiency in other skills. Confusion over sound-letter associations may cause problems in spelling. Problems with fluency and sentence structure, as well as the mechanical aspects of writing, also affect written composition. Difficulties with grammar and semantics impede oral language (Bryan & Bryan, 1986; Mann, Corwin & Schoenheimer, 1989).

Reading problems have been linked to deficits in language skills, phonological problems, or in the way letters combine into sounds, making words (Foorman & Liberman, 1989). Dyslexia is a subcategory found within a specific population of individuals with learning disabilities. It is believed to be caused by neurological differences within the brain (Kirk, Gallagher & Anastasiow, 2000). Disorders in math can occur without deficits in other areas. Computation and problem solving can be difficult for students with math learning disabilities (Cawley & Parmar, 1992; Mercer & Miller, 1992; Montague, 1999).

Personal Characteristics

The continued presence of academic problems can have adverse effects on individuals with learning disabilities. Poor self-concept and self-esteem can result from years of frustration and failure. Individuals with learning disabilities may develop lack of confidence in their ability to learn (Silver, 1998). Some children and young adults with LD become passive learners and develop an attitude of *learned helplessness* (Deshler, Ellis, & Lenz, 1996). Having little belief in their own abilities, they give up quickly if a task is difficult and may feel that outcomes are the result of external factors such as luck or teacher behavior (Hatzes, 1996; Kistner, Osborne & LaVerrier, 1988). It is difficult to motivate many students with learning disabilities for academic tasks because their history of repeated failure has established negative feelings and self-doubts.

Adult Outcomes

Until recently, the study of characteristics and remediation of learning disabilities continued to focus on children. It is now recognized that having a learning disability is a life-long condition that continues to manifest in both academic and social areas. Many adults with LD continue to have weaknesses in spelling, writing, and math, organization, time management skills, motivation, and self-esteem (Gregg, Hoy, King, Moreland & Jagota, 1992; Houck, Engelhard & Geller, 1989; Vogel, 1987).

The continuing presence of academic deficits and emotional problems poses hardships for many adults with learning disabilities. Many adults with LD are unemployed or underemployed according to their potential (Halpern, 1990; Sitlington & Frank, 1990); are not living independently (Spekman, Goldman & Herman, 1992); and report dissatisfaction with their jobs and life situations (Reiff et al., 1997). This

awareness of the persisting problems associated with the learning disability diagnosis has increased interest in determining the interplay of factors behind adult outcomes.

The differences in adult outcomes appear to result from a combination of personal characteristics and environmental influences. Early and continued support, personal characteristics of persistence and hard work, and effective educational interventions seem to increase the probability of satisfactory adult adjustment for this population. Adverse environmental and educational experiences, inadequate social support, and a more severe disability put an individual at risk for possible negative outcomes.

Spekman et al. (1992) measured the outcomes of 50 young adults according to: (a) accomplishments that were both socially accepted and expected for a certain developmental period, (b) individual's self-perception of life-satisfaction, and (c) the match between an individual's accomplishments and his/her aspirations. Based on these defining factors, they found 29 individuals from their sample to be successful after analyzing the results of parent ratings, current testing, in-depth interviews, and case records. Pronounced differences in personal characteristics were found between the groups although intelligence and background factors were similar. The young adults they categorized as successful accepted and understood their learning disabilities. They were able to recognize their strengths and compensate for their limitations. They set goals for themselves and had a high level of perseverance even in difficult situations. These individuals had developed support systems of parents, teachers, mentors, or friends who consistently supported and encouraged them. In contrast, the young adults who were not as successful were more likely to deny the presence of their disability. They either did not have educational or employment goals or had goals that were unrealistic. They avoided assistance and were critical of people who tried to help them.

Hartzell and Compton (1984) conducted a 10-year follow up of 114 students with learning disabilities and compared their academic achievements, social adjustments, and job experiences with those of their siblings without learning disabilities. Questionnaires and telephone interviews were used to gather information from these students, their parents, and their siblings. Seventy-three percent of fathers and 53% of the mothers had a college degree. Eighty percent of the families reported a history of learning disabilities.

At the time of the study 21% of the students with learning disabilities were in college, compared to 46% of the age-similar group without learning disabilities. The authors concluded that a positive personality, family support and high SES, participation in sports and a high IQ contributed to the academic, social, and job success of the participants in the study. A more severe disability, self-contained special education class and a disability in mathematics were factors that correlated with low academic, job, and social success.

Based on adaptability to adult life, Gerber and Reiff (1991) identified three subgroups within a sample of nine adults with learning disabilities. Those who were described as *marginally adjusted* had the most severe disabilities and were the least independent of all those interviewed. They had not graduated from high school and had continuing problems in comprehension, attention and self-esteem. Since these adults were in school before the advent of special programs geared to learning disabilities, the authors suggested that they may have done better if they had benefited from specialized remediation. The other two groups were described as *moderately* and *highly* adjusted to adult life. The majority of these adults were successfully employed and living independently. These individuals with learning disabilities were aware of their strengths and weaknesses, and chose leisure and work-related activities that maximized their potential and talents. Being persistent helped them find creative ways to solve problems caused by their learning disabilities. They recognized their strengths and developed ways to compensate for their weaknesses.

Reiff et al. (1997) interviewed 71 adults with learning disabilities whom they considered successful based on their: (a) income and education level, (b) prominence in their fields, (c) job satisfaction, and (d) job classification. The authors identified common themes in the respondents' life stories. The acceptance and understanding of their learning disabilities was a characteristic found in these individuals. Acceptance involved coming to terms with the disability and understanding it as an area of specific weakness. This awareness allowed them to gain control over the outcomes in their lives. By understanding their learning disabilities, they recognized their limitations and were frequently able to find ways to rely on their strengths to overcome obstacles. The authors used the term *goodness of fit* to describe the ability of these participants to choose careers

and interests that made use of their strengths, while minimizing their weaknesses. These successful individuals focused on realistic goals and developed the strategies to achieve them. They were persistent in trying to reach their goals even if the process proved difficult. These successful adults also actively sought support from family members, friends, mentors, or others they could rely on.

Twelve adults with learning disabilities who were also identified as gifted in school, (Reis, Neu, and McGuire, 1997) reported that their memories of negative and sometimes painful school experiences were balanced by successful accomplishments at home and in their community. Many of their parents had encouraged their outside interests in sports and hobbies which contributed to their feelings of competence and success. Many of these adults especially remembered the support and encouragement of their mothers who were involved in their education, were knowledgeable about learning disabilities and helped them understand and accept their learning problems.

In a review of literature, Morrison and Cosden (1997) found that individuals whose learning disabilities were less severe and were able to achieve some academic success were more successful in adulthood. An individual's self-awareness of the specific problems associated with the learning disability served as protection against a more global negative self-concept. The presence of an environment that offered practical and emotional support also seemed to provide resilience from social and emotional problems.

Transition Services and Supports

Federal transition initiatives resulted from the awareness that students exiting special education programs needed preparation and support as they entered the adult world (Blalock & Patton, 1996; Johnson & Rusch, 1993). Mandates for transition planning to begin as early as 14 are included in IDEA (1997) and emphasize goals to support students as they move from high school to postsecondary education or employment. The focus of transition services is on the individual student. Transition goals, guided by each student's interests and aptitudes, go as far as adulthood. These services are defined under Public Law 101-476, the Individuals with Disabilities Education Act (IDEA) [20 U.S.C.1401 (a)(19)], as:

A coordinated set of activities for a student, designed within an outcome oriented process, which promotes movement from school to postschool activities, including postsecondary education, vocational training, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation. The coordinated set of activities shall be based upon the individual student's needs, taking into account the student's preferences and interests [Sec. 602(a)(19)].

Although the need for transition services for students with mild disabilities has been documented (Hasazi, Gordon & Roe, 1985; Lewis & Taymans, 1992), there are suggestions that transition services for these students are not being adequately addressed. There is an assumption among service providers that students with less severe disabilities, including learning disabilities, are able to move more easily from school to postsecondary education or employment than their peers with more extensive disabilities (Dunn, 1996; Reiff & deFur, 1992; Rojewski, 1992; Wagner & Blackorby, 1996).

In a three-year follow-along study of over 400 students with disabilities who were in the process of transition from school to adult settings, Benz and Halpern (1993) reported that only about one-half of the students with learning disabilities were receiving the services that their parents and teachers said were needed.

Historically, transition goals focused on helping young adults with disabilities become independent and self-supporting through employment. Now that increasing numbers of students with learning disabilities are choosing higher education, more attention is being placed on their transition to college (Dunn, 1996; Whinnery, 1992). There are distinct considerations in planning for these students that may help their successful adjustment. Beginning early in high school, students with learning disabilities can prepare for college through individual and appropriate transition goals and objectives. These should include: (a) the active participation of their parents in transition planning (Kohler, 1993; Mooney, 1998), (b) student's participation in IEP planning (Lovitt, Cushing & Stump, 1994), (c) an early focus on college preparatory high school curriculum (Dunn, 1996), (d) helping students understand their learning disability

diagnosis (deFur, Getzel & Trossi, 1996; Vogel & Adelman, 1992), and by (e) helping students develop self-advocacy skills (Field, 1996).

Parental Involvement

A student's successful transition requires that parents are included as active participants of the planning team. Parental involvement is critical at all levels of a student's development and it is especially important as a student moves from the security of secondary education to adult services. Families will carry major responsibilities with their children in adult roles. Parents have first-hand knowledge about their child's interests, abilities, and needs (Mooney, 1998). Their continuing involvement in educational programs helps students reach their chosen postsecondary goals (Gajar, Goodman & McAfee, 1993). Parents' financial resources, achievement expectations and perception of their child's interests, abilities and needs, all influence students' postsecondary education choices.

Participation in IEP Meetings

Successful transition depends on matching students' interests, abilities and career goals. Without the student's active participation, any plan will be ineffective. Yet often, students feel that they are merely observers during IEP meetings. This problem may be compounded by their special education placement. Aspects of the system itself encourage dependency and the feeling of *learned helplessness* (Deshler et al., 1996; Reiff & deFur, 1992). Students are not included in making many of the decisions that personally affect them throughout their years in special education programs (Brinckerhoff, Shaw, & McGuire, 1992). Although their involvement is strongly encouraged at this stage of transition from high school, they do not feel empowered and are not prepared to be equal participants in their IEP planning.

Lovitt et al. (1994) examined how students with mild disabilities perceived their IEPs and then compared those perceptions to the actual documents. Although all the IEPs were found to meet federal guidelines, analysis of the interview data indicated that the high school students did not understand the goals and objectives of their individualized education programs. Although many students said that they had attended meetings, most felt that they did not actively participate and did not understand the process. Some students said they had requested minor changes, but overall, their

understanding of their IEPs was very limited. Although student involvement is strongly encouraged during transition planning, it often amounts to little more than a signature on an already-prepared document unless students are encouraged to participate actively in planning goals and objectives throughout their special education programs. Students who participate in their own transition planning are provided an effective means to promote the characteristics of self-advocacy, independence, and goal setting that are essential to college success.

Early Focus on High School Curriculum

For students with learning disabilities planning to enroll in higher education, the content of the high school curriculum is an important consideration. A study by Vogel and Adelman (1992) found that the best predictor of college exit GPA was the number of regular high school English and math courses completed with a grade of C or better. However, academic requirements are frequently modified for students with learning disabilities. They may be tracked into lower level mainstreamed classes or take their academic classes in resource settings (Aune, 1991; Dunn, 1996). Full inclusion in college preparatory classes, with instructional modifications available in college, is essential for students with LD to realize the demands of higher education. Early and appropriate planning for college preparatory content and curriculum assures that students with learning disabilities who have the potential for higher education will not find their options limited.

Understanding the Learning Disability Diagnosis

An individual's clear understanding of his/her learning disability diagnosis is a crucial element in the process of self-awareness and the foundation for successful transition (Adelman & Vogel, 1990). Students encounter difficulties trying to choose realistic goals or develop compensatory strategies without understanding the strengths and weaknesses associated with their learning disabilities. Without this awareness, students with LD cannot advocate for themselves or request the accommodations they need (Aune, 1991). Effective transition planning includes encouraging a student's realistic appraisal of his/her own skills, interest and needs with those required in a particular postsecondary environment (deFur et al., 1996). High intelligence and academic preparation alone do not ensure success. Total enrollment, support services,

choice of majors, and the student's level of independence and motivation become important considerations when determining the best match between students with learning disabilities and their choices of postsecondary settings.

Skills of self-advocacy follow from understanding the learning disability. Students with learning disabilities going to college must be aware of the differences they will experience in the new setting. They should know their legal rights and responsibilities and be able to request the assistance they need (Field, 1996). High school is the time for college-bound students to practice using accommodations and to develop compensatory strategies that will promote their college retention and graduation.

ADA and Section 504

Students with documented disabilities who continue their education beyond high school must be aware that they no longer receive mandated services under the IDEA. In higher education settings, students with disabilities must provide documentation of their disability to become eligible for accommodations and support services under the Americans with Disabilities Act of 1990 (ADA), and Section 504 of the 1973 Rehabilitation Act. Under ADA and the Rehabilitation Act, eligible individuals with disabilities are guaranteed certain rights. These federal laws protect individuals against discrimination in employment, transportation, public accommodations, and communication (Rothstein, 1995). In higher education these laws mandate reasonable modifications to ensure that services, facilities, and accommodations permit full inclusion and equal treatment of those with disabilities. Students with disabilities in higher education also may not be discriminated against in their recruitment or admission.

Specific modifications are not expressly mandated under these laws, however institutions must make reasonable provisions to ensure program accessibility for any individual with a disability. Auxiliary aids and services are included as needed. Based on the provisions of these laws, colleges and universities are required to modify teaching assignments and tests, provide course substitutions or waivers, and make assistive technology available. Accommodations for students with learning disabilities include computers, access to lecture notes, taped textbooks, and readers. It is the responsibility of the institution to provide notice of services offered and how students can access them (Heath, 1995). However, it is the student's responsibility to request them.

The student becomes the central figure in determining the educational program and services that he/she needs in higher education. Individuals with disabilities in higher education are responsible for the disclosure of their disability, providing specific documentation, and requesting needed accommodations. It is crucial that prospective college students understand the differences, for students who are unprepared for this change from entitlement to eligibility will face overwhelming obstacles as they exit the familiarity of secondary level special education programs.

College Retention

Adjustment to periods of transition is an on-going process and this point from high school to postsecondary education can be difficult for all students. A high level of maturity is required for all incoming freshmen to negotiate the demands, while avoiding the pitfalls of more autonomy and freedom. Learning is student-initiated. There is less instructional time and more independent study time. An ability to manage both short-term and long-range goals, self understanding and skills of self-advocacy are important for all students in higher education settings (deFur et al, 1996; Ellis, 1994).

Many distinct issues influence whether students who enroll in a four -year college or university will eventually complete degree requirements. Studies of student retention indicate academic preparation and high school GPA as the most significant predictors of student persistence until graduation (Allen, 1999; Murtaugh, Burns & Schuster, 1999; Vogel & Adelman, 1992). Other factors which may promote retention and graduation of all students, include (a) structured transition initiatives, adapted to individual student needs, (b) support and encouragement for incoming students, (c) participation of faculty in new student orientation programs, (d) including parents in orientation, and (e) making accommodations to support students from diverse backgrounds (Terenzini et al., 1994).

Factors besides academic ability increase the retention of incoming students. Students who understand their interests and abilities can find the best match for colleges. Colleges can help by developing special programs and initiatives specific to students' individual needs. In this way, colleges and universities facilitate the integration of these students into the college community (Astin, 1993; Sidle & McReynolds, 1999).

Retention and Graduation of College Students with Learning Disabilities

Many of the same factors found in the backgrounds of individuals who have made a successful transition to adult roles have been found in studies of college graduates with learning disabilities. Hatzes (1996) examined factors contributing to the academic outcomes of 20 adults with learning disabilities. Ten of these adults had graduated from the University of Connecticut (persisters) and 10 had been dismissed for academic reasons (leavers). Personal interviews underscored differences between the two groups. Leavers were described as having an *external locus of control* when they attributed failures to events outside their personal control. In contrast, those students who persisted until graduation attributed their success to their own hard work and felt they were successful because of their own level of personal control. The graduates understood their learning disabilities along with their strengths and weaknesses. They chose majors, which capitalized on their strengths and used university support services and accommodations to overcome their academic weaknesses. They had developed supportive social networks and recalled the encouragement of their parents and teachers during childhood. Many of the students who were dismissed did not choose majors in their areas of strengths. Some chose majors that were unrelated to their personal goals.

A follow-up study of 88 adults who had attended a private school for students with learning disabilities found 34% of the original group had completed 4 years of college or graduate work and were successfully employed (Rogan & Hartman, 1990). The authors concluded that several factors contributed to the successful outcomes for this population. These factors were: (a) cooperation of the families with school and other professionals, (b) the early age of diagnosis of the learning disability, (c) the intensive academic remediation during the students' elementary and middle school years, and (d) consistent parental support and understanding. Results were less favorable for those participants with more severe disabilities and with complicating emotional problems.

Support Services at the Postsecondary Level

Collaboration between college personnel, the student, parents and secondary transition specialists should begin soon after a student with a learning disability has been

accepted (Dalke & Franzene, 1988). Before the start of the new term, students with learning disabilities can explore many of the realities of college by participating in summer orientation programs. Courses in study skills, orientation to campus and community awareness, fall course advisement and registration, and career awareness and exploration can ease transition to postsecondary settings (Dalke, 1993).

It is important that college support personnel re-emphasize the differences students will experience in the new environment. The population of students with learning disabilities is heterogeneous and their level of independence and self-advocacy differ. Effective support at the postsecondary level is developed individually for each student. Study and note-taking skills, test-taking strategies, time management, and organizational strategies should be geared to developing academic self-sufficiency (Brinckerhoff, et al, 1992).

Effective transition programs in college go farther than providing support and accommodations. There is also a continuing emphasis on preparing students for new challenges. While the immediate focus is on helping students graduate, an additional concern is their next transition; adult independence in the workplace (Brinckerhoff et al., 1992). Disability service providers promote independence when they encourage students to take responsibility for their own learning, understand and accept their weaknesses as well as their strengths, and become self-advocates. Young adults with learning disabilities need these skills for positive outcomes.

Summary

From its beginnings in brain research in the 19th century, learning disabilities has become the fastest growing category of students in special education. Now, almost 6% of the total school-aged population are classified as learning disabled. The process of special education referral, diagnosis, and placement is regulated by federal law (IDEA, 1997). Students with disabilities are ensured a free appropriate education, in the least restrictive environment. An individualized education program (IEP) is developed for each student.

Problems of individuals with learning disabilities are diverse. There is variation among individuals as well as *intraindividual* variation. Academic problems in math, spelling, written language, or reading may be counterbalanced by strengths in other areas. Many individuals with learning disabilities also have social and emotional problems. Some students become passive learners and doubt their academic abilities because of their lack of academic success (Deshler et al., 1996)

The problems associated with learning disabilities persist into adulthood. Many adults with LD are unemployed or underemployed (Halpern, 1990; Sitlington & Frank, 1990); do not live independently (Spekman et al., 1992); and are not satisfied with their jobs and life situation (Reiff et al., 1997). Yet, many individuals with LD have positive and satisfying adult outcomes. A combination of personal characteristics and environmental influences appear to affect an individual's successful adjustment. The summary of major findings includes: acceptance of the disability (Aune, 1991; Morrison & Cosden, 1997; Reiff et al., 1997; Spekman et al., 1992); personal support systems, including parents and teachers (Hartzell & Compton, 1984; Reis et al., 1997; Rogan & Hartman, 1990); less severe disability and strengths in other areas (Hartzell & Compton, 1984; Vogel & Adelman, 1992); and goal setting, perseverance, effective coping strategies, and self-advocacy (deFur et al., 1996; Field, 1996; Hatzes, 1996; Reiff et al., 1997).

Transition initiatives (IDEA, 1997) begin at age 14 and are intended to prepare and support students with disabilities as they enter the adult world. Transition was historically intended to help young adults with disabilities become independent and self-supporting with employment. Students with learning disabilities who intend to enroll in postsecondary education must have transition planning that addresses their needs. Components of successful transition planning include: (a) parental involvement, (b) student participation in IEP meetings, (c) an early focus on college preparatory high school curriculum, (d) understanding their learning disability diagnosis, and (e) developing self-advocacy skills.

Studies of student retention indicate that academic preparation and high school GPA are significant predictors of retention and graduation (Allen, 1999; Murtaugh et al., 1999; Vogel & Adelman, 1992). Many of the same qualities found in successful adults

with learning disabilities were found in studies of college students with learning disabilities who persisted until graduation. These qualities include: (a) understanding and accepting the LD diagnosis, (b) goal setting, (c) early and continuing personal support, (d) persistence and extra effort (Hatzes, 1996; Rogan & Hartman, 1990; Vogel & Adelman, 1992).

CHAPTER 3

METHODOLOGY

This study explored how college students with learning disabilities believed that family support and educational programming influenced their academic decisions. An additional goal of this study was to inquire into the effect that the understanding of their learning disability diagnosis had on their choices in college.

Qualitative Inquiry

One of the consequences of having a learning disability label may be in the way people see themselves in relation to others. This perception might be reflected in personal beliefs about their strengths and weaknesses, the feeling of control they have over their lives, in the choices they make, or their personal goals. A qualitative method using unstructured, personal interviews was suited to explore students' perceptions of this diagnosis in their lives and its effect on their academic decisions in college. Open-ended interview questions were the way to understand their experiences and the meanings they attributed to them (Seidman, 1991). The way in which college students made sense of earlier educational and family experiences has continuing significance, for their present situations are connected to past decisions and events (Becker, 1998; Miles & Huberman, 1994). This connection is the path to their personal stories. Open ended, in-depth interviews allowed participants to answer freely. Participant-initiated themes were addressed which allowed the researcher better understanding of these unique experiences and their significance within the students' personal narratives.

The Instrument

The broad focus of the interview questions reflected the research issues: perceived family and educational support and the students' understanding of their learning disabilities. Although these general concepts provided the focus during each interview,

specific, pre-selected questions were not asked. This allowed participants the freedom to discuss related topics and to answer questions however they chose. Information from interviews more closely reflected their personal views than forced-choice responses or answers to a questionnaire, where the format determines the range of answers.

Categories of the interview questions included personal, family and educational history and the understanding/ acceptance of the disability. These issues related to the decisions that the participants made in college. The researcher's personal experience with students with learning disabilities, as well as the literature related to successful adults and college students with learning disabilities, also guided the questions. Sample questions are included in Appendix A4.

The Setting

The setting for this study was Virginia Polytechnic and State University, a large land grant research university located in Blacksburg, Virginia. The University has approximately 200 degree programs. It is the state's largest university with a total enrollment of about 26,000 students. Ninety-nine percent of the incoming freshmen in 1999-2000 were in the top 50% of their graduating class. The average high school GPA for this class was 3.56. High school GPA of at least 3.0 is required for admission. Because of their ability to meet admissions criteria, the participants in this study comprised a specific subgroup within the population of students with learning disabilities and even of students with learning disabilities at other colleges and universities. This study explored the effects of a diagnosed learning disability within this sample of university students.

University Support Services for Students with Disabilities

During the spring and fall terms of the 1999 academic year, a total of 458 students with disabilities registered for accommodations and support services at Virginia Polytechnic Institute and State University. The Office of Services for Students with Disabilities is housed in the Dean of Students Office and provides services to eligible students with documented disabilities. Students with disabilities must request services and provide documentation that is comprehensive, relevant and recent. Services for

students with disabilities at the University include: (a) modifications or adjustments to programs, services, and facilities, (b) advocacy to make the academic community aware of the needs of students with disabilities, (c) assistive technology including document scanners, large-size print and Braille embosser, and voice recognition software and (d) auxiliary aids including interpreters, readers and notetakers (Services for Students with Disabilities, 1999).

Selection of Participants

After receiving permission for the study from the Institutional Review Board at the university (see Appendix A1), the process of soliciting volunteers began. Services for Students with Disabilities Staff (SSD) in the University's Dean of Students Office identified 80 students with learning disabilities as possible participants. All were juniors and seniors in good standing and used support services during the fall 1999 academic semester. Although there were many more students with learning disabilities at the university, contact information is kept only on those students currently using services.

A general message that explained the purpose of the study and asked for volunteers was sent through email to these 80 students in January 2000 (See Appendix A2). Five students responded within two weeks. Students were contacted for interviews as soon as their email addresses and telephone numbers were forwarded to the researcher. When there were no other volunteers, another email message was sent to 72 students who had accessed services during the spring 1999 semester. One student responded to this message sent in mid-February. Two university students with learning disabilities, known to the researcher, were contacted. They agreed to participate in the study. A total of eight students with learning disabilities participated in the initial and follow-up interviews.

The population of college students with learning disabilities at this university is a subcategory of all those with learning disabilities, and even of those who attend other colleges and universities. Admission is competitive and an average grade of C or higher is required in all high school academic courses. The undergraduate catalogue states that those students "with a B to B+ average are more likely to be admitted". Students

enrolled in advanced placement, gifted and talented, or honors programs are given special consideration in admissions. Therefore students with learning disabilities who are accepted at this university have already met specific admission criteria and most likely possess attributes that have facilitated their academic retention.

Although a small sample of college students with learning disabilities at this university may not be representative of all those in other colleges and universities, the personal perspectives of these students may be useful for transition planning. Accepted and retained at this university until their third or fourth year as students in good standing, the participants provided information about the circumstances that influenced their educational decisions and achievements.

Data Collection

Participants were asked to read and sign a consent form explaining the study's purpose (See Appendix A3). Permission was requested to audio tape their answers and to use the interview as data to be transcribed and analyzed. Participants were assured that they could withdraw from the study at any time. Every effort was made to protect the identity of the participants. All participants were assigned pseudonyms and personal identifying information was deleted from the final manuscript. All the respondents were cautioned that since direct quotes would be used, complete confidentiality might be impossible.

Interviews were held at a time and place convenient to both parties. Each session lasted approximately 1 1/2 to 2 hours and consisted of unstructured, open-ended questions. Follow-up questions were asked for clarification and further understanding. Questions from participants were encouraged throughout the interviews. The interview process begun in mid -January, was completed by the end of March.

Data Analysis

The process of analysis was continuous throughout the data collection while interviews were being completed. After the interviews were transcribed, they were analyzed according to broad categories reflecting the research issues. Initially, all the

interviews were grouped in this way. These categories included the students' educational and family background factors, their understanding of the learning disability and the decisions they made in college. A process of coding to label these categories was used throughout the interviews. These codes helped in later organization and interpretation, forming a link between the data and ideas about the data (Coffey & Atkinson, 1996; Miles & Huberman, 1994). Preliminary coding was useful in later, more detailed analysis. This preliminary analysis was a way to summarize and use the interview material to create more complex ideas (Becker, 1998). Next, the coding process was used to find similarities, differences, and patterns within the same broad categories for all the students. Each category was again analyzed separately.

A more complex analysis, referred to by Strauss and Corbin (1990) as "axial" coding, involved making connections between categories. This provided a way to consider possible causes, consequences, and interaction among different categories. Differences became as important as similarities. Categories were organized and reorganized many times, leading to subcategories. From this continuing analysis, specific themes emerged from the data. These themes focused on the students' perceptions of their family and educational support. This study also investigated the students' understanding of their learning disabilities and its effect on their academic decisions.

After analyzing interview data from all the students, various broad categories were compared by individual students. The relationship between their learning disabilities, family and educational factors, and their decisions in college were explored for each student. Charts, tables, and visual displays were used throughout the analysis to help categorize, re-categorize and explore ideas that emerges. Finally, common themes across all the students and all of the broad categories were investigated. In the final analysis, themes and concepts were combined with findings from other research on college students and adults with learning disabilities.

CHAPTER 4

FINDINGS AND DISCUSSION

Introduction

This chapter includes a review of the qualitative methods, a description of the participants of the study and a discussion of the categories and themes that emerged during analysis of the interviews.

The purpose of this study was to determine how college students with learning disabilities considered that their family support and educational placements affected the decisions they made in college. An additional goal was to explore how these students understood the diagnosis of their learning disabilities and how their decisions in college were guided by this understanding. The major findings were discussed and organized according to the research questions asked in Chapter I.

The research questions addressed in this study were:

- How do students with learning disabilities perceive that aspects of family support and educational programming have influenced their decisions in college?
- How does the understanding of their learning disabilities influence the academic decisions these college students made?

Methods

A qualitative study was chosen to answer these research questions. A method, which used unstructured, personal interviews, was the best way to understand the participants' personal histories. In-depth interviews that were open-ended and exploratory allowed the participants to answer freely. Participant-initiated themes connected with the research questions became the basis for follow-up questions.

The interviews took the form of open-ended questions that followed a conversational format. After discussing the participants' understanding of the research, any questions were answered. The interview began by asking each participant their early recollections of the learning disability diagnosis and the areas of their academic weaknesses. Sample questions are included in Appendix A4. The focus of each interview centered on the themes of the research questions without asking them specifically. Topics were not covered uniformly since students talked about a variety of issues arising out of their personal interests and experiences.

All the personal interviews were conducted in a conference room in the Dean of Students Office at the university. The researcher and participant were the only ones present during each interview. Interviews were tape recorded with permission and lasted on average 1 1/2 to 2 hours.

Selection of Participants

The process of obtaining volunteers for the study began after receiving permission from the Institutional Review Board at the University (See Appendix A1). Staff in the SSD of the University's Dean of Students Office identified 80 students with learning disabilities as possible participants. All were juniors and seniors in good standing at the University and had used support services during the fall 1999 semester. A general message, which explained the purpose of the study and asked for volunteers, was sent through email to the students in January 2000 (See Appendix A2). Five students responded within two weeks. Their email addresses and telephone numbers were forwarded as they responded. Each student was contacted immediately. Interviews were arranged at a time and place convenient for the participants and the interviewer.

When there were no further respondents, the mailing was sent to an additional 72 university students in an effort to increase the number of participants. These students, also juniors and seniors, had used support services during the spring 1999 semester. One student responded to this additional mailing in late February. Two university students who were personally known to the researcher were contacted. Both of these students consented to participate in the study. In all a total of eight interviews and follow-ups

were conducted between mid-January, 2000 and late March 2000. A copy of the consent form was mailed to each participant before the interview (see Appendix A3). Another copy was brought to each interview. The researcher kept the forms after they were signed and participants were given a copy.

Data Analysis

Demographic information for each participant was recorded on a protocol form (See Appendix A5. Interview data was transcribed from the tape recordings made at the time. After the interviews were transcribed, they were analyzed according to broad categories reflecting the research issues. The process of analysis was continuous throughout the data collection while the interviews were being completed. Fictitious names were used throughout the study in an effort to protect the anonymity of each participant. Preliminary coding was useful to future, more detailed analysis. This coding process was used to find similarities, differences, and patterns within the same broad categories for all students. Each category was analyzed separately.

Three core categories emerged from analysis of the data. The participants' narratives revolved around their experiences before and during the time they attended the University. The third category was imbedded within the narratives and dealt with the students' personal characteristics and their parents' influences in their academic decisions at college.

A more complex analysis referred to as "axial" coding by Strauss and Corbin (1990) was used to make connections between categories. Subcategories evolved from the continuous organization and reorganization of categories. Common themes were found across all the students and all the broad categories. These themes became the subcategories that related to the research questions (See Appendix B Table 1).

Participants

Eight students enrolled at Virginia Polytechnic and State University, Blacksburg, Virginia were the participants in this study. All of the participants had documented learning disabilities and used support services at some time while at the university. The

majority of these students were diagnosed in the elementary grades. Two were evaluated and diagnosed with learning disabilities while at the University. All reported their learning disabilities to be in reading comprehension or written language. The median age of this group of three men and five women was 22 years. There were five juniors, one sophomore, one senior, and one first year graduate student. Their majors were as follows: two students were in computer science, two were in engineering, one was in geophysics, one was in business and marketing, one was in exercise and health physiology, and one was in hospitality and tourism. All were students in good standing at the university with above a 2.0 GPA. The majority of participants enrolled at the university as freshman directly after high school. One student transferred after receiving an associate's degree from a community college in her hometown. For a summary of the participants' background information, see Appendix B Table B2). This study explored the effects of a diagnosed learning disability within this sample of university students.

Research Question #1

How do students with learning disabilities perceive that aspects of family support and educational programming have influenced their decisions in college?

Included in a discussion of the first research question are the students' perceptions of their experiences before they enrolled at the university. In the analysis of the interview data, the most frequent responses to questions about the participants' families and education were clustered together and they became subcategories. Throughout the narrative, these subtopics were arranged in a chronological sequence reflecting events in the participants' lifetimes. They include (a) family environments, (b) diagnosis and special education placement, and (c) academic support.

The majority of the participants were diagnosed with learning disabilities while they were in their elementary grades. Therefore, these experiences may span more than 10 years. Two of the students were not diagnosed until they enrolled in college but they recalled their early experiences and perceptions of school and family as well. The actual events may differ from the way these students remembered and talked about the

circumstances of their diagnosis and special education placements and family environments many years before. However, the lasting memories of childhood experiences revealed their personal perspectives associated with this earlier time. The retelling becomes an important part of understanding how the participants have come to see themselves.

Family Environments

Participants revealed the influences of their families as they talked about their parents' education and accomplishments, the way that their parents supported and encouraged their interests, and the guidance they received during childhood. Research on children and adults with learning disabilities indicates that parent's attitudes toward raising their children are an important factor affecting the outcomes of these individuals (Hartzell & Compton, 1984; Rothman & Cosden, 1995). Parental support and encouragement are important to the healthy psychological development of children. It is noteworthy that the majority of the participants in this study frequently mentioned a strong bond with their parents. There was a clear message of mutual respect. Several students spoke of their parents' positive characteristics.

Parents' Education

Erik, a graduate student in computer science, talked about his parents' professional roles:

They both have college degrees. They both worked before I was around. I consider them to be very intelligent people. Dad's an engineer and Mom was...actually she was some sort of computer...programmer back in the days of punch cards. She did stuff with punch cards...I don't know. They're much better at grammar than I am. I know that.

Erin, a business and marketing major, proudly described her mother's abilities:

My mom is just smart all around...We have a joke in the family she got like 1400 on her SATs....or higher than that. She graduated with a physics major and now she's a computer engineer. So she got that high grade on her SATs ...and people on her job, she's the one they go to if they need help. She's the smart one but she doesn't flaunt it or anything. She's quiet too but she'll go out with her friends...I

know there are times when her friends talk about things and she could say, “No, this is the way it really is”, but she never would do that.... but I know a lot of times she should do all the talking.

Emily, a computer science major, talked of her mother’s determination in spite of a suspected learning disability:

My mom thinks she had a learning disability...She thinks she does...in reading comprehension...same thing as mine...and she says she went into that field because it was hard for her....She was an English major and she got, uh, 2 or 3 masters.

Lynn was the first of her 5 siblings to go to college. She knew her parents were pleased with her decision. She said: “My dad went to college and my mom went to nursing school. I think they...they wanted us to succeed and go do things, so I think they’re really glad that I stuck it out.”

Students talked about the strong influences of their parents throughout their childhood. It was notable that many mentioned their parents’ accomplishments and personal qualities. Astin (1993) found that the educational level of parents influenced the academic goals of students. Children of college graduates were more likely to enroll in higher education. In this study, every participant had at least one parent who was a college graduate. The majority of parents had both completed college and several had advanced degrees. When asked about their decisions to attend college, all the participants assumed it was their logical next step. Several students felt this way because other family members attended college, others because they wanted better jobs.

Leisure and Recreational Experiences

The participants talked of parents who encouraged their activities outside of school, including little league sports, drama, gymnastics, dance or music lessons. Allen, an engineering major who described himself as a “physically retarded” child, still participated in activities due to his parents’ urging. His comments were typical:

I played every sport known to man...and I was really lousy but I had a good time. I had fun trying, you know, bowling was about as high as I could go. I can deal with this, but yeah, I played soccer. I played football. I played baseball...My parents pushed a little bit because (a), if...if...I would have sat on my butt.

Erik had memories of participating in many activities when he was younger. He said:

I did everything, uh, every rec sport, boy scouts, cub scouts, um...everything, yeah...(My parents) said “here go here, go do this”...hated baseball so they let me stop doing that one...but soccer and baseball...

Erin, who came to the university to play sports, described her early connection with her particular sport:

I wanted to be in dance lessons, so I went and took dance lessons. I said “I don’t like this” and saw the [sport] sign up and Mom let me sign up and said “Ah...that’s it!”

All of the participants mentioned trips and memories of family activities.

Elizabeth, the youngest of 4 children, talked about her family’s playful attitude that continues now that the size of the family has increased. She said laughingly:

We’re all loud. When you get 30 or 40 of us together, you probably can’t even hear yourself think. We get together and one thing we do....when everyone gets together, we play games...Outburst, that’s a game we like to play. It gets so loud. There’s a lot of yelling and everything. Their new games are Domino and Phase 10. There’s still that atmosphere. We’re all doing things together.

Lynn, the middle of six children, talked of growing up in a large family:

Well, with eight people you really can’t go on a lot of vacations. So we went to the farm every summer....my mom’s parents. So we would go to grandma’s and grandpa’s...lots of good memories.

Interviewer: You must have had a big car. Did you have a van or something?

Lynn: (laughing) Oh, yeah, we had the Bradymobile that held, you know, ten people.

The respondents in this study revealed the importance of family support in their comments. Almost all the students mentioned participating in sports and extra curricular activities at their parents’ urging. There were memories of family activities and trips. Positive accomplishments at home and in their communities were cited in other studies of successful adults with learning disabilities (Bryan, 1997; Reis et al., 1997). Many of their parents had encouraged their strengths and interests as children. Although the adults in these previous studies remembered negative feelings associated with their school

experiences, opportunities to participate in outside interests such as sports and hobbies balanced their negative school experiences.

Discipline and Guidance

When the participants described the type of parenting that they remembered growing up, a profile emerged of parental support and acceptance. Several participants talked of parents who encouraged critical thinking. Allen spoke of his family's attitude toward individual choice, a theme that appeared in several other interviews as well:

You know, it's not a matter of having real expectations of where individuals should go. It's just a matter of where they choose to go. You're being supportive. You'll be there for them. Now if they screw up and screw up, you know, and that's their own thing, now you can beat their head on a wall, but they make their own decisions.....and they face the consequences of those decisions.....Kind of out of respect, but more...more of thinking everything through. You know, there's always two sides to any issue.

He went on to talk about how he viewed his parents' disciplinary tactics. Punishments were not arbitrarily meted out but carefully considered and openly discussed. He felt that he had a role in the decision making process.

I remember my father going once....I broke a rule and this is a real indication of my kind of family....I broke ..I stayed out late or something and my mom said, "You're late", and I said "Yeah", and Iswear I said, "but you're gonna give me this punishment and I thought it would be worth it.".....I would have to defend the punishment I would be given...and if I couldn't defend it, then they got to choose. If I didn't understand something...if they said something, I was always able to say, "I don't quite understand why you did this", or "I don't think this is fair.".....Their parenting hasn't changed, um, you know, I'm very glad I have the parents I do.

Erin said that she realized her own good fortune after she went home with a college friend and saw her strained relationship with her parents. She recalled her feelings of surprise:

I was like "Oh my gosh, people are raised like this". I mean they were so strict...like my friend's mom...I went home with her and she got a speeding ticket

and her mom...and I was with her.....yelled at her when we were at the house. My parents would *never* do that. I mean I would know that my car's taken away from me...probably never drive again (laughing)..until I can afford it. But they wouldn't make a big scene like my friend's parents. They would just say "OK, deal with it." Her...her parents yelled and yelled at her...and she was like "I hate my parents."

When she gave an example of her father's reaction to a fight with her brother, it was obvious that discipline in Erin's home followed a different approach to teaching the laws of cause and effect. She recalled the consequences of her reaction to her brother's behavior when they were teenagers.

...I didn't know what to do to get him to stop and he kept punching me.....and I'm like "What am I going to do?"..and so I just kicked....a hole in the wall (laughing). It probably wasn't the best idea but I didn't know what else to do (laughing)....and so he stopped and then right after, I called my dad at work and I'm like "I kicked two holes in the wall"...I was actually crying. He's like "That's OK." They were having a party two days later....and I had to fix the hole ...myself and I had to drywall it.....It was like, "It's already done, there's no use getting mad."

Effective parenting skills and appropriate expectations for children with learning disabilities have been cited as protection against possible low self-esteem resulting from learning problems (Kloomak & Cosden, 1994; Morrison & Cosden, 1997). Many participants in this study spoke of parents whose rational style of child raising centered on logical consequences for their actions. In these cases, punishments were not arbitrary but thoughtfully considered and discussed. Such practice in understanding choices and making decisions increases feelings of personal control and self-advocacy that are important to college success (deFur et al., 1996).

Family History of Learning Disabilities

For many of the students, their learning disability was not a surprise to their parents since other family members shared similar problems. Many participants remembered hearing of family learning problems that were recognized before 1975 when the term learning disabilities became officially accepted. Erik, who had a diagnosed

disability in written language, mentioned “some old grandmothers...on his father’s side” with the same problems. Others referred to siblings or parents with weaknesses in specific areas. Family patterns of learning problems often led their parents to suspect learning disabilities well before formal evaluations. Emily said her mother suspected her learning disability because she had the same problems. Lynn had several siblings who had been diagnosed before her and described their problems as more serious than hers.

Allen talked in a matter of fact way about his family’s attitude toward their differences:

It was only that my mom knew because my whole *family’s* that way..... It never seemed *odd* to me because it wasn’t odd, you know, it was just the way things *were* and “Congratulations!” you know, “Welcome to the family!” ...My dad still can’t spell the word “hey”..um, my mom a little bit. Yeah, I have a ..two or three cousins that have to go to special colleges for it because they were so severe...most everybody in my family, um, probably half of ‘em are and half of ‘em aren’t...I have a little sister....and she’s very....very....LD.

Elizabeth spoke of many relatives with similar learning problems. Her sister’s son had a learning disability. Her older brothers had reading problems like hers when they were in school in the 1960s. She told about one of her brothers wearing special glasses to cure his suspected dyslexia. Both are college graduates but their grades were poor when they were younger. She laughed and told how she had found their report cards in the family Bible. When she asked her mother why they were there, she answered that she was hoping it might help their grades.

In many cases, the learning disability diagnosis for these students was not a surprise. Parents knew of relatives or had other children with academic problems. Three students mentioned their parents’ learning disabilities. This helped the participants accept their own problems because family members shared them. Some participants like Allen, said that learning disabilities were well understood in their families. He said that his weaknesses in written language and organization were balanced with his high intelligence. He talked about his sister’s more severe learning disabilities and said that she was not as intelligent. But Erik, who had a full scale IQ in the superior range, spoke of his sister who had no learning problems, as a “genius” who always excelled at

everything she did. He added that he always had “a huge inferiority complex” because his sister did so well. There are theories of inherited traits for learning disabilities (Green, 1990; Pennington, 1991). There is evidence that relatives display similar problems in reading, speech and language disorders, and spelling in up to 45 % of cases (Hallahan & Kauffman, 2000). However, some researchers feel that this apparent tendency for learning disabilities to run in families may not always be genetic but due to certain conditions of the family environment (Kirk et al., 2000).

Diagnosis, Labeling, and Special Education

Participants recalled the feelings associated with their learning disability diagnosis. They remembered being aware of early academic problems but their special education placements led them to feel different from their peers in general education classrooms.

One of the first steps for any student who is referred for special education services is a psychological evaluation. The diagnosis of a student’s learning disability begins the official entry into the special education system. Critics of labeling argue against its harmful effects on children who may begin to see themselves as academically inferior to their peers, a precursor to feelings of low self-esteem (Coles, 1987; Lipsky & Gartner, 1990). In this study, the initial testing was not significant for most of the participants who were evaluated in the elementary grades. Several students said they didn’t remember much about their first evaluation. For those who did, responses reflected typical child-like reactions. Erik, a graduate student in computer science, was one participant who remembered enjoying the experience. He was in 2nd grade when his parents made arrangements for him to be tested by a private psychologist. When he was asked how he was told about the upcoming evaluation, Erik said:

I remember it was a brief talk. I can’t really remember. I just understood that I had to go and they had to ask me questions and I was going to be tested. ... I really didn’t think I understood why entirely at first, but I didn’t care, I was missing school (grins)...I remember because he made it really fun (laughing)...You know there were breaks and there was juice and toys....I loved

the little blocks that were half-red and half-white. I just, I just remember those very distinctly.

Lynn was diagnosed with a learning disability in reading comprehension and written language in third grade. She described herself as the peacekeeper in her large family and as someone who always tried to please others and do what was expected. She talked about her memories.

Whatever a grownup says, you just go and do. I think she said that I needed to take some tests for school. I don't know, for me it wasn't a big deal.

However, later when she thought about her first psychological evaluation at nine or ten, she remembered feeling uncomfortable because she knew her performance was being assessed. She didn't know the criteria but assumed she was doing poorly. She had a different reaction to the little blocks than Erik:

Well, the first time I didn't know what it was...so it was kinda weird. I went...I guess it was the psychologist and we went to the little room...that was nerve-racking because I [know] I was doing bad. It took me a long time to put those little pictures together...you're timed to see how long it takes to put the blocks there...You get frustrated...You think you're not getting this so you get kind of nervous about that. But every time I got tested I got better and better because it was all the same test...and I memorized....

There was a difference for the two students diagnosed in college. The recent testing made the memories more vivid. Another difference was the students' own level of awareness of their academic problems. As adults, they agreed to and understood the reasons for assessment. Lauren said:

I kind of realized this summer when I was taking summer school and I mean I studied all the time and I still didn't do well. I had been thinking it for a long time but never really, you know, wanted to do anything about it. Finally, I just realized...I realized that I really wanted to get my grades up and stuff...so I asked my dad if he would have me tested.

and Erin said:

I'm a senior and I was ...doing really bad...I didn't do that bad in high school and I'm like "What is going on?" I asked my mom and she was like "Maybe we should just get you tested."

It has been suggested that the process of diagnosing and labeling students as learning disabled may contribute to feelings of low self-esteem. The definition of learning disability, ruling out environmental influences, inadequate instruction, or other impairments, implies a deficiency inherent to the student. The diagnosis may lead to negative feelings if children feel they are to blame for not meeting the expectations of their teachers and parents (Coles, 1987; Murphy, 1992). Arguments against labeling children include the idea of disability as a social construction. It is a classification imposed on children, who differ from their peers. Furthermore, once they are labeled, individuals tend to be seen in terms of their disability (Biklen, 1989).

The students in this study who were diagnosed with learning disabilities in the elementary grades did not remember the initial testing as significant. Now many years later, they seemed to remember either being unaware or unconcerned that they were being evaluated for suspected learning disabilities. Instead, they recalled the activities with the psychologist and their feelings about the tasks that they did. There was a noticeable difference though for the two students diagnosed with learning disabilities in college. Each of these participants recognized their academic problems and sought their own evaluation. In addition, they understood the purpose of the testing was to determine a possible learning disability diagnosis.

Early Academic Problems

A learning disability is usually not detected until a child enters school. Students are normally referred when teachers or parents notice their academic problems. It is an important consideration that children are only aware of their learning problems in reference to an external focus, the academic performance or expectations of others. All the participants in this study were diagnosed with learning disabilities in written language or reading comprehension in the elementary grades. How these students recognized their learning problems when they were younger is significant, for this understanding became a part of their developing academic self-concept.

Elizabeth had mononucleosis in first grade and due to her many absences, her reading and math skills lagged behind those of her classmates. As she said “I knew I was behind, but didn’t ever think about having a learning disability.” Lynn knew she was in one of the lowest reading groups in her class. Looking back, she knew this because her reading group always got the books after the other groups finished them. However, she took comfort in the fact that she was not in the very lowest group since her books were passed to still another group. Emily said that she was more aware of problems after she was diagnosed. That was when she realized she was compensating by trying harder so no one would notice.

In second grade, Erik was diagnosed with a learning disability in written language. He said he was aware of academic problems in elementary school because he frequently had to spend playtime completing assignments.

I...also have very vivid memories of being the only kid in the class who had to stay through recess to finish my English stuff.... I would spell wrong, uh, I would like know what I wanted to say but I just couldn’t say it. I would sit there forever and not remember how to spell “of” and “who” and...lots of small little words like that.

He remembered homework as particularly difficult when he was younger. His said his mother stayed beside him and kept him focused. He still sounded resentful that his sister, whom he described as a “genius”, was allowed to do her homework in front of the television:

I remember doing some stuff....you know the English grammar, that I just, oh God, that I hated.... and doing some of that homework was such a struggle and I had to sit at the kitchen table and Mom would watch me do my homework. It was the only way that I would do it. Um, my sister got to do her homework in front of the TV (almost whispering).... In class, during school, there wasn’t much that I absolutely didn’t want to do....but at home, homework was an absolute chore...a battle...Math wasn’t bad. Anything where I had to write a lot was a struggle.

It took him a long time to do his homework. He said it wasn’t because there was so much but because he got easily distracted. He laughed and said he was a difficult child. When

asked if he got to play afterwards, he answered with a laugh: “Yeah, oh yeah...I played...I played when I was *doing* my homework.”

Ben, now a mechanical engineering major, remembered reading problems when he was young. He said he was told his grades were bad but that was of little concern at the time:

I don't even remember the grades. I was probably completely oblivious to the grades. I didn't pay any attention.....I don't really remember realizing any problems, like I just kind of.... I knew sometimes like I would read something and then they would ask questions about it and I would be kind of blank. I mean I looked at the words but I didn't really read them. (laughing)

Allen, also an engineering student, said he remembered organizational problems more than his diagnosed disability of written language. When asked if he recalled any problems in elementary school, he said he never could remember where anything was:

I mean I *knew*...there was a difference, in the sense of not knowing where things were. You know it was real obvious. They'd ask “Hey turn in this paper” and I had no clue where I put the paper... You know, I knew I had put it somewhere *safe*. I could remember *that* (laughing) but you know there were like six or seven different safe spots. So I had to go through each one of them, you know, um,When I hit middle school, the notion of having separate notebooks for each class...I wouldn't remember which notebook was for which class.... *So*, I carried them *all*...because if I didn't, I'd forget them....carried every textbook to every class. You know, regardless of whether I had that class that day or not.

In addition, he talked about differences in the way he learned:

There were areas where I grasped it so much quicker than they did, and then you know, go from section 1.1 to section 1.2, which is a different topic and I didn't grasp it at all. You know, I mean I could tell there was a difference.

Although they did not understand the extent of the formal diagnosis, the participants in this study remembered noticing problems when they were younger. Looking back to their elementary grades, they focused on the externally imposed consequences of their school-related problems. They missed recess, had to do homework

when others were playing, didn't know the answers to questions, misplaced books, or couldn't read or do math as well as classmates.

Due to the heterogeneity of the population of individuals with learning disabilities, the literature offers no conclusive answers to the affect of this diagnosis and the learning problems students experience. Many studies cite low self-esteem and characteristics such as learned helplessness in students with learning disabilities (Huntington & Bender, 1993; Scarpatti, Malloy, & Fleming, 1996). Other studies find that many children with learning disabilities have high self-esteem or self-concepts equal to their normally achieving peers (Abouserie, 1995; Hagborg, 1996; Heyman, 1990). Differences are not fully understood.

Certain protective factors seem to mitigate the effects of negative school experiences. Among these are attributions for success or failure termed *internal* and *external* locus of control. Studies of students with and without learning disabilities found that normally achieving students attributed their success to internal factors such as ability or hard work and failure more externally to difficulty or bad luck. Conversely, most students with learning disabilities attributed success externally to luck and failure more internally, to their own lack of ability (Bryan, 1986; Grimes, 1997; Huntington & Bender 1993).

The differences in outcomes are significant. Internal attributions for repeated academic failure could lead to undue self-criticism and negative personal feelings. Although it is difficult to determine attributions from the comments of the participants in this study, on the surface, most of the memories of their early academic problems reflected an external focus. This may signal a healthy defense against taking personal blame for their poor performances.

Special Education Placement

Most students with learning disabilities are served in resource room settings or included within the general education classroom with assistance or monitoring from a special education teacher. Students with more severe learning disabilities might receive instruction in a self-contained classroom. During the 1996 school year, 81% of students with learning disabilities in the United States were included in general education

classrooms or in resource room placements while 17% of students were served in separate classrooms (U.S. Dept. of Education, 1997)

The majority of participants diagnosed with learning disabilities in the elementary grades received instruction in resource room settings and were mainstreamed for the majority of the school day. Only one participant was in a self contained classroom setting. Elizabeth, the student who had missed so much time because of her illness, remembered three years in a self-contained class at another school within her district. She vividly recalled this separate placement in the early 1980s, before more inclusive practices became widely accepted. She said:

The Child Study Team suggested I go to another school because they had the isolated classroom with more...they had the teacher and the teacher's aide and all this other stuff.... I changed schools so I didn't even know who went to that school when I went there....and just the fact that I was being isolated from them made me feel like I *shouldn't* go there.

She remembered that attempts at fuller inclusion still made her feel different from children in the regular classroom.

In fifth grade, there was art, music, gym and health. They were with the other classes. They divided the people in our special, isolated class into the different homerooms of the other classes. So the thing was that everyone knew that you were from the other classes.

When asked if the term "isolated", was actually used, or related more to her perception, she responded:

That's what they called it. They called it the "special ed. isolation",... or something...They actually used that word..."isolation". That was part of the terminology. . . Everyone was in the same room. In fact, we were usually in a different end of....let's say all the 5th graders were down the hall, we would be down the hall of the...the 3rd graders...in a little room....and there was usually, in 3rd grade there was 1st, 2nd, and 3rd graders in that room and 4th grade, it was 3rd and 4th and 5th grade there was only 5th graders.

Some of the other students that had resource placements also recalled the feeling of being different from those in the regular classroom. Erik, diagnosed with a learning disability

in written language, remembered his feelings when it was time to go to the resource room.

It was separate English classes in elementary school. There was a room for all that...for all the disabled...I had to go down to *that* room. Later on it became quite a thing because in my elementary school we didn't change rooms but when we did English...fortunately I wasn't the only one in the room, but me and other kids had to get up and *leave*...but once we were down there we had fun.

He recalled the stigma of being a member of this special group when he spoke of the other children in the resource room.

...I didn't really know the other kids in the room 'cuz all those guys were in my grade. They were all in my classes. I remember Mary Jill McCarthy was one of the, uh, mentally, uh...I don't know what she was...just she was very different...and uh, they disrupted.... because it was one classroom and when they would act out it would distract the entire room... Part of the reason I didn't like going down in the room, I was somehow being associated with that. I didn't like that.

It became his goal, an incentive to try harder, just to be allowed to be in a regular classroom for English.

I worked very hard to get out of that room, so to speak. I mean that's how I thought of it. I didn't think of it as a learning disability. Yeah, that was there but I associated it more with what I was doing that was different from everyone else....It wasn't so much being in a normal class but not having to get up and walk out of the room...and just the wanting to fit in and all that...

Ben was diagnosed with a learning disability in reading comprehension when he was in second grade. He went to a private elementary school but went to a public school for half a day to attend special education classes. He talked about that experience:

It was very strange because I went to a very small school so I had to go to the public school for a while and then go to the private school. I mean my day would be split up between schools so I would get a lot of questions like where I was and I had missed part of the day.

When asked if anyone had ever talked to him about his weaknesses and explained the term, “learning disability”, he replied:

Well, there were two aspects of that...like the teachers, the system; they always talked to it in a positive sense. Other people always talked about it in a negative sense. It was kind of hard. I tried to be really quiet...I mean I didn't talk about it very much. Other people knew but I didn't really like the distinction.

Allen came from a family where many relatives had learning problems similar to his. Several times, he mentioned that learning disabilities were accepted and well understood by both his parents. He remembered the bad timing of his instruction in the resource room in elementary school. This bothered him more than his learning problems. He said:

It wasn't a huge deal because it was never...it was never a point of shame. You know I wasn't embarrassed and my mom wasn't ever embarrassed with it...Um, now it was inconvenient at times, you know. I lost playtime one year because when I had playtime you know, I had to go....and that was a bummer.

Lynn said she always wanted to do well and didn't mind going to separate classes because she realized she was getting help so. She said:

Other kids didn't know what it was, so it wasn't an issue...It wasn't different or strange...I didn't really do much, in intermediate...in seventh, eighth grade...one of the periods was like the LD period and we could do our homework...if it was math, or some other subject and that always helped.

Emily did not ever think she minded going to resource class for special help and felt no stigma from the placement. She noticed an improvement in her grades when she got help and remembered being pleased. She said: “I don't think there was much difference (from the others). I was only gone, for like one class. It may have been a study hall or something.”

Erin and Lauren were diagnosed with learning disabilities in college. They both remembered doing well throughout school. Neither could imagine what it would have been like to be in special education classes when they were younger. Lauren's comments reflected both their feelings when she said:

When I was in school.....I was a fast learner. I would get taken away to go to...more...faster...classes. I couldn't imagine because that never happened. Many students recalled their parents talking to them about why they were going to special classes. At the time of the interview, Elizabeth was 23 and had junior status. As previously mentioned, she had mononucleosis in first grade and missed a great deal of school. She said the disease weakened her immune system and she continued to miss many days due to illness throughout elementary school. She remembered being taught at home by a visiting teacher for several months. When she returned to school, her mother told her that she was behind her classmates and still needed extra help. She believed that was the reason she had been assigned to a special class.

Oh, I didn't...I didn't ever think I had a learning disability I mean I *knew* I had problems reading....At first I was told the reason I was going into this classroom was because I was *behind*. I'm like "OK, I need the extra help because I'm behind." I mean everyone else was doing basic math and reading and I couldn'tso I thought I *was* behind.....I guess in middle school I did start to wonder, "Am I still this far behind?"...but that was when I started to get mainstreamed for math.

Other students remembered being told that they learned differently but that there was nothing wrong with them. Erik said his parents told him that he had a learning disability but:

Not that I was *stupid* but that I learned differently....and I think they just told me I did and I started going to a different English class,....I remember my mother telling me that....I remember being told, "You are not stupid. You are not dumb."

Lynn's comments reflected those of several other students. She didn't recall a specific discussion about her need for special education when she was young but she said:

I think they told me I needed extra help...in something....that, uh, you know, "You learn differently than other people. You're not dumb."...But no one ever sat down with me and said, "This is what you *have*....and this is why you go *here*.".....I just kind of went. (laughing)

The participants who were diagnosed with learning disabilities in the elementary grades were aware of subtle differences between them and their classmates. Several remembered that other students seemed more proficient in reading or math. They understood their academic weaknesses as they contrasted with the skills of others. All mentioned their parents' participation in and support throughout their education. Most remembered the learning disability term but several said their problems were explained as learning differently. They had memories of being reassured that they were smart but learned in their own way. This type of parental acceptance for a student's learning problems is a pivotal factor in a child's healthy development. Parents who understand and accept their children's learning disabilities may diminish the negative effects of their children's learning problems (Morrison & Cosden, 1997; Reiff et al., 1997; Rosenthal, 1973).

Reactions to instruction in separate classes were mixed for these students. Many of the students interviewed had distinct memories of a stigma associated with their special placement. Having to "get up and leave" during their scheduled resource periods was disturbing. For many of the students in this study, their special education placement was associated with being singled out and leaving while others stayed. Peer acceptance and fitting in are important to children's developing self-concepts (Jackson & Bracken, 1996). Feeling different can be traumatizing. One student in the present study discussed his goal to get out of his special education English class, saying he thought of the placement "as what he was doing that was different from others" in the regular education class. Others remembered missing activities such as playtime when they went for resource help.

Still a few students seemed unconcerned about going to special classes and took it in stride, although one of these students said she knew she was different and was "not especially proud of it". The only participant who was in a self-contained LD classroom for three years, had the most vivid memories of being separate and "isolated". She did not know the other children in her grade and was not with her friends, since her class was at another school within her district. The respondents thought little about the term *learning disabilities*, but instead noticed what they were doing that was different from other students in their regular classes. The two students diagnosed in college with

learning disabilities had no such feelings and fit in well with their peers. They both said they did well throughout school and were in some advanced classes. They felt it would be hard to imagine being in special education classes when they were younger.

Research on the effects of special education placement is inconclusive because of the diversity of students with learning disabilities and their school environments. Some studies indicate that children in self-contained placements may maintain higher self-esteem when they compare their abilities to those of other students in their special education classrooms (Kistner & Osborne, 1987; Strang, Smith & Rogers, 1978). They also receive instruction and assignments geared to their academic level, which reduces the negative effects of failure. Those either fully included or mainstreamed may contrast their weaknesses with the strengths of their peers in the regular classroom. Students may develop negative feelings about their own academic abilities.

One of the protective factors against the negative influence of learning problems is family support. The majority of participants in this study recalled that the academic problems they had were explained as learning *differently*. They were reassured that they were smart and capable. None of the students recalled feeling that their parents were disappointed in them, but instead felt supported and encouraged in their efforts.

Recognizing Differences

Some of the students identified in the elementary grades talked about their feelings toward other students in the special education classroom and the differences they noticed. Erik talked about the other students in his learning disability resource class:

They were different, uh, I guess I think I'm going to say I was more natively inclined to math and logical problems than they were. They were perfectly intelligent but they were...just a little...slow. Some of them were ADD.

Lynn said: "...mine (ld) was never serious like some of the other kids in the class."

The difference became more pronounced in middle and high school. Two participants felt that there was a subtle prejudice against any student with the learning disability label. Elizabeth who had been in self contained classes in elementary school, recalled feeling disturbed:

...In the 8th grade, all my friends were taking algebra, I had never *seen* algebra before...and I remember one of my friends...she would have trouble with algebra and I would help her with her...algebra every day and I wasn't even allowed to take algebra.....because I was *special*...because I had a learning disability....I was classified as a learning disability...and so I didn't have enough *knowledge* to...go out...and do stuff. It didn't seem that they actually expected you to...succeed or go to college...or do anything..

Elizabeth did not believe that teachers expected students with learning disabilities would go beyond high school. She said:

I felt like...I guess it was not common that ...the classified children with learning disabilities would actually go on to college...not a community college but a real college or university would succeed...much more than high school or an associate's degree...Those kids just ended up graduating and working somewhere...some of them even dropped out. I mean they worked to graduating, nothing else. They weren't really achieving, but those were the people I had classes with.

Emily knew she had taken a different path than other students in her special education classes. She said:

I think there were maybe only two or three of maybe 10 or 20 special ed. people who actually went to a real college...or even went to like a community college.

Respondents observed differences between themselves and others in their special education classes. They remembered that classes for students with learning disabilities served children with a variety of academic problems, some very different from theirs. A few recalled feeling a subtle prejudice against high academic achievement simply because they were students with learning disabilities. Several respondents felt that they were not expected to attend college because it was not the norm for students with learning disabilities. Studies of secondary programming for students with learning disabilities support this perception. Students with learning disabilities are often mainstreamed into lower level classes in high school (Aune, 1991; Dunn, 1996).

Academic Support

Participants talked about the academic support their parents provided when they were younger. Most participants mentioned help with homework, participation in IEP meetings and school involvement. Erik talked about his mother's involvement in his schoolwork. She helped him and made sure he finished his homework. He recalled a time that he had an assignment he could not finish in class. His teacher let him take it home. He said:

I remember....sitting there in the middle of an essay...Mrs. AC's class...in the 7th grade. It was one of my first real English classes and sitting there for 15 or 20 minutes because I couldn't spell "of". I hate that word...I couldn't...I could sound it but I could not make any connection with that sound and any letters of the alphabet, any way...It...I just couldn't make any connection....At the end of class, when I went to turn it in...like I said my parents were very involved...I think she let me take it home too because my mother knew all of my teachers.

Allen's mother was a teacher when he was younger. She taught him phonics when he was having trouble with the whole language approach used at school. He credited his mother with teaching him to read. Erin talked about her mother's help proofreading her written assignments. She noticed the difference in college when her classmates read them. It made her self-conscious about her problems with spelling and written expression. She said:

...In high school my mom would like look at my papers...so now in college, you get your peers to look at it...So my mom couldn't do it any more...help me out...(by the time I turned it in) It was pretty good. It wasn't bad. She was the one that corrected it. She wouldn't do anything that would make me feel like I was stupid. I never felt bad about it....But yeah, my mom always helped me in high school...that helped a lot.

All the participants in this study mentioned their parents' active involvement with homework and their school curriculum. Many remembered continued support and encouragement even if they got bad grades. Parental support and guidance for emotional and moral issues in childhood is a factor that is frequently mentioned in other studies of

successful individuals with learning disabilities (Morrison & Cosden, 1997; Murphy, 1992; Reiff et al., 1995). Support and encouragement, helping children develop strengths, and providing a nurturing atmosphere are important practices for all parents. However, parents of children with learning disabilities may help them avoid possible negative feelings associated with their learning problems by continuing to accentuate their positive traits.

Grades

Several students talked about their parents' reaction to their grades. Although they all said they did well in high school, there were still times when their grades could have been better. Emily, like the others, felt that her parents knew she was trying.

Interviewer: When you were in school, before anybody knew you had a

learning disability, if you got a bad grade...what was the reaction from your mom...or your family?

Emily: I never really got in trouble for my grades, I don't think. If I didn't do well, they would just say I could do better...I think I would be more upset over the bad grades than my parents were...like even now, I've gotten Ds and stuff and my mom's like "Well, you can bring that up", and I was really upset about it.

Erin talked about the improvement in her grades after she was diagnosed with a learning disability in college. Realizing she had a learning disability led to a change in her study habits and her grades drastically improved. She remembered:

It was my junior year, like I was taking econ at the time and I started reading the chapter and paying attention and participating in class...and so...it helped me understand, um, that ..I got like an A in that class and that really pumped me up and I was like "OK, this is really what I need to do", and my parents were excited when I brought my grades home. I mean they never get really....even when I had straight Ds, I think it was straight Ds...maybe a C or something...they never got mad at me. They're the type of parents who say, "We know you're gonna work it out. We know you're not happy with this, you know. So we don't need to sit here and harp on you and they knew that was true because I'm not the type of person who would say, "Oh good! straight Ds...At least I passed." (laughs)

Teacher Support

Many participants remembered excellent teachers for their support and encouragement. They spoke of their enthusiasm and obvious concern for students. These comments reflect typical responses. Ben and Erik remembered the help they got in their special education classes:

Ben: (I was getting help) with one of the special ed. teachers. She is retired but she was

really good. She would work with me a day and then gave me like 45 minutes to take it easy, work on things.

Erik: It wasn't so much the teachers but some of the aides...mainly not because they weren't teachers but because they were the ones who would sit down and walk me through it....They would walk me through and just...uh, dedicated.

Emily and Elizabeth talked about memorable teachers in their regular education classes:

Emily: (One science teacher) really cared and when I didn't want to enter the science project...or work hard, she pushed me.

Elizabeth: I had Mr. Simmons who was really great. He was the science teacher for middle school. He was very entertaining. Science must be fun and funny and he was always making jokes throughout class....I already *loved* science.

Allen frequently misplaced his books and materials. He remembered how his teachers had tactfully accommodated his weaknesses with a plan coordinated by his special education teacher. Instead of using a locker or carrying every book with him, he said:

The teacher usually had it (his book). Different teachers did it in different ways. I mean some of them would nonchalantly put it on a desk near the front door. When I walked in I just kind of picked it up. Sometimes it was underneath. You know when they have those little cages under...it was under there and I knew where I always sat.

He explained why he felt very comfortable around teachers.

Well, generally, it's just been an experience. Just because my mom was a teacher, I've always been around them. They don't, they don't scare me. They're just like

any other person and, um, if you show them respect and you're willing to be flexible, they generally will be back.

Every participant remembered teachers that seemed special for their personal interest in their students. They showed genuine concern and encouraged their abilities. Several of these teachers were favorites because of the enthusiasm they showed for their subjects. Creativity and a sense of humor showed in their approach to teaching. The literature supports the important role that teachers play in balancing risk factors for students with learning disabilities by their positive responses to students' efforts (Reiff et al, 1997).

Individualized Education Programs

All the students knew what an Individualized Education Program (IEP) was and about the IEP process. The IEP document, mandated under the Individual with Disabilities Education Act (IDEA, 1997) includes the student's present level of performance, long and short term goals, special education and related services and their duration. The IEP is developed after considering each student's individual needs, and is revised annually to insure that special education services are appropriate. It is prepared by a team including parents and school personnel. Students fourteen years of age are encouraged to participate in their IEP planning in anticipation for their transition from high school.

While most participants remembered attending meetings with their teachers and parents (usually their mothers), some did not. Lynn told her mother in high school that she did not think she needed to be in special education because she was doing so well. She could not recall ever attending any IEP meetings but instead heard the outcomes from her mother. She said:

They would meet with my *mom*, and they would do that, and then I think they would go over some of the things with me...yeah, but when they ask your mom to come in and do the whole IEP thing I was never there. I might have signed it afterwards...She would say...if they would say, "You still need to be in the classes", or "You can get help if you ever need it."

Ben did not remember attending any meetings either. He said:

I probably heard the outcome but I don't really remember. I think I talked to the counselor before the meetings and then I probably wasn't there for the meeting itself.

Emily though, remembered going to the meetings with her mother but not actively participating. She was asked if she felt as if she truly participated. She said:

Not really. I think I would talk to the teacher ahead of time and write it up with my mom and then we'd go to the meeting. My special ed. teacher pretty much explained to the others what I needed and my improvements.

However, other students were notable exceptions. They participated more actively and felt they knew what accommodations and services they needed to succeed in high school. Several students remembered expressing concerns about goals that they felt were no longer appropriate.

Elizabeth, the student who missed so much time from school due to illness and was in the most restrictive environment of all the students, was ready to take control and make her own decisions in high school. As she remembered:

But like sophomore year I guess, I started to argue with them more. It was all very confusing to me in middle school but in high school, I understood better. ... I asked that they declassify me because they didn't want to...but I probably had about 4 or 5 meetings before they'd let me, um, get declassified because they were like "I don't know if we should do this", and I'm like "It's my life. I'm almost 18 and *I want to be declassified!*" ...and they were like, "That could be a problem", and I'm like "I don't care if it is a problem. I want to do this!" I mean just the pure fact that I wasn't getting accommodations. I wasn't having any special ed. classes...nothing. Also I was doing *fine* in my classes. I mean I was in the National *Honor* Society.

Erik remembered both his parents coming to IEP meetings and felt that he participated and made decisions about accommodations that he needed in high school. He talked about his mother's influence with school personnel throughout his education. When asked if there was ever disagreement over his program, he said:

I don't think I was exposed to a lot of it...uh, and, I think that Mom put her foot down and that's just the way it was. I know...and this is one of the things I'm

thankful for...I know that they wanted to put me on Ritalin but she would not let them. I don't know who "them" was...but a few people said: "Put him on Ritalin" and she would not...let anybody and I'm very glad she didn't.

Allen had also begun to realize that he could be his own advocate.

Yeah, you know, I knew what I needed. I wasn't ashamed of it (ld) and we'd walk into IEP meetings and I'd go, "Well, OK, that wasn't so useful this time"...I didn't take a big part when I was younger but seventh or eighth grade, I kind of started to take more part and I sat there...I thought "They won't hurt me" and as time progressed, I started feeling more and more....by senior year, I was my *own* LD person.

Only a few of the students in this study did not remember being involved in the IEP process. Those students heard the outcome of the meetings from their mothers who were present. Lovitt's 1994 study indicated that few special education students felt included in the IEP process. In this study, few students actually signed their IEPs. Many of those participants recalled that they were confused and uncertain during the meetings. The majority of the students who attended IEP meetings felt that they had little influence over the goals and objectives that were selected for them.

Most of the students in the present study did attend IEP meetings, but it was only as they matured and understood their academic needs that they took a more active role in these meetings. When they were younger, they relied on adult decisions. As they neared high school age, they were able to discuss the goals and objectives that were meaningful to them.

Increasing autonomy and self-determination frequently are mentioned as goals for students with learning disabilities. One method often suggested is to increase student participation in the IEP process (deFur et al., 1996; Lovitt et al., 1994; Vogel & Adelman, 1992). Students who are involved in planning their own programs gain needed practice in self-advocacy and goal setting; skills that are fundamental to their success after high school.

Transition Planning

In response to research on adult outcomes for students with disabilities, transition planning initiatives were mandated in the mid 1980's (Blalock & Patton, 1996; Johnson

& Rusch, 1993). Many students with disabilities were not successfully meeting the demands of adult living after leaving high school. Compared to students without disabilities, those students had higher unemployment and postsecondary education drop out rates, more trouble living independently and interacting socially (Wagner, 1993).

Under the Individuals with Disabilities Education Act (101-476), transition planning must now be included in educational programs of all students with disabilities starting at age 14. Each student's interests and abilities should be the foundation for transition goals. Now that more students with learning disabilities are enrolling in higher education, their transition plans should include goals relevant to that setting (Dunn, 1996; Whinnery, 1992).

Although all the students in this study knew what an IEP was and most said they had been at the meetings and signed the documents, only one student specifically remembered goals that were related to developing skills needed in college. Although her IEP committee pushed her to practice self-advocacy skills, Emily was reluctant. She said that during her last two years in high school there was an effort to get her to participate.

...in my senior year they were trying to get me to tell my teachers myself...and I didn't really want to..like what I have to do now pretty much and I see that's what they were trying to get me to do.

Except for this one instance, no other student recalled specific transition goals. Most seemed to share Lynn's sentiments when she said that everyone assumed she would be successful in college because of her good performance in high school.

They might have said that we can get accommodations in college, or they might have...they might have talked to a bunch of us and said, you know, "College is coming up," and we might not be ready. I don't remember. It wasn't such a big deal for me because I was doing OK. I wasn't really having school problems. I could go to college if I wanted to. I wouldn't get frustrated or just fail out.

Lynn's comments are supported in other research on students with learning disabilities. Students with mild disabilities are least likely to receive instruction for transition (Rojewski, 1992). It is often assumed that students with mild disabilities who are succeeding in high school will not need services to help them make the transition

(Dunn, 1996; Reiff & deFur, 1992). All the participants in this study were mainstreamed for their academic subjects in high school. Several only received minimal support from special education staff such as monitoring or assistance during a study hall period. One student had been dismissed from special education.

Erik, who was in all regular classes by the time he was a senior, felt that he received the same transition services as other college-bound students.

Int.: When you were in high school, did you feel you were prepared to come to college, to be a self-advocate and to know what you're going to need when you're here?
(in college)

Erik: Um, as much as any other student. Partly because I had, you know, phased out. I was back in a regular English class by the time I had graduated (from special ed.) in high school. I feel that I had already had that transition from going from a more supportive environment to a more general. I had already made that transition, so going from high school to college, it wasn't that big of an issue for me, as for say, someone who had been, you know, in a special class throughout their education.

These students registered for support services with the SSD in the Dean of Students Office. Therefore, they were aware of their legal rights and used accommodations. Records and relevant documentation were sent for all of them to the university and most of the students remember their mothers telling them, or taking them, to talk to personnel in the office for students with disabilities. The majority learned of their rights and responsibilities there.

Ben's response was typical:

...during the summer orientation my mom came down and we kind of talked about what we needed to do and that's when we found out I needed to get tested again and then when I came down I met with...I just blew the names (of the staff).

Lynn remembered her conversation with college support personnel when asked what she would do if a professor refused to grant an accommodation request:

I'm very shy, um, I don't know. I guess I'd ask them why or why they think...I'd say, "They said I'm allowed to have this....and by law I'm allowed to have this...and I know to some people it seems unfair, but I'll go talk to the Dean of

Students for you”...That’s what they said, “If any teacher ever gives you a hard time that they can take *action*”.

Of all the students, Erik seemed most aware of his rights and responsibilities in the university setting. He said that he had actually learned about transition and the Americans with Disabilities Act in a class he took at college.

Actually I learned that in a professionalism class here...yeah, I, I didn’t know too much about it until I went...actually it was a writing intensive class as well. It was a professionalism class...everything from manners to business to copy rights...and they went over everything, stuff...basically an intro to everything you need to know....We spent a day on this (the ADA) and on accommodations...for everything and where the lines were drawn at the time. It was like a year and a half ago...and where lines were drawn for certain things.

It is well documented that learning disabilities persist into adulthood (Polloway , Smith, & Patton, 1984; Reiff et al., 1993; Rogan & Hartman, 1990). Problems of learning disabilities continue and may increase due to the differing expectations of employment or postsecondary education. This realization of persisting problems was the impetus behind transition goals. Students need to be prepared for their life after high school graduation.

All the participants planned to attend college after high school, but Emily was the only one who remembered specific IEP goals geared to her transition. Members of her IEP committee encouraged her to tell her high school teachers which accommodations she needed. She refused, but realized later that they were trying to get her to practice the self-advocacy skills that she needed at the university. All the students used accommodations at some time while enrolled at the university. All recalled learning about their rights and responsibilities after their acceptance. No one remembered learning this information while they were in high school.

Many students with learning disabilities choose higher education after high school graduation. Goals and objectives for these students should be focused on specific skills needed for their success as they make the transition to postsecondary education.

Summary of Research Question #1

The participants in this study remembered the strong influences of their parents, families, and early education during childhood. Students recalled their parents' accomplishments and positive personal traits. They spoke of parents who encouraged their strengths and interests, including out of school activities. Parental approaches toward discipline reflected an attitude of providing guidance and developing skills of critical thinking. The students diagnosed in the elementary grades did not remember their initial testing and diagnosis as significant in their lives, however they did recall early academic problems. The majority of the respondents were in resource room settings in the elementary grades. They were aware of the way that they differed from their peers in the general education classroom. This recognition came from comparison with the skills of their classmates or the expectations of their teachers and parents. Students talked of parents and teachers who encouraged them in their efforts and provided academic support. Parents helped with homework, were knowledgeable about their children's educational programs, and helped them understand their strengths and weaknesses. Participants knew of learning problems similar to theirs throughout generations of their families. Most of the students attended their IEP meetings but only one student recalled any goals related to her college transition. All the participants said that they learned about their rights and responsibilities as college students with disabilities after they enrolled at the university.

Research Question #2

How does the understanding of their learning disabilities influence the academic decisions college students make?

The discussion of the second research question focuses on the participants' experiences during the time they were enrolled at the university. As these college students learned to understand their particular strengths and weaknesses, their academic decisions reflected this understanding. Also included in the discussion of the second

research question are personal characteristics that were manifested as the participants coped with the effects of their learning disabilities in college. This section is organized according to the participants' most frequent responses to questions concerning their years at the university. These responses were grouped into topics that became subcategories. The subcategories include (a) college choice, (b) academic problems in college, (c) accommodations and self-advocacy, (d) understanding strengths, choosing a major, (e) compensating for weaknesses, and (f) personal perspectives on learning disabilities.

College Choice

Every participant, except one who attended a local community college, enrolled in the university directly after high school. Most students said that this four year university was their first choice. Two students stated it was their only choice. All the respondents applied because of their interests in specific programs. While most chose the university for academic programs, one student based her choice on participation in a particular sport.

All the students had parents who attended college and the majority of parents were college graduates. In most cases, both parents had college degrees and held white-collar, professional jobs. Many participants mentioned their parents' education and family expectations when asked about their own decisions to attend the university. After completing high school, all the participants recalled assuming that postsecondary education was the next step. Elizabeth's response was typical when she said: "What else would I do?"

Emily, a computer science major said:

I just always thought I would go to college. All the people in my family went to college...I looked at it (this university) for the computer science part and I wanted somewhere that had good services as well.

Although all the students had one or both parents who were college graduates, it was not just family expectations that were the driving force behind their decisions. When asked about her decision to attend college, Elizabeth said:

Eliz: I just assumed I would go.

Int: because of your family?

Eliz: NO...because I wanted to do it. It was just something I wanted to do. I thought what else would I *do* if I didn't go to college. I couldn't get a job if I didn't go to college...like being an astronaut.

Others attributed their motivation to attend college to experiences they had, and contacts with others besides their family members. When Erik was asked if he ever felt there was an option not to attend college, he responded:

Erik: I was always going to college.

Int: It was just in your family?

Erik: Yeah, my family and the summer between my senior year of high school and freshman year of college, and my freshman and sophomore year, I had...I mean I always had, you know, piddly little jobs, you know, breaking my back, and that helped reinforce that I didn't want to do manual labor for the rest of my life. Not that there's anything wrong with that, you see, but that was unskilled manual labor. It's not fun.

Ben, a mechanical engineering major had a similar experience.

I always liked working on mechanical things. I took a lot of shop classes in junior high and in high school I used to work on cars a lot and a couple of summers I actually worked in a garage or two. I think being there and seeing...there was one guy there and I worked with him. He went to school for two years and then he dropped out. He was like "You got to go to school," and a couple other people with the same story. Just seeing the shop, working there, I don't want to spend the rest of my life...

Lynn, the only student who did not enter the university as a freshman, followed a somewhat different path. Although the university was her first choice when she transferred, she wanted to go to a community college close to home after she graduated from high school. Now a junior, she remembered her feelings:

After high school, you know they wanted me to go to college and I said, "I'm not going *anywhere*. I'm going to [the community college]" ...and I said, "If you want me to apply to college, then you have to do it." So my mom applied me to

some schools and I got accepted....but I didn't want to go...I didn't want to leave ...so I went to (the community college).

Int: She...so you applied...She applied when *you* were a senior?

Lynn: Yeah...she applied when I was a senior...and I got into those places and I said, "I am not going"...I didn't want to go....I just wasn't ready to leave home and I wasn't ready to go to a four-year school...be thrown into that....I knew I wasn't ready. I would not have done as well as I have done if I had come here right away.

Children of college-educated parents are more likely to attend college themselves (Astin, 1993) and persist until graduation (Allen, 1999). Their parents' education was clearly a reason cited by all the participants in this study, but it was not the only one. Several students made the decision based not only on family expectations, but also on their own. Realization of broader career choices and better employment opportunities gave these participants an internal motivation for choosing higher education. Most of the participants revealed that the university was their first college choice. Their decisions were based on the fit between their particular skills and interests and university programs. Only one participant came to the university as a transfer student. She also showed an understanding of her particular needs when she said she knew she would not have been successful at this large university directly after high school. She attended a community college near her home because she was not comfortable with the large class size and demands of a large university.

Self-understanding and internal motivation have been cited as factors in the retention of college students (Allen, 1999; Attinasi, 1989). The participants reflected these qualities by their strong desire to enroll in college, coupled with an appreciation for the most appropriate fit for their interests and abilities.

Academic Problems in College

When they were younger, the participants noticed their own academic weaknesses as they compared with the abilities of their classmates. They also were aware that they were not meeting the expectations of their teachers and parents. Their early focus was on

the external factors that accounted for their deficiencies. By the time they reached college, the understanding of their learning differences became internal. The participants themselves noticed areas of weakness. The following comments were characteristic of the academic problems they experienced at the university.

Emily, who had a diagnosed learning disability in reading comprehension, remembered her mother being the one to notice her problems when she was younger. She said, “My mom thought I could do better. She had a learning disability herself.” However, by the time she was in college, she was aware of differences herself. She said:

I’ve had papers for classes and things and I’d read it 3 or 4 times and it wouldn’t make sense and I didn’t understand why it didn’t make sense....and I’d ask somebody, “Why doesn’t this make sense?”, and they’d say, “Well, it does.”..and then I’d read it and see that there were words there that I didn’t read (laughing)

Ben talked about his style of learning:

I am in engineering so I get a lot of word problems and math problems. I sometimes look at it in a different way. A lot of times I have to think it through step- by- step and it takes me a little longer....It takes me a real long time to read something, like read a book or just to kind of go through each sentence and make sure that I understand what is going on...and I have a hard time writing too. It takes me a long time to write essays.

Lynn did well when she attended a community college but noticed problems when she came to the university:

Oh reading...I will read the same page four times and I will not even know what I just read...at all. So that’s why it always takes me so long to read. It takes me *forever* to read...and I’ll read it and read it and read it and I’ll keep going back because I don’t even remember. I mean I remember reading the *words* but it’s not going in. I’m not comprehending, it’s just not going in.

Allen talked about his problems with lack of organization and weak auditory skills:

I still have no organization whatsoever (laughs)...I have *no* organization, but that’s all right, you learn to cope....(in written language)...if I’m writing, for some reason I’m not hearing. So I’ll be writing what you’re talking about right *now*.....and..in the process of finishing up that thought, I’ve missed the next point

just made. I didn't even hear it...That's basically when the notetaker comes in because I can't *hear* the little details...I'm trying to memorize key points so when I see the notes, they make sense to me. But I'm not learning anything till I actually see those notes and all of a sudden...the lecture makes sense...the visual is being attached with the auditory.

One characteristic frequently mentioned in the literature on successful adults with learning disabilities is that they understand the effects of their learning disability diagnosis (Adelman & Vogel, 1990; Gerber et al., 1992; Rogan & Hartman, 1990) At the time of the interview all the respondents had been in college several years. Their comments reflected the recognition of academic problems caused by their learning disabilities. Without this understanding, it is not possible for individuals with learning disabilities to develop compensatory strategies to overcome their weaknesses. Either denial of the disability or confusion over its effects precludes successful adaptation to adult life (Reiff et al., 1997).

Differences Between High School and College

All of the respondents felt successful in high school. As previously mentioned, all were integrated in the general education curriculum for their academic classes. The two students who were not diagnosed until they began at the university also said they were academically successful high school students. Lauren, one of those classified in college, was asked about her high school experience. She answered:

'When I was in high school, I was in what they called the advanced...I was a *fast* learner.'

Erin, the other student identified in college, was not used to the difference she noticed in the amount of work she had to do:

I always did the best in the class (in math) you know. Maybe I was over confident when I went in...(In high school) I didn't study at all. I mean just the little studying you do in high school compared to college, it was nothing at all.

Erin entered the university as an engineering major but switched after she began feeling overwhelmed by the difficulty of the math courses she was required to take. She said that she studied all the time and barely managed to get Ds. She was confused and discouraged by the lack of similarity to her high school success. She sought testing for a

possible learning disability. Her academic problems did not just come from the high expectations of the faculty but from the obvious abilities of her peers.

I think...in...the engineering...they just assumed that they could explain it to you and you would know what was going on....and I'm one of those people that if I don't get it, I have to raise my hand and say "Explain this", and then I'll get it. It's not one of those things that you'll have to explain to me three or four times, I just have to make sure I get it. So I was kind of...intimidated, like "Would you please explain this one more time?" In high school you could do that 'cuz they would go slower...for people who struggled even more. But in engineering all the people were good in math. It seemed to go pretty fast. That's where I got lost...and even working with my professor, she could have explained it to me...but I was like, really...lost...and behind.

The same feeling was evident even among those who had been diagnosed as early as the elementary grades and received special education services throughout their schooling. Emily's response was typical of those experiencing reading problems in college.

High school was pretty easy for me. I really didn't have to do much work (laughs). In high school I really didn't do any of the reading that I was supposed to do.

When asked how she did so well, she explained:

Well, I don't talk much in class, anyway (laughs) Um, I did read, like the novels I was supposed to read. I did, like advanced 9th and 10th grade English. I did read those books but I didn't read much else (laughs)...and then in the 11th grade, the teacher read the books to us....and when there were tests on things, it was usually what they had talked about in class.

Erin seemed to concur in her response:

Well, in high school (laughing) you didn't really have to, you know, you didn't really have to study and when we had to read something, for instance, I would always use the Cliff notes and if I did use the Cliff notes, I didn't read.

Other students had trouble with schedules and the new level of organization that was called for when classes did not meet every day. Allen already knew he had problems

with time management. Problems escalated with the self-discipline required at the university. He said:

...the setting was difficult. The whole, um, going to classes wasn't bad but the sense of it here is, you do it and when it's due you turn it in and you're not mentioning it to me every day....The time management of it and the organization of it was very difficult. The first semester I was dumb. I didn't even come to the center. You know for two to three years, I had seen my LD counselor once or twice a semester. I'd say, "How are your kids? How's the rest of your life? Good to see you."

Lauren, diagnosed in college with a learning disability, saw this same problem between current and previous expectations.

I did really well in high school actually. But I think the difference for me in high school was that I had the classes every day...and I would get tutored in high school...and I mean I got a 3.3 in high school. It wasn't like I wasn't successful. You know in college you just kind of put things off because you don't have it the next day.

For the two students who had not known about their learning disabilities, their academic problems led to the incentive for an evaluation. As Erin said:

I had a lot of trouble with *math*..That was *odd* to me because in high school I did *so* well in math... Then I had three Ds my freshman year and I was like "What's going on?".... I was really devastated I was doing so bad...

Most of the participants, whether they were diagnosed with learning disabilities in college or before, commented on the differences between high school and college. Academic assignments were more demanding. Several respondents who had always been good students began to falter as their grades began to go down. Others realized they would have to improve their study and organizational skills if they were to be successful. University classes did not meet every day as in high school and many assignments were long term. College textbooks were more difficult to understand. Several individuals who had always been excellent math students found that they were unprepared for the advanced level of their classes at the university. No longer easily at the top of their classes, participants realized others' skills were more advanced than theirs.

The contrasts between high school and college expectations that the participants noticed is one of the biggest hurdles facing students enrolling in higher education. Many students, both those with and without disabilities, are not ready for the demands of this new environment (deFur et al., 1996; Ellis, 1994). Student-centered learning, the ability to organize and manage more difficult academic requirements, and increased independence are challenges for all incoming freshmen. Students with disabilities are frequently unprepared for the level of maturity required to overcome these obstacles to their academic success. The external focus of the special education system, beginning with diagnosis and labeling may lead to dependency when students are not accustomed to making the decisions, which personally affect them. The participants in this study successfully learned to meet the academic challenges they found at the university. After they realized the changing demands, they acted to remain the good students that they had been in high school.

Accommodations and Self-Advocacy

Students with disabilities in higher education must become self-advocates. They are encouraged to take part in their IEP planning in high school but they will still receive services if they do not actively participate. The IDEA is the law which mandates services for students with disabilities until they leave high school. The laws that affect them in college have a different focus. Section 504 of the 1973 Vocational Rehabilitation Act and the ADA (Americans with Disabilities Act, 1990) place the responsibility on students for initiating services. These federal laws address modifications and accommodations for students with disabilities in higher education. Among these accommodations are, providing for alternative testing formats, the use of learning aids deemed necessary for a particular student, developing course substitutions or waivers, reduced course loads, and allowing students extended time for degree completion (Jarrow, 1992). Academic requirements are to be considered on a case- by-case basis to allow equal educational opportunities for all.

Although only one participant recalled specific transition initiatives while she was in high school, all the students were aware of the services offered by the university SSD

in the Dean of Students Office. Many of the participants mentioned coming with their parents to meet with support staff before they enrolled at the university. Emily's comment was typical when she said

When I came here for orientation, I guess....My mom made me come down here (laughs)... I think we came and met...with someone when we came to orientation. They told us what I needed.

Several students said that their mothers told them about the services they could receive. When they entered the university all the respondents were eligible to receive services and although they knew how to request assistance, most chose not to until they realized the need.

As Erik said:

I used services only as I needed. I stuck my foot in the water just as far as I had to...I realized I needed help, or more importantly that I might need help and it was a lot of "better safe than sorry".

Lynn shared the same feelings:

My mom said I could come and talk to them to see if I could still get the accommodations. But I took my first chemistry test when I got here... and I failed. That's when I decided to use accommodations.

In addition, by Allen, who saw testing his initial independence as a valuable learning experience:

Yeah, uh, I came and I said, "Let's see what I can do by myself"....I ...failed pretty much...and um, it was a good thing in one sense because I did learn what my limitations were and I learned so much about myself in the sense of where I had deficiencies without a lot of those backups, and that's invaluable to me.

Emily said she used services often since she enrolled at the university. She laughed and said she did not need to be reminded because: "There was one semester that I didn't use 'em...and my grades were not so good."

The most commonly used accommodation involved testing situations. All the students who took advantage of the options available to them mentioned extended time and taking tests in an environment free of distraction. They all felt that it was to their benefit and improved their chances of doing their best.

Lauren explained her use of this accommodation:

Yeah, I get really distracted easily 'cuz when I'm taking a test in a big room and everybody starts to get up, I'm like "Why am I not finished?"...and so in a separate room, there's no one else to compare myself with. I don't focus on it. I mean I have no distractions at all.

Elizabeth expressed the same feeling when she started taking her tests in a separate room:

I wouldn't get as stressed out about tests. I wouldn't have to take it in the same room as everyone else. I mean I get distracted with everyone else in the room, rustling papers...or people finish early. I'm one of those people who has to look up every single time that happens.

Elizabeth had been adamant about declassifying herself from special education in high school. She realized that due to her individual personality and learning style, she would need accommodations to be able to succeed at the university.

Lynn felt that she did not need extra assistance in high school either. She recalled not wanting extended test time as an accommodation. She also remembered telling her mother: "I don't need to go to resource class. I'm getting As and Bs. It's just a waste of time." She felt differently in college and took advantages of accommodations, especially the option of extended time. She said:

I know that, like the testing time really helps. I don't think I would have time to finish because it does take me awhile to read it, then think about it, and write the answer down. The teacher will say "It should take you about a minute to do each question"...and I'm thinking it takes me about 10 minutes to do a question...I do the hard tests like chemistry...and the physics and stuff I would take extra time and then I do it for pretty much most of my classes. If I can use it, I'm gonna use it. If it's gonna help me keep the grades up.

Erik realistically saw the advantage of being allowed to use certain accommodations when he said:

It's just that I saw that I had this opportunity that was available and it would be stupid to pass it up.

However, he added:

I didn't really use the letter of accommodation much. I don't know how much I, um, the services really did help me. They did help my confidence some because I knew that I had something there.

The students who were identified with learning disabilities in college were very different in their approaches to using accommodations. They both were evaluated because of the academic problems they experienced. However, once they were diagnosed, their reactions were not alike.

Lauren seemed relieved that now she had found the source of her problems. As a junior, she had a total QCA of 2.4. She had gotten a 3.6 in the fall semester after receiving accommodations, mainly in the form of extended time on tests. She said:

Well, last semester, yeah, that's brought me up a lot and even though I wasn't diagnosed with ADD, I think I might have mild ADD. Yeah, I get really distracted easily 'cuz when I'm taking a test in a big room and everybody starts to get up, I'm like "Why am I not finished?"...It's like instead of just being relaxed and just thinking about my test, I'm like getting nervous inside because people are finished and I'm *not*.....and so in a separate room there's no one else to compare myself with and I don't have to...I don't focus on it.

Lauren changed her major from Human Nutrition and Food Science, where she was required to take chemistry and anatomy classes that she described as "very difficult", to Hospitality and Tourism Management, where she felt the classes were easier and more interesting. Therefore, the true effects of the accommodations she was eligible for because of her learning disability would be hard to determine.

The story of Erin, a fourth-year marketing major was very different from Lauren's. She was upset when her grades were not good although she felt like she was studying all the time. Her mother suggested a psychological evaluation to determine if Erin might have a learning disability. When testing revealed she did have a learning disability, it might have brought relief by helping her pinpoint the reason for her problems. Unfortunately, the diagnosis only seemed to add new ones. Not used to thinking of herself as someone with a disability, she remembered feeling discouraged. She said she told her mother:

“I *hate* all these papers and I *hate* having to give all these things to teachers. I hate having to get all these tapes...basically read to me”...and I hated having to deal with all that...and ...I think it was psychologically harder for me knowing I had a disability and I have to have all these accommodations that I’ve never had before.....I had to sit down and actually listen to the..words and taking the time to go to the Dean of Students and taking my syllabus and have them read them and I’d have to go back and get them. I was like “I can’t *do* this. The real world’s not gonna accommodate me. I have to figure out...how to do it.”

Therefore, she stopped using the services for which she was eligible. When asked about her attitude toward accommodations, she replied:

I don’t think it’s something you need to do. Studying...is what...is what *really* needs to be done. I mean you’re going to have to realize that you’re going to have to spend more time than everyone else. I mean, we’re not...people with learning disabilities are not the kind of people who can go out drinking the night before a test. I mean, we can’t do that. We have to sit there...for *three* nights before.

...We have to be studying and be sure you understand.

The discovery of her learning disability helped Erin realize that to succeed in college she would have to find new study techniques. Throughout her freshman year, she relied on the strategies that had brought her success in high school. Poor results made her realize their inadequacy in this more demanding academic environment.

The majority of participants took advantage of extended time on tests and took them in a separate room without distractions. Most students mentioned that they were also eligible for other accommodations. A few used the notetaker services provided by the university. Some students obtained copies of the professor’s notes, although several felt they were usually hard to decipher. Ben, a mechanical engineering student, mentioned a method that was very effective for him. His instructor made an outline for the whole class and they could include information as he lectured. Several other students were eligible for books on tape but only one student said she used them. Others felt that the whole process was too time consuming. Elizabeth’s comments reflected those of other students when she said:

I tried that one semester. It was too confusing. It took *longer* to actually

get through the material than when I read it ...myself...They read *everything*....and they start out with reading the acknowledgements, the credits....I mean they read *too* much.

A full range of services for students with disabilities is offered at the university in which these students were enrolled. Although it is the LD service provider's responsibility to consider a student's requests, it is the student's responsibility to inform the college of any handicapping condition. No accommodations will be made if the student does not initiate contact.

Previous studies of individuals with learning disabilities indicate that the acceptance and understanding of the disability is a vital step to becoming a successful adult (Heyman, 1990; Hoffman & Field, 1995; Kronick, 1977; Morrison and Cosden, 1997). College students experiencing a new level of independence must work through the internal recognition of their needs associated with their learning disabilities. Experiences in special education may have fostered their reliance on the opinions of teachers and parents. All the students in this study knew about available accommodations and most met with service providers when they enrolled at the university. They took advantage of support services as soon as they realized the need. Other studies of individuals with learning disabilities revealed that being able to recognize and accept the need for help was vital to success (Gerber et al., 1992; Spekman et al., 1992; Vogel, 1987). The participants' ability to ask for needed support showed an understanding of the weaknesses associated with their learning disabilities. It was also evidence of their desire to meet their academic goals successfully.

Talking to Professors

In this large, state-supported public university, policies and procedures are very clear concerning rights and responsibilities of students with disabilities. Faculty are informed regularly of changes in court interpretations of the Americans with Disabilities Act and Section 504 of the Vocational Rehabilitation Act. Course substitutions and accommodations follow generally accepted procedure and personnel in the Office of the Dean of Students are well respected.

Students with disabilities in a college or university must self-identify in order to receive services. Students with learning disabilities at this university must provide

relevant and recent documentation and discuss their individual needs with SSD in the Dean of Students Office. Students who are eligible for services are given accommodation letters for their professors. When participants were asked how they approached their professors about accommodations, they replied that they showed the letter during the first few weeks of class. Several said that they would also talk to their professors during office hours if they felt it was necessary.

When Erik was asked how he explained his learning disability to instructors, he replied:

I don't go my learning disability is...I say "My weaknesses are, you know, this, and basically I need a little more time...and I might want to have an extra few people read this over"...stuff like that.

He did not use accommodations in all classes but determined when to discuss them based on the nature of the course and an understanding of his own needs. He said:

Well, I sit through the class and find out if there's going to be any written assignments. You know, if it's a 400-person class and the tests are scantron and that's it, why bother? But you know in my English classes I would go in at office hours and go "Look here's this and blah, blah, blah."

Emily, the student who refused to tell her teachers about needed accommodations in high school, still did not find it hard to show the letter of accommodations to her professors at the university. She said she was told about her legal rights and responsibilities after she got to the university. When Emily was asked if it was difficult for her to tell her professors about her learning disability, she said:

It wasn't too hard because you don't really have to tell anybody what your learning disability is. You just have to say that "Here's my letter and this is what I need," and it's OK.

Int: Have you ever been to a class where you *didn't* have a letter with you...where you just told them what you needed?

Emily: I don't think they'd necessarily give me the accommodations...without the proof.

She added:

I've had some professors who didn't understand....but they were like graduate students. I don't always use everything on my letter, for every class, and I think

they were worried that I would pop up and say “I need this now, so give it to me”, and so I just pretty much explained to them. They were OK.

Lynn felt that telling professors about her needs was met with understanding because as she said:

They’ve all run into it before. They’ve all had students who have done it. So they, they know what it is and they’re ready for it.”

When he was asked what he would do if a professor were not willing to give accommodations, Erik, who had learned about his rights in a class at the university said:

The letter of accommodation, it’s my understanding, it’s not an asking the teacher to be nice and do this if they could. I was always under the impression that they don’t have a choice with the Americans with Disabilities Act, in which case you come over here and tell [director of disability services] and she’ll try to politely smooth it out. If that doesn’t work, you know, they don’t have a choice. This is the government telling them, you know, a public institution, that this is what they have to do.

Emily had the same faith in the power of the disability support services personnel when she was asked what she would do if she ever had a professor who did not agree to the accommodations. She said that had never happened but if it did, “I’m pretty sure I could come to the Dean of Students Office and they’d take care of it”

Not all the respondents felt this comfortable talking to their professors about their special needs. Some were more hesitant to disclose their learning disabilities, not knowing what reaction to expect. Although his professors always honored his accommodation requests, Ben, a mechanical engineering major, said:

I didn’t want to have to approach them. I mean I felt like I had a sign on my head that said, “I am an idiot.” I don’t know why. I just didn’t want to do it.

He added:

They are pretty helpful because they have to be and they don’t give me a hard time about it. They don’t really direct it toward me but I don’t think they are real thrilled about it.

Allen, also an engineering major, remembered that during his first year at the university, he had a professor who was reluctant to grant accommodations and he seemed to understand why:

I see a red flag every time he appears because he doesn't believe in it at all...but legally he had to do it. Legally he was forced to do it and he resented it because you know, on his defense, he was teaching engineers. He was preparing you for the real world. The harshness of it is the real reality. You know, there's not going to be somebody to, you know, when you fall, catch you, you know, and especially engineering because there isn't going to be somebody to fix your mistake if you make one. You know, you are that person and you make a mistake, you blow up a couple million dollar lunar lander.

His response reflected his attitude about the difficulty of the major when he said:

In engineering that's very much the attitude...and that's the...I don't want to say that's the way it has to be...but it is very cold natured...Engineering professors in general tend to be very callous...in general...because it's very competition based. You know, "If you can do it, do. We don't care how you do it. We want to see the results and that's what your boss is going to say": 'You're paid to get the right answer in the same amount of time that anybody should get'and that's a big issue...in the same amount of time. "OK, it takes you twice as long to do something, well, if I'm your employer, why do I want to hire you?"

Other students though, saw their professors as extremely helpful and sensitive to their needs. Lynn, a health and physiology major did not disclose her learning disability until she realized she might need accommodations. She recalled a professor's response when she told her:

My very first chemistry test, I went to her and told her that I could get accommodations but I hadn't been over here yet and she's like "Well, here, just finish it in the back room and go and see them this week and get that taken care of."

When she was asked where she took her tests if accommodations called for testing in a separate room, Elizabeth replied:

um, it depends on the professor. Some have you take it here (Dean of Students) because it's easier. Some have you take it in their office and if you have any questions you can come and get them...something like that. They might find a conference room if it's in the same building that their classes are in. They might use another room.

Int: and they don't bother about being there with you during the test?

Eliz: uh, no, no...I mean...I've even been sent to the *library*...to take tests. It all depends on the professor.

Lauren had the same experience but it made her feel a bit uncomfortable. She remembered:

This one professor, he would give me my tests and tell me to take them to the library. It sort of scared me because I knew I wasn't cheating but there was always the possibility that he might think that because he didn't make sure that there was no way I *couldn't*. ...I think he was very sensitive to the fact... that he felt like I was trying very hard and he wanted me to be successful. I mean he even offered me to have my notes on the final exam...if I needed them.

After her sophomore year Erin was diagnosed with a learning disability and tried using support services and accommodations. She became very frustrated adapting to her new role as a student with a disability. All she did was study. There was time for little else in her life. Using recorded books only seemed to add more stress.

I was taking econ my sophomore year when I called my mom and I said "I can't do this anymore" (said like pretend whining). That's when I was having a hard time. I had to sit down ...and actually listen...to the...words and taking the time to go to the Dean of Students and taking my syllabus and have them read 'em and I'd have to go back and get them. I was like "I can't do this...the real world's not going to accommodate me. I have to figure out...how to do it."

All of the participants in this study used accommodations at some time while at the university. All were aware of their rights and responsibilities and mentioned the strong support they felt from staff in the Dean of Students Office. Most of the students were not hesitant to present the letters of accommodation from this office to their professors. The letters paved the way. Students generally felt that they did not have to

explain their disabilities, but could instead discuss the modifications they needed in specific classes. The use of accommodations and modifications for students with disabilities was familiar to the faculty at the university. The respondents in this study felt little resistance to their accommodation requests. Most students believed that their instructors were genuinely interested in helping them to succeed.

Results of an earlier study conducted at the university indicated that the majority of faculty members were willing to make accommodations for students with learning disabilities. Most of the faculty surveyed also felt that students with learning disabilities were able to complete degree requirements. The researchers found that students with learning disabilities at the university found their instructors to be sensitive to their academic needs (Houck, Asselin, Troutman & Arrington, 1992).

The tradition of strong support services at the university provided a foundation for students with disabilities as they talked with their professors about course accommodations and modifications. This is not always the case. Faculty attitudes on some college campuses reflect a lack of awareness and acceptance for the needs and rights of students with disabilities. Students may be left to work out their own accommodations (West et al., 1993), or faculty requirements may take precedence over the legal rights of students (Brinckerhoff, et al., 1992). One of the major responsibilities of the disability support staff at a college or university is to help personnel understand the needs of students with disabilities. Unlike secondary teachers who may be assessed on student content mastery, many college faculty see their primary responsibility as providing information to their students. Learning and understanding may be left to the student. Although faculty may be willing to make accommodations for students with physical impairments, they may be more reluctant to grant accommodation requests for students with learning disabilities. Lacking adequate knowledge, they may question why students with learning problems are in a standard college curriculum (Fonosch & Schwab, 1981). Coordinators of services for students with disabilities can help change negative attitudes through a program of disability awareness on campus. This includes providing information about the legal rights and responsibilities of students with disabilities, as well as those of the institutions in which they are enrolled.

Understanding Strengths/ Choosing a Major

The choices of majors and career goals for the majority of the participants in this study reflected their interests and abilities. They were drawn toward certain subjects, and led away from others, as they became more aware of their particular strengths and weaknesses. They found ways to match their skills and aptitudes with specific majors that would provide supportive work environments when they graduated. There was a noticeable difference for the two students who were diagnosed with learning disabilities after they enrolled in the university. The recent discovery of their learning disabilities did not allow for a clear understanding of the effects of the diagnosis. Both of these students were forced to abruptly change their original plans and find a more suitable major.

Erik, a graduate student in computer science, clearly relied on his strengths and his early interest in computers when he chose his major. He said that although he had limited access to computers at school, he had them at home since the time he was very young. When he decided on a career, he remembered considering the options in light of his interests and abilities:

I'm a bit lopsided, where my English skills are very poor, my math and science skills are very strong. I was actually in some gifted programs, uh, so there was never anything in that area that I didn't want to do....Well, given the career choices that were available to me.. the one that made the most sense....and I played on computers so much, I figured it was either that or engineering. I don't want to be an engineer.

A major in computer science also maximized his strengths and to some extent, helped him avoid his weaknesses. Erik showed a clear understanding of this goodness of fit when asked how he circumvented his learning disabilities in spelling and written language. He laughed and said: "Well, I'm not an English major."

Emily was diagnosed with a learning disability in reading comprehension when she was in the fifth grade. Her math and science skills were strong. She was also a computer science major and talked about her choice and her early interest in computers. When asked if she picked her major because of her reading problems, she said: "Not

really, I had some really good computer teachers in high school who told me it was an obvious strength...and I really liked it then.”

She also remembered having a computer at home and using it frequently. Both Erik and Emily benefited from enriched home environments. They recalled the availability of computers in their homes during the early 1980s before they were as prevalent as they are today.

Elizabeth was a geophysics major and she recalled a life-long love of science. She also had strong math skills. She intended to become an engineer when she entered the university but her classes quickly seemed too difficult and her grades were poor. She was suspended from the university for one semester, but during that time, she knew she wanted to come back. While she was on academic suspension, she stayed in the university town to work instead of returning home. When she came back to the university, she knew that she would have to make some changes. Elizabeth recalled using a rational process of elimination when she decided on another major:

I...I was like talking to my advisor ‘cuz we were always trying to figure out if I didn’t go into engineering what else I could do. Engineering was getting too difficult and I was sick of engineering professors and their attitude so I thought maybe this is better. I had been taking physical geology, and I remembered earth science in high school and I loved it. It was like my favorite one other than physics...was earth science and I loved it. I always collected rocks and everything. So I thought “Geology sounds interesting” and I looked at the classes you had to take and I’m like “oops”, you have to take *biology* and organic *chemistry*....I wasn’t too fond of chemistry and I’m not really that good in biology as it is.and there was geophysics and I thought “That sounds interesting” and I had already taken all these math classes because engineering....that goes toward ...geophysics, then that wouldn’t be a waste of time, so I said “Yeah, I’m interested in that!”

Elizabeth’s interest in science began when she was a very young child. She enthusiastically recalled her exciting discovery of the phases of the moon.

Um, I always liked science...I remember by fourth grade I already wanted to become an astronaut. I had no idea where it came from. When I was really little I

would look at the moon and my dad had these really old books about the phases of the moon and I would look at the books because I couldn't read and I was like "OHHH...I solved this great mystery. The moon's *always* there. You can always see the whole entire thing. It's just that sometimes it just gets covered up." I figured it was maybe a cloud or the sun shining on it....and it was like "Oh, I've discovered this wonderful thing!"

Elizabeth, like many of the other participants, remembered family support for her budding interests. She had many advantages and experiences that fostered this special love. She recalled that her parents sent her to space camp for two summers and took her to Disney World.

She recalled that experience when she said:

I remember the first time I went to Disney World. I was only 8 years old and I liked Epcot much more than the Magic Kingdom....and maybe that's what sparked my interest. I remember really being interested in space...science...and everything.

Lively and enthusiastic, Elizabeth said she was also interested in many other subjects. She had always had a special love for history. The understanding and acceptance of weaknesses associated with her learning disability was a factor in her decision not to choose it for a major. She explained:

I know that I wouldn't be able to be a history major. There's too much reading and there's too much writing. I might be able to keep up with the reading but I wouldn't be able to keep up with the writing. I know that.

Allen had a diagnosed learning disability in reading comprehension but also knew he has difficulty with written language. He talked about the problems he experienced and how that seemed to make him more inclined to numbers.

It's difficult because, it's like...like in English, very difficult to uh, I know what I want to say but to try and get the words in order so other people can understand...Not when I'm speaking more or less... but written's much more difficult. Mostly now it's just a matter of being a little slower and stuff and I still have no organization whatsoever (laughs)....I think I've naturally leaned toward numbers because of that.... Just because numbers are one and one, black and

white. A four is a four...always. There aren't, uh, complications, um..and it's also different from high school, um, in the sense of, um, you do this and in the next line you do this...um, I forgot the question (smiling) What'd you *ask* me? (laughing)

He described the process of choosing a major and considering options:

...Um, I don't want to really say that I was a...nerd in that respect but you know, I mean little things...when you get excited about somebody's calculator. You know I loved calculus...I had a real aptitude for math and science...and also I couldn't think of anything else I'd want to do, kind of like a process of elimination. Well, I don't want to do anything liberal arts...and well...I don't want to be just a science major, so....

Although he came to the university planning to major in engineering, Allen did not choose the specific type of engineering until he could make a more informed decision.

He let himself be guided by his intuition. As he said:

I would have never picked, you know mining engineering initially. I had no interest in mining. I could care less. But because I let it, let it sort of come as it may, um, I hadn't really shut that possibility out...I like the professors. It's, it's very small...um..highly sought after, highly paid....real good jobs

Ben was a mechanical engineering major and recalled his early interest:

I always like working on mechanical things. I took shop classes in junior high and in high school I used to work on cars a lot.

Lynn demonstrated this characteristic of understanding her strengths when she chose exercise and health physiology as her major. She had a longstanding interest in nutrition and personal health. She was also a dancer. These interests balanced against her weaknesses in written language and reading comprehension led her to a major that had many math and science classes, subjects that she had always been good in. She also demonstrated this goodness of fit when she chose to attend a community college near her home after high school graduation. She said she realized that she would not have been able to meet the demands of a large university at that time.

I knew I wasn't ready. I would not have done as well as I have done if I had come right away...I just wasn't ready to leave home and I wasn't ready to go to a four-year school...be thrown into that.

The choice of major for the two students who were diagnosed in college did not seem driven by their strengths as much as a reaction against their weaknesses. Experiencing academic problems made them both change their original plans. Lauren said:

I came in as a nutrition major...and after chemistry (small laugh) and after anatomy...I was really struggling through them and then I just thought "eech" I got to get out of this. So I just did anything to get...me out of it. But my grades were not that great so I just switched majors within my college....and that looked like it (hospitality and tourism) would be for me.

She later decided to switch her major again. This time to education after she had done an internship in an elementary school. She said the teacher education program at the university had a waiting list for applicants so she had applied to an education to a teacher education program in another state where many of her relatives lived.

Erin intended to major in engineering when she entered the university but like Lauren, changed her plans when her grades began to plummet.

I'm not in engineering any more.....I'm in business marketing now. So that's a lot more reading...but math...engineers have to take ...regular calculus...and another math called linear algebra so I was ...taking two maths...I did so bad in...calculus and I was so good at it in...high school. I thought, "If I'm doing this bad, I'm not sure I should go on."

When asked what classes she took in the business marketing major she said:

Advertising...business strategies, dealing with the market place. Basically all it is, is...memorization. You don't have to understand what you're doing. I don't like that part of it...

The choice of a major was also determined by timing. She said she would be ineligible to play sports if she did not choose a major by her junior year.

.... Seriously I was like freakin' out and so I talked to my advisor and I said "We have to pick something"...I had ...no idea what I wanted to do. Marketing seemed fun but I had no idea what it entailed...or anything. I, I think I really

wanted to do something in business because business incorporates a lot of things. So I just said “marketing”. Seriously, it was like one of those things...I was like “OK” (closes eyes and points finger)

Erin was asked if her advisor was instrumental in helping her choose her major and she said:

It was totally up to me. You know she had no idea either how to instruct me ‘cuz I was like a lost cause. (laughing) I’m serious.....but even now I don’t know what it is....I reallydon’t know...what I want to do.... But marketing, there’s nothing that you can’t understand. Like I said...it’s like history...cut and dried. Um, I don’t think I would have done that...knowing that. I think I would have taken the business classes, the ones you have to take initially and then picked something else. Instead I just...like went into business...and after that, I really had to stay in because I was a junior and I really didn’t have time to change...to decide what I want to do. I was a junior and I had to start taking junior level classes.

A characteristic found in studies of successfully employed adults with learning disabilities was their ability to find environments that used their strengths to the best advantage while minimizing their weaknesses (Gerber et al., 1992; Reiff et al., 1997; Rogan & Hartman, 1990; Silver & Hagin, 1985). In this study, the students who were diagnosed with learning disabilities in the elementary grades demonstrated this attribute. They recognized their strengths and particular skills and understood their weaknesses and particular learning styles. Many participants traced the discovery of particular aptitudes and interests to their childhood’s and parents who encouraged them and provided enriching experiences.

The two students who were diagnosed with learning disabilities in college were still searching for the best match between their abilities and career goals. They were adjusting to the recent diagnosis and trying to make sense of the learning disability label. Their good student status in high school was belied by their low grades at the university. During this transition, they both seemed more aware of their academic weaknesses than strengths as they searched for majors that fit their skills and interests.

Compensating for Weaknesses

Every student whether diagnosed in college or years before, said that they did well now because they had learned to compensate for their learning disabilities. Most of the participants mentioned a style of learning that took into account both their strengths and weaknesses. None of the students, even those diagnosed in the elementary grades, mentioned specific instructions in learning strategies. Most participants felt that they had developed their own learning styles that came from understanding of their learning disabilities. Undoubtedly, another important factor in their success was the belief in their own abilities and strong desire to succeed in college.

Several of the students knew they had problems in reading comprehension. They knew they would not remember what they read unless they concentrated very carefully or read the material over many times. After her learning disability diagnosis in college, Erin said she changed her study habits:

Once I learned that reading comprehension was one of my problems, I read...every ...word instead of just..scanning it. Like studying, I take a lot more time knowing that that's my weak point. So I read everything....very detailed...take notes on it when I read it. Before I'd be in class and be kind of like paying attention and wanting to go to sleep. (laughing)

Elizabeth, who also had a reading comprehension problem, noticed a difference now that she is in college and believed she had learned to compensate. She said:

I...I.. think I'm...learning..... how to read more effectively...I think that before I would read something and I wouldn't understand what I read....and I would have to read it...I remember if I just happened to be reading it through and I would get to a sentence....or like a paragraph and I didn't understand what I just read and I would have to read it several times before I actually understood and I would go on....and I don't really do that anymore....I don't feel like I have to.

She added that one of her nephews had a learning disability. His experience was different from hers in the elementary grades when she was in a self-contained classroom. She considered the contrasts when she said:

...My nephew who is 12 now...he, uh, has been classified since he was in kindergarten...What I understood is that they actually *teach* him to accommodate for his learning disability instead of just giving him accommodations to make up for it...which makes me wonder why they didn't do that when I was there?

Lynn felt her skills improved as she got older and that she learned to make up for her deficiencies

I think it was much worse when I was younger. I really had serious problems but ...I just learned how to fix it...and then I learned better grammar. I learned better writing skills...I can't do a lot of things. I think I always learned to overcompensate. That's what I always did..*over* compensate so it never looked like I had a problem.

Erik talked about his difficulty with written language:

It's not necessarily, um, spelling mistakes anymore because spelling's not much of an issue, but if um, just the best way to express an idea and I will nit-pick that and just not be able to say it...and when I don't have a spell checker and I'm writing something out, my spelling ability will dictate my word choice. You know I will say something and *not* be able to say something else because...not that I *can't* spell it but I'm not *sure* that that's how it's spelled.

Allen also showed he was aware of his history of written language problems when he said:

I've gotten substantially better and with the acceptance of like spellcheck and that sort of thing on pretty much anything, it's all right.

Several students remarked on the workload in college and that they had learned they could be successful if they took fewer hours. Lynn came to the university from a community college and said a reduced course load has always worked best for her:

I've always taken like 12 or 13 credits. I've never taken a heavy load. So, I mean, that helped. I think a lot of kids give up because they take too many credits...My method is: take as few as you can and do better in those.

Ben's engineering courses were very difficult for him. He found a unique system to help him deal with the stress he experienced from his demanding classes. He talked about how he learned to cope with the demanding course load:

The second semester I just died. I had seventeen credits and it was like C,C,C, B...I didn't even *pass* one of my classes. I ended up having to retake that. Then I dropped down to 12 to 15. That helped a lot. I took summer classes and that helped a lot.....I took every semester off for a while and worked. That gave me a little bit of inspiration and a little bit of a break.....Took classes last fall and I am taking classes this spring. Will take this summer off and then hopefully graduate in December.

Allen also took a lighter course load than some in his engineering classes. He laughed and said:

I'm at least on a 5-year program. I've got to take 13 hours. You know, there are some people that can take, you know, 18 hours. Well, I personally can't do that. I can't spend 24/7 on my work...and I applaud them...You know, they do good work. I am just not that type of person so I'm going to take a little longer and I accepted that fact that, like last semester I knew I was dropping a class. There was no way I could survive differential equations.

He also compensated for his poor organizational skills by living on campus. He explained:

I live in a dorm. I've never been organized and living in a dorm if I forget something I can always run back and grab it....and I won't forget to eat. Sometimes when I'm by myself I'll go an entire day and not remember to eat. I'll wake up the next day and say "I'm hungry", and this way it's easier for me

It was clear that the majority of participants in this study accepted and understood the effects of their learning disabilities. This characteristic is frequently mentioned in studies of adults with learning disabilities who found personal satisfaction in their lives and their jobs (Heyman, 1990; Reiff et al., 1997; Rothman & Cosden, 1995). Other studies of college graduates found their ability to understand the specific problems associated with the disability became their foundation for gaining control. They were more likely to ask for assistance and to rely on their strengths instead when they recognized their weaknesses (Rogan & Hartman, 1990; Vogel et al., 1993). Conversely, denial of the disability has been associated with more negative outcomes. When individuals with learning disabilities reject their problems, they do not develop effective

strategies for success and therefore cannot compensate for their weaknesses (Morrison & Cosden, 1997).

Several participants recognized that lighter course loads helped them be successful. In another study, Vogel and Adelman (1992) also found that college students with learning disabilities generally attempted fewer credit hours each semester and took longer than 4 years to complete their degree requirements.

Extra Effort/ Persistence

Successful college completion was the goal for every participant in this study. While goals are important to success, certain personal characteristics must come into play for them to be realized. These college students all mentioned the hard work and determination that was required to offset their deficits. A profile emerged of individuals who were not going to accept defeat. Academic success was important but all shared a sense of determination when they talked of how hard they worked to achieve their goals. Erik said:

Fear of failure is a very big thing with me. I don't want to fail....I started graduate school...third week...and I have been, you know, reading stuff 3 times and still not understanding it. I'm reading it. I'm alone. There are no distractions. You know, I'll spend an hour on a page and still not understand it. I still haven't given up.

Ben talked about his motivation and determination to stick with a particularly difficult major:

I guess so many people told me that I couldn't do it that I just wanted to do it...I have this tendency that once I start something to finish it.. I mean just not finishing what I started was a big failure. That is probably what kept me going. It takes a lot out of me.

He talked about his attitude toward the extra effort that was required.

It takes me a while to grasp the concepts. Like I don't always get it the first time. I might not always get it the second time but by the third time I am starting to get it and by the fourth time I've got it pretty well. That was really hard here because everything moves very fast and they don't go over...nothing is repetitive.

Lynn accepted the fact that she had to spend many extra hours studying to keep her grades up. She said:

Well, I have to study. If it's hard I ask questions and make the teacher explain but if it's hard I keep studying. I don't just quit and say "I don't get it" and fail the test...like you know everyone in class says "I don't get it" and fail the test....but I always try to understand. ...I don't know why people give up and don't try. It's easier, I guess that's it. It's just not something I could ever do.....I mean, I knew what I had to do to get a good grade or to understand or to pass the test. So I just did it. I didn't give up. I guess there was like that family pressure and that internal pressure...not really bad or anything, not like a bad case but it's just *there*.

Allen showed the same attitude of perseverance and determination when he talked about his future as an engineer:

I'm not going to be able to finish the same amount of work in an 8-hour day. That's impossible...and that's knowing that I'll have to take work home and I'm not lying to myself in that respect because I'm willing to accept that and that's just the way it's gonna be....I've always kind of lived by the law, you always set your bar a little higher.

and when he talked about his studies at the university:

You know, I have 13 credits and I have 2 classes each of them taking a minimum of 8 hours....and that's 6 credits....takes 16 hours?. I mean that's a serious commitment....and if you aren't willing to make it, you know, you're not going to be around.

Erin remembered always being very competitive and wanting to be successful, both in athletics and in the classroom. About playing sports, she said:

I worked...really hard at [my sport] too. I worked harder than everyone else...after practice and on the weekends. But a lot of people didn't have to do that....either because they were good enough or they didn't want to. But like it discouraged me 'cuz I'm like "Why do I have to....and still I'm not even as good as they are....when they don't do it?....That really discourages me when I have to put in more time or effort.... I feel like I really have to prove a lot of things..to

myself. Maybe that's why I've been working so hard to get my grade point average to a 3.0 so I can say, when I'm older....that I graduated with a 3.0,...or a....whatever.

The participants in this study were clearly willing to persevere and work extremely hard to achieve their goals. Several students had chosen majors that were difficult for them and knew that their academic success required continuous effort. The realistic appraisal of their strengths and weaknesses helped them achieve both their short-term and long-term goals for college completion. The willingness to persist and put forth extra effort to attain goals has been attributed to an individual's sense of control over positive outcomes (Gerber et al, 1992; Hagborg, 1996) and evidence of self-determination (Sands & Doll, 1996). This intrinsic desire to achieve academic goals is an important component of college success (Allen, 1999).

Stress in College

It is not difficult to imagine that as the participants struggled to overcome their academic weaknesses, many of them felt stress. Several students said they were tired of their college routine and the ceaseless effort it required. Constant studying left time for little else.

Ben, who planned to graduate a year after the interview, seemed disheartened by the years of grueling work in his engineering degree program. He said:

I am getting tired of working. I think I realized this semester that all I have done for a long time is just work....and that's what it takes....This semester and last semester have been really hard. I'm just sitting in class. I am really bored with what I am doing. I almost hate it. I'm just hoping I can finish because I don't know if I can take it....Now that I am graduating I am trying to figure out the next step. Like I know I need more school. I figured that much out. I don't want to go to grad school for engineering, I've had enough.

Elizabeth was planning on graduating within a year of the interview. She said that a few years earlier, she had been suspended from the university for her low grades because:

I didn't have any confidence and it was getting too difficult.

Lynn talked about the stress of her own, and others high expectations and her role in her large family:

Everyone...I don't know if we got bad genes or something but *everyone* had problems in school. You know I started doing good in school and they kept me on that. I started doing this and I started doing that...and pressure started and I was looked at as the one, you know who was getting good grades. They put all that effort into *me*...to keep getting good grades....There's pressure from my family but I also put a lot of pressure on myself. Pressure for good grades....and I knew I had to go to college 'cuz no one else had so far. They couldn't have a *fourth* kid not going to college...I mean I was the first one actually growing up...to stay and since...I'm the *smart* one the pressure's on from everybody. They're always asking what am I doing and how's it going.

Her confusion was evident when she said:

I feel like a robot. I mean I'm just kind of doing what I gotta do and I don't know what I want to do. I always do what I *have* to do.

Lynn elaborated on the effect of always striving to do her best in a personal communication (2000):

I found that a lot of times when I was growing up that I was resentful of my friends and family members that I had to work harder and miss out on a lot of things that were going on because I had to study or do work to keep the grades up. And I believe that I did miss out on a lot of things (I still do today).

Lauren, who was diagnosed in college with a learning disability, talked about how hard she studied the summer before when she was only taking one class:

...But like this summer...all I did, I studied for class and I trained for a marathon...but that's like all I did....I studied, ran on the weekdays. I always had to do my homework and all I did was...read...and run.

Erin felt under so much pressure to do well that she worried about doing anything that kept her from studying:

I have to take 18 hours to get out of here and since I have a hard time studying anyway...I spend like all my time studying. I feel like if I have anything extra I'm like "Oh gosh, I'm not going to be able to be able to study"....any activity in my life, even like coming to this (interview)...or I had to go talk to my professor about something else.

Allen talked about his decision to drop a class when he became frustrated with the amount of work he needed to do:

I had 14 hours of homework....and I don't have time for 14 hours of homework for a day. You know there's got to be at least 10 hours for sleeping...maybe seven. ...Perhaps eating would be possible (laughs)

Many of the participants mentioned the heavy toll that their academic courses had exacted. They had set their goals on college completion but most of them were also determined to maintain high averages. Several students mentioned that they were more concerned about their grades than their friends were. Other research of college age students with learning disabilities indicates levels of anxiety higher than norm scores (Gregg et al., 1992) on the Minnesota Multiphasic Personality Inventory. Another study of students with learning disabilities at this university noted that they expressed concerns about the lack of understanding from other students about the nature of learning disabilities and their need for accommodations (Houck et al., 1992). Although the participants in this study did not mention these concerns, they could contribute to their feelings of anxiety.

Personal Perspectives on Learning Disabilities

Understanding and accepting a learning disability as an area of specific weakness allowed the students in this study to accept their problems and put them in perspective. This trait was evident in the way all the students diagnosed in elementary school described their feelings toward their learning disability diagnosis. They talked about themselves as individuals who learned, but learned differently. They were unanimous in feeling that the term learning "disability" was not an appropriate way to describe their learning style.

Ben shared his reaction to the term and his personal interpretation of his own method of learning. The idea of a distinct style of learning as opposed to disability was evident when he said:

...I think it (LD) has a negative connotation to it. I don't think "learning difference" would be a lot better either...just a different style. I mean 85% of the

population thinks *one* way, and I think a little bit differently and some people have a hard time accepting that. It's a problem with how the mind interprets and understands different ideas and concepts from a larger part of the population. Sometimes it takes longer, needs more repetition from...I guess when I think about it, how the brain thinks and works and processes what it sees. It is just in a different way than other people...Does that make sense?

Erik thought that media attempts to oversimplify the problem led to a general misunderstanding of the term. He said:

Personally, I think the term has been, uh, abused and muddled since the mass media has, you know, become a bit of a blitz and it kind of gets distorted and gets projected that this is a learning disability *here* and it cannot be so simply defined like that. Basically I would tend to define it in terms of myself and it's just (sighs)...inability...or...for some reason, unbeknownst to me, my brain is ...wired...differently .and I have difficulty with...written expression. That's me but with other people, their brain is wired and...they have other problems.

Then he made a comment that showed how he had come to understand the personal effects of having a learning disability. He said he believed that deficits in one area had helped him develop strengths in another.

I tend to feel in general, that for every....like thing it takes away from me, it gives me something else in a different area...and I think that applies to everyone. Maybe they just haven't found it or they haven't realized it....I don't think that it's...it's you know, because I have *this*. I...I then have *this*, like someone's doing a balancing act. It's somehow as if I was forced because I wasn't good at it, I worked harder on *this* one..Or (he added laughing), maybe all the stuff in my brain that was supposed to go over *there* ended up over *there*.

Elizabeth also talked of difference, not disability when asked to define the term:

Um, someone who learns in a different way....at a different pace....than the average ..populationof their age bracket.

Lynn objected to the word "disability " and said:

It's kind of a bad term. You know you're not learning *disabled*. I *can* learn. I just learn different. Change it to some PC thing that doesn't sound so bad.

She talked about the effect that good teachers can have on students' learning:

Sometimes it is the teachers. If a student is with, not the right kind of teacher....Everyone has a different way to learn. Teachers just need to be able to vary...to everyone. I mean it's not so hard, I don't think.

Allen said he never felt bad about having a learning disability because similar problems were so common in his family. He said he knew that difficulties in reading, written language and organization had existed for generations throughout both sides of his family. They were accepted as family characteristics before there was a name for them. Now that there is a label of learning disability, he said, "It's just a little weird quirk about us. OK, fine, you gave us a title....whoop de doo." When he was asked how he would define the term, he replied:

I don't really know because it wasn't ever really approached...that direction. I...I really...I really couldn't give a definition. I really don't know. ...Now, I've talked to a lot of people who've had them quote unquote and they....run the whole gambit(sic). You know, everybody's different. Just like in general, it's no different....it's just a different aspect of me....Um, some people are, you know, great musicians. That's an aspect..... It's not who you are. It's just an *aspect* of you. Unfortunately, a lot of times there is a focus on that...weakness...with the label...Labels can sort of stereotype you and lock you into something. I know a *lot* of friends that their parents found out that they, you know, were quote unquote learning disabled and had a difficult time...not *understanding* what it really meant caused that kid more harm than being "OK, this is reality. It's not going away. Now let's deal with it."

All of these students clearly showed that they accepted their learning differences and saw them as particular characteristics associated with the way they learned. The label did not become an identity, only a unique trait. While they were not ashamed of the fact that they had been classified as "learning disabled," they did not talk about it unless there was a need. Most said that the general misunderstanding of the term made them hesitant to tell anyone but close friends.

Erik did not see any reason to tell acquaintances, even at work. He said:

I don't see why, especially if it's not an issue. I don't want to be looked at any differently. Outside of school, in the business world, it's not going to make a hill of beans worth of difference and it's not going to gain me anything and I just don't see the point.I don't identify with it. You know, I don't think of myself as you know, "I'm a blah blah blah person with a...." You know, I don't think like that.

He added that his experiences in special education were an important part of his personal history. He acknowledged though, that even close friends have trouble understanding.

Um, yeah, you know, if you get to talking about your past...obviously it becomes part of that...but I've told people before and they're like "Nah"...but you know, either they didn't believe me or they thought I was joking or something....They don't understand learning disabilities, or...or, they see...or they have stereotypes of you know, people over there and I'm too intelligent for that. They don't understand that I just can't spell...or I can't write...

Emily had the same experience:

Some of my friends still don't believe. They think it's kind of strange that somebody could be smart and have a learning disability.

When asked how she would react if someone were impolite because they did not understand what a learning disability was, she said:

Um, they're not really somebody I would want to talk to.

Elizabeth shared the feeling of the other participants when she said that talking about her learning disability could lead to misunderstanding. She said she usually did not tell anyone but added:

Well, I actually lately told...some people...but I usually don't because I was always afraid how they would react... like would they start treating me differently.....talking *down* to me....that I wouldn't understand them, stuff like that.

Lauren and Erin were diagnosed with learning disabilities while they were at the university. They both were still trying to make sense of the recent diagnosis. Lauren showed her confusion when she described her learning disability:

In math classes or in.....um.....classes like economics, you know, things like that whereI don't know...I mean it involves math but it doesn't only involve math.....I don't know. You know...I've only been diagnosed with it for a semester so I don't really know...like I know where my weaknesses are but I haven't really, you know, figured out where all the problems are.

She talked about what the psychologist had told her:

She just said there were certain areas that... I think, it was like reading comprehension and...I can't remember...some of my math skills. Like college math I do okay on but some of the big math classes that I've had, you know, years ago, I can't remember how to do it...It wasn't really one particular area, she just noted weaknesses in a couple of different areas that she, you know, thought it would be best if I was....in a separate room and get extended time on tests.

She was asked if she felt like she actually had a learning disability. She said:

I really...I really...don't know that.... Obviously she diagnosed me with a learning disability but I think my problem is...that it takes me a little bit longer to understand concepts where some people catch on really easy...it takes me a couple of times around for the teacher to, you know, get it into me...that this is how it works...I definitely think it takes me longer to....uh....understand that kind of stuff. I think it takes me a little bit longer to...I definitely have to reread things and a lot of things I have trouble concentrating and staying with it...and she didn't diagnose me with ADD. She said I was borderline but that I wasn't. She didn't prescribe medicine or anything....But I mean if I really stick with it, you know...I do fine. I mean last semester I really.....stuck with everything and I made a 3.6, got all As and Bs....But if I don't.....then I get far behind.

Lauren told people about her learning disability if she felt it was pertinent. She was in a sorority and was put on probation for a semester because her grades were low. She felt she had to tell her sorority sisters since she was not allowed to vote during rush. She explained:

Yeah, I've told people...friends. I'm not exactly proud of it...but I'm not ashamed of it. I don't go out and tell people but if it comes up, I say, you know, "I got tested and the psychologist thinks it's best for me to take my tests in a

separate room.” You know, people don’t really ask that much. Most people don’t really know when the classes are so big.

Before she was evaluated, Lauren was discouraged about her performance at the university. She remembered bad grades although she said she studied all the time.

When she was told of the learning disability diagnosis, her reaction was positive:

Definitely, it’s a relief. I don’t want to say that I can blame it on something. I don’t....but sometimes when I get really frustrated, I know I just need to read it again..... It’s turned things around. So in a way it’s given me an opportunity because I know I have these accommodations....and if I continue then I think my grades will be fine.

Erin was also diagnosed in college with a learning disability. When she realized that she was having difficulties in college, she said she was interested in finding out if she might have a learning disability. She had been diagnosed only one semester before the interview. Erin did not feel that the psychologist helped her understand her learning disability and was still trying to understand her particular style of learning. She described a person with a learning disability as “when somebody’s slower in some things” and was uncertain how to characterize her own:

They said my reading comprehension is really really....below...you know, the average....I know my...my reading comprehension was very low. I don’t know what else but I came back with a learning disability and then....my mom called up here...’cuz I didn’t know what to do.....and she called up here and I guess talked to them, or whatever, um, and I started, like, working with them....and do the taping with them. You know, books...’cuz that was my weak area. So they started taping the books....whatever, but.....So I found out.

While Lauren felt somewhat comforted to know the cause of her academic problems, Erin felt differently.

Int: What was the feeling when you were told you had a learning disability , relieved ?

Erin: Uh uh...I got really discouraged...It was kind of like at least now I know the reason....but it was like now I have to put up with all this....you know and think about that.

After only one semester of trying accommodations, she gave up and decided to do it on her own. She said she told her mother:

I don't understand why I just can't learn like everyone else. I'm *not* stupid....so I should be able to do this and I'm not dealing with this anymore. I'm just going to act like a normal student and just try my hardest. I hated having to deal with all that and I think it was psychologically harder for me knowing I had a disability and I have to have all these accommodations that I've never had before.

She responded emotionally when asked about her willingness to share the diagnosis of her learning disability, even with her boyfriend of two years.

No, I still *won't* tell people. That was one thing I hated was to bring in the sheet and tell my professors I had a learning disability...because I didn't want them *not* to have to deal with it too...but like to have them look at me...differently. I've been dating this guy for two years and he just found out.....probably two months ago that I had a learning disability...'cuz I won't...I don't like to tell people at all that I have it. I mean he...he actually said something one time like "Are you dyslexic or something?" and you know, I took offense to that when he did it...'cuz like he didn't know. I'm not exactly dyslexic but I do....have some problems.

Although they understood and accepted their learning problems, none of the participants felt it was imperative to tell others. Decisions to disclose their learning disabilities were made based on circumstances. Most of the students decided to mention their learning disabilities only if there was a need for others to know, especially at the university. Although it was not something they discussed with casual acquaintances, several participants mentioned that they had told close friends. As Erik explained, "If you get to talking about your past...it becomes part of that".

These students were self-advocates who did not deny their disabilities. Yet, they were discriminating about disclosure. They felt a stigma associated with the learning disability label and shared a concern of being misunderstood. Several participants mentioned the surprised reactions of their friends, who did not equate the possibility of high intelligence with the presence of a learning disability. The participants' comments about this attitude toward students with learning disabilities are supported in other

research. Teachers have been found to have more negative views of students with learning disabilities (Kavale & Forness, 1996) and to have lower expectations for these students than their normally achieving peers (Dunn, 1996). The label itself may cause individuals to be seen differently and may be confused with mild mental retardation (Lyons, 1996). In a review of the literature, Gajar (1992) found that there was prejudice from employers who perceived individuals with learning disabilities as misfits, even when they were accepting of workers with other disabilities.

Advice for College Students with Learning Disabilities

Several of the participants were asked if they had advice for others with learning disabilities attending college. They shared lessons learned from their own experiences and were reflections of their personal characteristics:

Erik: It just comes down to...perseverance, hard work...and you know, it just *is* (LD) and don't use it as an excuse.

Emily: Try...their hardest. If you want to do it, you can.

Ben: I would come up with a plan before you start. I mean I can talk about engineering here, it is probably the easiest thing for me to describe. I would try to take only 12 credits a semester. I would plan on taking summer classes as much as you can to help you. I would try to get either an internship or a co-op with a company and go out and see how much you would like it in the real world before spending 4 to 5 years getting a degree.

Erin: People are going to have to start realizing that they have to start taking control over their academic career instead of just thinking that this is the same as in high school....You're going to have to know that if you want to use the services you have to do it..not just take the piece of paper that says you have a learning disability. .but you're going to have to work with them and really take the extra effort. I guess...be true to yourself...like "This is how I have to work..and get over it but not just think of it as "Oh God, I can't do it". I mean I have a learning disability...and I can still learn ...because you can. You just have to spend a lot more time than everyone else.

Lauren's grades improved dramatically after she was diagnosed with a learning disability in college. When asked what she might tell someone else, who suspected a learning disability, she said:

Get tested and see for sure because there are ways that you can get help. It makes a difference.

Summary of Research Question # 2

A discussion of the participants' experiences in college revealed their ability to rely on their increasing understanding of strengths and weaknesses in making personal and academic decisions. The majority of the students enrolled in this four-year university directly after high school. For most of them, it was their first college choice. Their decisions were based on the university programs, which they already knew corresponded to their aptitudes and interests. All the participants noticed differences between high school and college. Many of the students sought help from disability support services after their first few bad grades. Some of them waited longer, but they all made the decision to seek help based on their desire to succeed in college and their goal of graduation. The students did not find it difficult to discuss their needs with their professors and most of them felt that the faculty members at the university were willing to do whatever was needed to help them succeed. Several students changed their academic majors when they realized the required courses were too difficult, but the understanding of their interests and specific aptitudes guided the selection of their new majors. The participants believed that they had learned to compensate for their academic weaknesses but they all believed they had developed their own strategies throughout the years of coping with their learning disabilities. Many students talked about the extra effort that was required for them to manage their academic careers successfully. Most of these students said they were eagerly anticipating their graduation. Finally, they offered their personal perspectives on how to deal with the effects of a learning disability in college. Their comments reflected their attitudes of determination and persistence. Their learning disabilities were not cause for defeat, instead the acceptance and understanding of their particular learning styles seemed to add an extra incentive for them to succeed in

spite of past academic problems. Table 3 in Table B3 shows a detailed summary of individual responses to subcategories reflecting the participants' college experiences.

CHAPTER 5

CONCLUSIONS AND IMPLICATIONS

The purpose of this study was to explore how the family environments and educational placements of college students with learning disabilities influenced their academic decisions. In addition, this study sought to identify the ways in which the understanding of their learning disability diagnoses affected these students' choices in college. This study adds to the existing research on factors contributing to the retention and graduation of college students with learning disabilities.

This chapter contains an overview of the problem, a summary of the findings and conclusions and implications for practice and future research.

Overview of the Problem

About 2.6 million students, almost 53% of the total population of students in special education, are currently classified as learning disabled (Lerner, 2000). Increasing numbers of these students are enrolling in higher education and now comprise almost one-half of all students with disabilities in 2- and 4-year colleges. Many of these students do not graduate and drop out even within the first year (Sitlington & Frank, 1990).

It is now recognized that learning disabilities exist throughout an individual's life span (Reiff et al., 1997; Rogan & Hartman, 1990). An ability to understand and adapt to the changing effects of this diagnosis through transition periods is a prerequisite to successful achievement. Due to persisting academic deficits, the transition from high school to college can be difficult for students with learning disabilities. Recent legislation (IDEA, 1997) addressed the need for transition planning geared toward the particular interests and aptitudes of students with disabilities. It is important that transition goals and objectives for students choosing higher education prepare them for that environment (Reiff & deFur, 1992).

College students with learning disabilities should be prepared to accept personal responsibility for their learning. They need to be familiar with their legal rights and responsibilities and understand the importance of self-advocacy skills. Students at this level must request services and should be aware that high levels of independence and motivation are needed to succeed in a postsecondary setting. Parental involvement is especially important during this time of transition. It is the parents' understanding of their child's interests and level of independence that help determine the most appropriate higher education setting.

It is important to make the best match between prospective students and their college choice, but other factors also contribute to retention and graduation. High school GPA and academic preparation are significant predictors of college retention and graduation (Adelman, 1999; Vogel & Adelman, 1992). Many of the same qualities of successful adults with learning disabilities were found in college students with learning disabilities who persisted until graduation. These qualities include: (a) understanding and accepting the LD diagnosis, (b) setting goals which incorporate strengths, (c) early and continued personal support, and (d) persistence and extra effort (Hatzes, 1996; Reiff et al., 1997; Rogan & Hartman, 1990; Vogel & Adelman, 1992).

Purpose

The purpose of this study was to investigate possible factors that contributed to the retention and graduation of college students with learning disabilities. This research was accomplished using qualitative methods to answer the following questions:

- How do students with learning disabilities perceive that aspects of family support and educational programming have influenced their decisions in college?
- How does the understanding of their learning disabilities influence the academic decisions college students make?

Participants

The participants in this study were those enrolled at a four-year public land grant university, who volunteered to be interviewed. They all had documented learning disabilities in reading or written language and had registered for support services with Services for Students with Disabilities in the University's Dean of Students Office during Fall and Spring 1999. Two students were diagnosed with learning disabilities in college and the remainder were diagnosed in the elementary grades.

These students with learning disabilities possessed many of the qualifications for academic success and retention when they were admitted to the university. Admission is competitive and a high school GPA of at least 3.0 is required. Therefore, the college students in this study represented a specific subgroup of all students with learning disabilities and were distinct from many other students with learning disabilities attending less competitive colleges and universities.

Family Environments and Early Educational Experiences

The students' experiences before they attended the university were included in the summary of the first research question. When analyzing the interview data, the responses that occurred most frequently were clustered together as subcategories. The major themes included in this chapter were those common to the majority of participants as they recalled their family environments, the early understanding of their learning disability diagnosis and special education placements, and the academic support they received from their parents and teachers.

Family Environments

Strong parental influences were an integral part of the lives of these university students. They mentioned their parents' personal and professional accomplishments and saw their parents as role models and mentors. Participants remembered childhood environments with many enriching opportunities that included enrollment in summer camps, family vacations and trips. Parents supported and encouraged their children's interests and talents through sports and extracurricular activities. Participants recalled

their parents' thoughtful discipline and positive guidance throughout their early years. Their narratives included references to the lessons learned from being allowed a certain degree of freedom in making personal choices. Students mentioned many other instances of learning problems throughout generations of their families. This familiarity with specific types of problems seemed to foster a general attitude of acceptance and understanding of the participants' own learning disabilities.

The literature on academically successful students with learning disabilities indicates family environments similar to those of the students in this study. Family support, high SES and participation in sports were reported in the backgrounds of college graduates with learning disabilities (Hartzell & Compton, 1990). The outside accomplishments of these individuals balanced their negative school experiences. Many of those adults remembered their parents being involved in their education, being knowledgeable about their learning disabilities and helping them understand and accept their learning problems.

The results of this study support research that found that early and continued family support is important to positive outcomes for students with learning disabilities. Children are molded by heredity and environment and parents are largely responsible for both. The participants in this study benefited from being raised in families where education was valued, their interests and skills were encouraged, a certain degree of freedom was allowed in making choices, and learning *disabilities* were seen as learning *differences*.

Recommendation:

- Parent involvement is crucial at all levels of a student's education and effective educational programming for students with learning disabilities should incorporate efforts to assist parents in understanding the strengths and weaknesses associated with their children's learning disability diagnosis. In this way, parents can help their children develop an appreciation of their particular skills and aptitudes, as well as ways to compensate for their academic deficits.

Diagnosis, Labeling, and Special Education

Most of the students diagnosed with learning disabilities in the elementary grades did not remember the initial testing and diagnosis as significant events in their

lives. However, all the participants diagnosed before college did acknowledge early reading, language, and organizational problems. When they recalled being aware of their own deficits, it was in relation to the presumed abilities of their peers or to the expectations of their teachers.

Although these students did not seem fully to understand their learning disability diagnoses when they were children, several of them remembered feeling different from their peers when they left their general education classrooms for resource room settings. Participants also recalled contrasts between themselves and other students in their special education classrooms, whom they described as *troublemakers*, *mentally retarded*, or *emotionally disturbed and physically disabled*. These differences were more pronounced in high school when several students felt that expectations were lower for them as students in special education classes, who generally did not go to college or participate in competitive academic courses. However, all the participants mentioned the support and encouragement of specific teachers.

Critics of the labeling process suggest that categorizing students as learning disabled may set the stage for future social and emotional problems. Individuals may begin to see themselves as academically inferior, leading to feelings of low self-esteem (Coles, 1985; Danforth & Rhodes, 1997; Skrtic, 1986). But the participants in this study only mentioned *difference*. They recalled being more concerned about the fact that they were leaving and being separated from their classmates than about having a learning disability label. The importance of fitting in and peer acceptance in the development of positive self-concept in children is supported in other research (Jackson & Bracken, 1996).

Many participants remembered feeling different from the other students in the special education classrooms, whom they recalled as having behavioral problems or more severe academic deficits. Most respondents aligned themselves with the other students in their general education classrooms, not those from their special education settings. These students maintained positive academic self-concepts because their parents and teachers helped them understand and accept their learning disability diagnoses as specific problems. As children, they were reassured that although they were smart, they learned differently. This positive message became the foundation of

the faith in their abilities. All children benefit from loving and supportive families, but early environments where children's strengths and aptitudes are encouraged are essential to students with learning disabilities. Negative feelings that come from early academic difficulties may foster insecurity and low self-esteem, but environments where children's abilities are nurtured and valued help them develop feelings of positive self-worth.

Recommendations:

- Social support from parents and families is important to the development of positive self-concepts in children. Parents should be encouraged to support and encourage the positive characteristics and strengths of their children in their home environments.
- Parents can be helped to support their children's independence by providing choices and increasing their opportunities for decision making. In this way, students develop skills of autonomy and self-advocacy that are necessary for success after high school.

Academic Support

Participants recalled their parents' support extending into academic areas where they not only helped with homework but were also involved and knowledgeable about their children's educational programs and special education placements. Many students believed that even occasional poor grades did not alter their parents' positive attitude of support and encouragement. Parental acceptance and knowledge of their children's unique learning styles and educational needs helped the participants understand their particular academic weaknesses as well as their areas of strength. The recognition of learning problems as specific deficits, which were limited to one area, contributed to their feelings of competence and success.

Most of the participants diagnosed in the elementary grades recalled attending IEP meetings, but their active participation in the IEP process did not start until they approached their high school years. Although transition planning is mandated under federal law, only one student remembered any specific goals related to transition. The other students felt that they received the same preparation as their college-bound peers without learning disabilities because they were fully included for all their academic classes.

The literature on students with learning disabilities indicates that many of them do not fully participate in IEP meetings or choose the goals and objectives that personally affect them (deFur et al., 1996; Lovitt et al., 1994). Frequently, transition service providers assume that college-bound students with learning disabilities will make successful adjustments because of their high school success. Therefore, these students are less likely to receive effective transition planning (Dunn, 1996; Reiff & deFur, 1992; Rojewski, 1992). The narratives of the participants support inadequate transition planning. Although they were successful in high school, the participants remembered that they had problems adjusting to the academic requirements at the university.

Recommendations:

- All high school students need preparation for transition. For students with learning disabilities enrolling in higher education, this involves the skills they will need in the new setting.
- Students with learning disabilities must be helped to understand their learning disabilities and encouraged to participate actively in setting the transition goals and objectives that personally affect them.

College Experiences

The summary of the second research question focused on the events in the participants' lives during the time they were enrolled at the university. Four significant areas were included which reflected the students' increasing ability to recognize the strengths and weaknesses associated with their learning disabilities. The participants sought help from university support services after they experienced academic problems. Many of the participants had to rethink their ideas for prospective majors after they began to receive failing grades. Their academic difficulties became opportunities for them to understand their strengths and weaknesses better as they were forced to realistically appraise their goals. As a result, many students changed their majors. The increased understanding of the problems associated with their learning disabilities helped them develop compensatory strategies for their deficits while maximizing their

strengths. The personal characteristics that the participants demonstrated as they dealt with their learning disabilities in college were important to their academic success. These are also included in the summary of the second research question.

Academic Problems and Accommodations

Although the participants were academically successful in high school, they found many differences in their new academic environment. Never having experienced problems before, the two students who were diagnosed at the university were especially concerned over their low grades. Students found their courses more difficult, the workload greater and very little opportunity for individual attention from professors within their large classes. Many of the respondents realized the need for better organization and more effective long range planning. A few of the participants anticipated the possibility of bad grades, but many waited until their grades were poor before they sought help from university support services. The student, who had demanded her release from special education in high school, was suspended from the university for her failing grades. She, along with the two students who had not known they had learning disabilities in high school, were evaluated and diagnosed after they experienced academic problems at the university.

All the participants remembered initially learning about their rights and responsibilities as students with disabilities during their meetings with SSD personnel in the University's Dean of Students Office. While they were in high school, these students did not recall learning about the differences they would experience in college or the skills they would need. More comprehensive transition services might have eased their adjustment by providing them with a more realistic understanding of a university environment. Transition goals and objectives for students with learning disabilities enrolling in higher education are critical. It can not be assumed that college success follows the same path as high school achievements.

Recommendations:

- Full participation in college preparatory classes, practice using similar accommodations, goals and objectives directly relating to understanding legal rights and responsibilities, and practice in self-advocacy should be an integral component of

IEP transition goals. These initiatives increase the chances of a student's successful adjustment to college.

- Collaboration between high school transition specialists and college or university services for students with disabilities personnel is critical. Coordinated transition plans ease the adjustment for students by helping them learn of the changes in their rights and responsibilities at a college or university before enrollment.

Understanding Strengths/ Choosing a Major

As the participants better understood and accepted their learning disabilities, they chose majors that would help them use their skills and in most cases, minimize their weaknesses. All the students diagnosed with learning disabilities in the elementary grades had problems in reading comprehension or written language and their majors reflected their strengths in areas of math and science. The students who were diagnosed with learning disabilities after they enrolled at the university focused less on their interests and strengths, but seemed to choose majors as a reaction against their weaknesses. At the time of the interview, one student had switched majors three times and tentatively decided on education after she was not successful in chemistry and anatomy. The other student recently diagnosed switched from engineering due to her poor grades and had chosen business marketing, although she said about her choice: "Marketing seemed fun but I had no idea what it entailed...or anything".

The literature on individuals with learning disabilities indicates that the ability to understand and accept the diagnosis is crucial to feeling successful as an adult (Kronick, 1977, Reiff et al., 1997; Spekman, et al., 1992). Recognizing the need for and accepting help has been found in adults with learning disabilities who feel their lives to be satisfactory (Gerber, Ginsberg, & Reiff, 1992; Vogel, 1992).

In this study, the differences in the level of understanding their learning disability diagnoses were evident between the students who had been diagnosed many years earlier and those who were diagnosed in college. Years of parental and educational support, the internal recognition of their own strengths and weaknesses, and an understanding of their personal styles of learning, provided the students diagnosed in the elementary grades an advantage in choosing majors that accentuated their strengths while minimizing their academic deficits. The participants who were recently

diagnosed were still struggling to understand their learning disabilities and the impact that the diagnosis might have on their career choices.

Recommendations:

- Career counseling is an important component of college programs for many students with learning disabilities who may not understand their strengths. A focus on career opportunities that match the unique aptitudes of students with learning disabilities is essential for their transition to adult independence.
- Academic advisors and college faculty would benefit from training in ways to assist students with learning disabilities in choosing majors based on their understanding of strengths and weaknesses.

Compensating for Weaknesses

When they were children, the participants who were diagnosed in the early elementary grades noticed their academic deficits in comparison with the perceived abilities of their classmates and the expectations of their teachers. By the time they were in college, they had developed an intrinsic awareness of their weaknesses and understood ways to compensate for their learning disabilities.

All of the participants diagnosed in college or years earlier believed that they were successful because they had learned to compensate for their learning disabilities. Without benefiting from specific instruction, the respondents developed their own strategies to cope with academic deficits. Whether it involved more effective reading skills, choosing words carefully to avoid misspellings, using accommodations or adjusting their schedules, all the participants mentioned strategies that they used to remain academically successful. This ability to compensate for their problems evolved over many years and reflected their increased understanding of the problems associated with their learning disabilities.

The participants were clearly motivated to succeed in college. Even their early academic problems at the university did not deter them. Students sought help from the support services at the university and their difficulties became opportunities for increased understanding and acceptance of the problems associated with their learning disabilities. Other studies of college graduates with learning disabilities indicate that individuals were more likely to ask for assistance and to develop compensatory

strategies when they understood the specific problems associated with their disabilities (Rogan & Hartman, 1990; Vogel, Hruby & Adelman, 1993; Morrison & Cosden, 1997). This study supports other research that cites the importance of understanding the effects of a learning disability as an area of specific weakness. It is this awareness that allows an individual to accept the deficits associated with the diagnosis while at the same time recognizing the strengths that may offset them.

Recommendation:

- Programs for students with learning disabilities, at all levels of their education, should include goals that provide individual instruction to understand their particular strengths, as well as strategies to compensate for their weaknesses.

Personal Characteristics

The students in this study were highly motivated to graduate and were willing to expend the extra effort and hard work necessary to reach their goals. Many of the participants demonstrated an internal drive that would not let them accept failure. They persevered and compensated for their learning problems by spending what they considered to be a great deal of time studying and preparing their assignments. Participants commented on the contrasts between their own study habits and those of their classmates and friends whom they believed cared less about their academic success.

This willingness to persevere and put forth extra effort to achieve personal goals has been cited as an indication of self-determination and belief in control over positive outcomes (Gerber et al., 1992; Hagborg, 1996; Sands & Doll, 1996). While some students with learning disabilities develop feelings of *learned helplessness* (Lerner, 2000) and *external locus of control*, believing that others control the outcomes that affect them, the students in this study demonstrated personal responsibility for achieving their goals. They knew that their families offered support and encouragement, but their belief in their own abilities and their inner drive motivated them to spend the time and energy required to make their college degree a reality. Many of the participants mentioned the anxiety and stress that their academic success had brought. All of these students had been in college for at least three years and many

were tired of the constant studying and the great amount of effort required. However, they all still anticipated completing their degree requirements

The determination found in these college students underscores the importance of finding the right match for students with learning disabilities as they graduate from high school. All of the participants had parents who were college graduates, and none of the students expressed doubts that they would attend college. While family expectations undoubtedly played a role in their decisions, most of the students mentioned goals based on personal interests and their belief in the benefits of a college degree. They chose the university for the degree programs that fit their interests and areas of strength. Several participants said it was their only college choice.

Recommendations:

- The academic success that these students experienced in college was a testament to their ability to choose an environment that matched their strengths and interests. All students with learning disabilities who intend to enroll in colleges or universities benefit from transition planning that supports their personal goals while addressing their particular aptitudes and interests.
- Many college students with learning disabilities experience stress related to the extra effort that is required for them to compensate for their academic deficits. Therefore, stress management training should be available at the university level to cope with these demands.

Implications for Further Research

This study supports findings from research on successful college students and graduates with learning disabilities, which indicate: the importance of supportive family environments, acceptance and understanding the learning disability, adequate academic preparation, and personal characteristics of persistence, goal setting and extra effort. However, several areas are suggested for future research.

- A comparison of the perceptions of college students with learning disabilities and their parents concerning the influences of family environments and educational experiences on students' academic choices.
- Other research reviewing the IEP documents and transition plans of the college students in this study, along with interviews of their high school special education teachers would reveal a comparison between the students' perceptions and actual transition goals and objectives.
- A qualitative study of college students with learning disabilities who were dismissed for academic reasons from a four-year university would offer a comparison to this study, by exploring similarities and differences in perceptions of the family environments and educational experiences of those individuals.
- Longitudinal studies of students with learning disabilities who are still in high school and extend until they have successfully completed college, would assist educators and parents in developing goals for successful transition.
- Research of college students with learning disabilities in other higher education settings such as community colleges and smaller colleges would provide insight into additional factors that may indicate academic success and graduation for this population.

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APPENDIX A

Appendix A1
Approval of Exemption

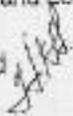


Office of Sponsored Programs

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Blacksburg, Virginia 24061-0249
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MEMORANDUM

TO: Elisabeth MacClarence Steenken, Susan B. Asselin
Teaching and Learning 0313

FROM: H. T. Hurd 
Director

DATE: January 21, 2000

SUBJECT: IRB EXEMPTION APPROVAL- "The Learning Disability Label: Its Role in College
Students Academic Decisions" - IRB #99-349

I have reviewed your request to the IRB for exemption for the above referenced project. I concur that the research falls within the exempt status.

Best wishes.

HTH/baj

cc: Jan Nesper

Appendix A2
Letter Soliciting Volunteers

A call for volunteers!

My name is Elisabeth MacClarence Steenken and I am a doctoral student at Va. Tech. I am currently the director of student services at Bluefield College, in Bluefield, Va. I am writing my dissertation on factors that contribute to the academic success of college students with learning disabilities. I would like to interview successful students like you, to explore possible factors that have led to your success at Va. Tech. I would like to ask you questions about your learning disability, the effect it may have had on the decisions you make in college, and about the support you have gotten from your family and teachers in understanding your learning disability diagnosis. Interviews will last less than an hour and you will be asked to choose the time and place that is most convenient for both of us. Your experiences may help other students with learning disabilities make a successful transition to college. Participation in this research is completely voluntary and if you are selected, your answers to questions will be completely confidential. Your name will not be used at any time. I would certainly appreciate your help with this project.

If you are interested in participating in this project, please respond to this brief questionnaire and return to jwarner@vt.edu.

Name: _____

Email and/or telephone #: _____

Sex : M____ F____

Age: _____

Major: _____

Documentation of learning disability on file at Va. Tech: high school IEP(educational program)_____ diagnostic/ psychological evaluation_____other_____

Thank you , if you are selected, you will be contacted within the next two weeks.

Appendix A3

Informed Consent of Participants

Title of Project: The Learning Disability Label: Its Role in College Students' Academic Decisions

Investigators: Elisabeth MacClarence Steenken
Susan B. Asselin, Ph.D., faculty advisor

I. Purpose

The purpose of this project will be to describe how college students understand their learning disability diagnosis and how this label affects the academic decisions they make. Since transition planning and continued personal support are important to college retention, an additional goal of this study will be to explore those factors as possible influences on the decisions of these students.

II. Procedures

If you choose to participate in this study, I will ask you during 1-2 sessions of less than an hour, to answer open-ended questions about what role you think your learning disability may have played in your decisions and past experiences. The interviews will be held at a time and place convenient for you. You may stop the interview at any time or refuse to answer any question. You are encouraged to seek clarification of any question which you do not understand and may address any issues that you wish. With your permission, interviews will be audiotaped and later be transcribed.

III. Benefits and Risks

There will be no risks other than what you would experience in your everyday life. You will control the extent of your participation by answering only those questions you choose. You may also withdraw from the study at any time. Therefore any risks will be minimal. Personal benefits may come to you from thinking about your history, but the larger benefits will be for others reading about your personal experiences. This may help high schools and postsecondary institutions develop better transition and support programs for students with learning disabilities and let other students realize that others may have shared some of their experiences.

V. Extent of Anonymity

Complete anonymity will be difficult to protect. Your identity may be recognizable from your responses. If you desire anonymity, every effort will be made to comply.

Pseudonyms will be given; interview tapes will be erased or destroyed after transcription. Yet it is still possible that anonymity may be comprised.

VI. Compensation

There is to be no material compensation to any volunteer by anyone supporting this research

VII. Freedom to Withdraw

You can refuse to answer any questions and you may withdraw from this research at any time by telling the interviewer or by contacting Dr. Susan Asselin at Va. Tech (540-231-8206) or sasselin@vt.edu or, Tom Hurd, IRB chairman (540-231-5281).

VIII. Approval of Research

This research project has been approved as required, by the Institutional Review Board for Research involving Human Subjects at Virginia Polytechnic and State University by the Department of Teaching and Learning.

IX. Subject's Responsibility

I voluntarily agree to participate in this study. I will participate in 1 to 2 interviews of less than 1 hour with the researcher. The time and place will be mutually agreed upon. With my permission and prior knowledge the questions and my answers will be audio taped.

X. Subject's Permission

I have read and understand the Informed Consent and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent for participation in this project. If I participate, I may withdraw at any time without penalty. Please indicate whether or not we may use your proper name on transcripts. You will be offered a copy of this form.

I wish to participate in this study

Date

Appendix A4
Sample Interview Questions

Questions often followed participant initiated themes, the following are representative of specific interview categories.

Understanding/ Acceptance of the Learning Disability

How old are you now?

When were you were told that you had a learning disability?

Do you remember who told you? How /when were you told? Do you remember specific feelings associated with that experience?

Can you tell me more about that time in your life?

Were you told why you were being tested?

Do you remember any feelings about the tests? What were they like? Do you remember the person who did the evaluation?

Did you notice any academic problems when you were younger? In what areas? How did you know?

Do you really believe you have a learning disability?

How would you describe your learning disability now?

Do you think it affects other areas besides academics?

What kinds of things are you good at? How do you know?

What activities do you enjoy? Has that always been an interest?

Are there things you avoid because you know you do not do them well?

What do you do if something is very difficult?

How do you think your life would have been different if you did not have a learning disability?

What kind of a job would you like to have after you graduate? Do you think that career makes use of the things that you are good at?

Parents and Families

Would you tell me about your parents? Where do they live now? Did they both work when you were younger? What kind of jobs do they have now?

Did they go to college?

Do you have any brothers and sisters? How old? Where are they now?

Does any one else in your family have a learning disability? How do you know?

When you were young, did you take vacations with your family? Where did you go?

Did you have a favorite place?

Did you play sports or participate in drama, scouts, or other community activities?

Did your parents encourage you to participate?

What kinds of activities did you like as a child?

Were your parents involved in your school activities?

Do you remember if your parents went to your IEP meetings?

Do you remember your parents talking to you about learning problems?

Did they help you with your homework?

Do you know if your parents ever disagreed with your special education program?

What do you think your parents like best about you?

How did your parents react if you broke a rule (stayed out past curfew, etc) when you were younger?

Do you think your parents expected you to go to college? How did you know?

Did they help you choose a college (this college)?

Do you think they would have been disappointed if you didn't go to college?...or if you didn't graduate?

Educational Experiences

Were you in a special class because of your learning disability? What kind?

Do you remember how you felt about your special education classroom?

Do you remember any of the other children in the class?

Did you notice that you had any academic problems when you were younger?

How old were you when you started going to special classes? Were you in resource, self-contained? What subjects were you in the resource room for?

Do you remember any special teachers? What were they like?

Did you have special education classes in high school?

Do you know what an IEP is?

Did you go to your IEP meetings?

Do you feel that you were able to tell the committee what you wanted in your IEP?

When did you decide you wanted to go to college?

How did you choose this university?

How is college different than your high school experience?

What kind of adjustments did you need to make?

Did your teachers prepare you for what it would be like?

Do you use accommodations here at the university?

Which ones, do they help?

Was there a time when you didn't use accommodations? What changed your mind?

How do you tell your professors that you need accommodations?

Are they understanding about accommodations? What would you do if they would not give you the accommodations?

What is your major now? How did you decide? When did you make this decision?

Have you changed your plans since coming here?

Would you choose this university again? What kinds of things did you like about the environment here? What kinds of things do you not like?

Are there things you have learned that you could tell other students coming to this university?

Appendix A5
Interview Protocol

Name: _____

Date: _____

Observation of setting:

Where

When

Others present

Overall impression

Demographic Information:

Age/Race/Sex

Marital Status/children

Home Address/phone/ email

Interests and Hobbies

APPENDIX B

TABLES

Table B1
Theme Categories and Subcategories

BEFORE COLLEGE

Family Environments

Parents' Education

Leisure and Recreational Activities

Discipline and Guidance

Family History of Learning Disabilities

Diagnosis and Special Education Placement

Early Academic Problems

Special Education Placement

Academic Support

Grades

Teacher Support

Individualized Education Programs

Transition Planning

DURING COLLEGE

College Choice

Academic Problems in College

Differences Between High School and College

Accommodations and Self-Advocacy

Understanding Strengths/ Choosing a Major

Compensating for Weaknesses

Extra Effort/ Persistence

Stress in College

Personal Perspectives on Learning Disabilities

Advice for College Students with Learning

Disabilities

Table B 2

Participants' Background Information

STUDENT	AGE	LEVEL	MAJOR	DIAGNOSIS	GRADE DIAGNOSED	PLACEMENT	PARENTS COLLEGE.	LD HISTORY
Allen	20	Soph.	MINE	WL	3 RD	Resource	Both	Yes
Emily	20	Jr.	CS	RC	5 TH	Resource	Both	Yes
Lynn	22	Jr.	HNFE	RC	3 RD	Resource	Both	Yes
Elizabeth	23	Jr.	GEOL	RC	3 RD	Self-contained	Father	Yes
Erik	24	Grad.	CS	WL	2 ND	Resource	Both	Yes
Ben	23	Jr.	ENGR	WL	2 ND	Resource	Father	Unknown
Erin	22	Sr.	MKTG	RC	college	NA	Both	Yes
Lauren	21	Jr.	EDCI	RC	college	NA	Both	Yes

Key:

CS- Computer Science
MINE- Mining Engineering
MKTG-Marketing
EDCI- Curriculum and Instruction
ENGR- Engineering
GEOL- Geology

HNFE-Human Nutrition, Foods and Exercise

RC- Reading Comprehension
WL Written Language

Table B 3
Participants' College Experiences

	Academic Problems	Accommodations	Self-Advocate
Allen	Organization Written language	Lived on campus Reduced course load Extended test time Notetakers	Yes
Emily	Reading comprehension	Extended test time Testing in separate room Books on tape	Yes
Lynn	Reading comprehension	Extended test time Reduced course load Notetakers	Yes
Eliz.	Reading comprehension Math skill deficit	Extended test time Testing in separate room Changed major Books on tape Notetakers	Yes
Erik	Written language Spelling	Extended test time Careful choice of words Spell check, proofreaders	Yes
Ben	Written language Math & reading comprehension	Extended test time Copy of professor's notes Took alternate semesters off to Work, as break from college	Yes
Erin	Reading & math comprehension	Tried books on tape Extended test time Changed major	No
Lauren	Reading & math comprehension	Extended test time Tests in separate room Copy of professor's notes Changed major and transferred	Yes

Elisabeth MacClarence Steenken
711 High Street
Pearisburg, Virginia 24134

Education

Virginia Polytechnic and State University, 1997 to 2000

Doctoral candidate

Major: Teaching and Learning (EDCI)

University of Virginia, 1980-1981

M.Ed.

Major: Special Education/ Learning Disabilities

Hood College, 1970

B.A.

Major: French

Employment history

Bluefield College, 1995-present

Assistant Professor; Director, Services for Students with Disabilities

Giles Co. Public Schools, 1984-1995.

Teacher of students with learning disabilities

Tazewell Co. Public Schools, 1981-1984.

Teacher of students with learning disabilities.

Stafford Co. Public Schools, Stafford Co. Va., 1977-1979.

Classroom teacher, elementary grades 2, 4.

The Merrimac School, Washington, D.C., 1974-1976.

French teacher

Work Related Activities:

NAIA Advisory Board for Students with Disabilities

Member, Virginia AHEAD

Member, Council of Exceptional Children

Member, Virginia Education Association

Member, Gifted Education Advisory Board, 1997-99

Member, Professional Advisory Council, Giles Co. Public Schools, 1988-1995,

Secretary, 1994-1995.

Mentor Program, Bluefield College, 1992-1993

Chairman, Special Education Department, Narrows Elementary School, 1987-1993.