A STUDY OF PERCEPTIONS OF COLLEGE STUDENTS WITH LEARNING DISABILITIES

By

CATHERINE M. BARTON

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University of Wisconsin

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A STUDY OF PERCEPTIONS OF COLLEGE STUDENTS WITH LEARNING DISABILITIES

Thesis Approved:

Barbara Wilkinson
Thesis Advisor

Imogene L. Rand

Joseph Pearl

Thomas C. Collins
Dean of Graduate College

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TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

Figures Page

CHAPTER I

INTRODUCTION

The purpose of this study is to investigate the characteristics necessary for success at the college level as perceived by students with learning disabilities (LD). Additionally, the study examines the relationship between these perceptions and the student's actual school performance, and between these perceptions and the student's life satisfaction. Information from this study will enable service providers to better assist students with learning disabilities. This study is important because it recognizes and emphasizes the students' perspective of their disability as it relates to success in college.

Statement of the Problem

Section 504 of the Rehabilitation Act of 1973 (Federal Register, 1973) grants adults with disabilities access to postsecondary education. Since this law came into effect in 1981, obstacles to higher education have been legally removed for individuals with learning disabilities. As a result, a significant increase in enrollment of this population in colleges and universities has occurred (Decker, 1985). In the past decade those served by special education in the public schools have benefited from numerous state and federal laws as well as an increased awareness of their educational needs (Longo, 1988; Minner & Prater, 1984). The success these students have experienced due to improved identification, instruction, and support has encouraged many students with learning disabilities to pursue postsecondary education (Collison, 1989). Access

alone is not sufficient for this population to succeed. Many students with LD arrive on college campuses unaware of how to meet the academic demands placed upon them. They are unprepared and lack the skills, attitudes, and behaviors necessary for success in such a competitive environment. This, coupled with the increasing numbers of students with learning disabilities attending colleges, has created concern in college instructors and administrators. The interest of professionals in the field has thus been directed toward issues pertinent to college students with learning disabilities and attempts to maximize their chances for success (Decker, Polloway , & Decker, 1985; Ellis, Sabornie, & Marshall, 1989). Improved student success not only enables a more productive life for the individual, but increases student retention, allows for higher academic standards for classes and departments, and positively influences declining enrollment, which is the concern of many college officials (Bliss & Mueller, 1987; Collison, 1989).

Background of the Problem

The majority of current literature concerning college students with learning disabilities deals with variables associated with success and failure in an attempt to help service providers develop programs to assist these students (Allard, Dodd, & Peralez, 1987; Cowen, 1988; Vogel & Adelman, 1989). Findings of other groups of studies are directed toward parents and teachers of students with learning disabilities (Cowen,1988; Ellis et al., 1989). Few studies focused upon the ideas and perceptions of the students themselves in an attempt to gain new perspective.

The existing studies concerning issues faced by college students with learning disabilities can be categorized in several ways. Some relevant studies examine successful college students with LD, focusing on study skills and

certain personality variables related to success (Brozo & Curtis, 1986). Other studies compare the higher failure rate of students with LD versus their non-learning disabled peers and seek probable cause (Vogel & Adelman, 1989).

The existing studies also differ in their method of data collection. Data is obtained in various ways. Some studies utilize written questionnaires, short answers, or test results, while others employ interviews as part of their data collection method (Speckman, Oi, Goldberg, & Herman, 1989). Studies may also be differentiaited by whether they include a measure of satisfaction with one's life in their definition of success or utilize a solely objective measure of success such as grade point averages (GPA). Researchers caution against relying only on visible, conventional measures of success (such as GPA), which may create a false positive picture. Also, when attention is paid to the social, emotional, vocational, and related areas of personal growth it may alter the overall view of the success of the individual with LD (Ealy, Leuenberger, Morr, & Friedman, 1985). It becomes necessary then to go beyond objective measures of success and to devise a way to measure social, emotional, and vocational growth of this population.

As a result of current studies, different strategies have been suggested to assist the student with LD. Instruction in study skills and coping strategies is advocated by many to enable students to function successfully in a competitive academic environment (Cowen, 1988). Other studies focus less on study skills and point to elements of motivation and determination as prominent factors that lead to success for college students with learning disabilities. Similarly, some attention has now been given to the vital role of self-perception (student's feelings and beliefs about themselves), and how it relates to academic achievement. A study conducted by Bliss and Mueller (1987) found self-perception to be the determining factor between study skills and study

behaviors. A non-random sample of 1052 non-LD undergraduates responded to the Study Behavior Inventory, Form D (1982). Results were factor analyzed, yielding three factors: defining feelings of competence, preparation for routine academic tasks, and preparation for special academic tasks such as term papers and examinations. Based on data collected, the researchers differentiated between study skills and study behaviors and proposed a model whereby the students' feelings and beliefs about themselves played an important role in the transfer of study skills they possessed to study skills they practiced (Bliss & Mueller, 1987). They state: "Our model suggests that the reason students who possess appropriate study skills may not exhibit positive and productive study behaviors is they have negative perceptions of themselves and their abilities as students" (p. 17). They suggest that providers of developmental education and study skills programs could be more effective if they included a strong counseling component in their programs. Further, they feel that attempts to change these negative perceptions should occur in an "organized and purposeful manner" rather than addressing them as a "minor adjunct" to a program which focuses mainly on academic and study skills (Bliss & Mueller, 1987, p 17).

Although the Bliss and Mueller study was carried out on a non-LD population, the role of self-perception has also been recognized by researchers who concern themselves with college students with learning disabilities. Researchers who suggest ways of dealing with the problems commonly faced by college students with learning disabilities include self-perception as an important focus (Decker et al., 1985). Decker, et al. address the fact that as individuals with LD grow older, their problems tend to become more complex. Thus, to be most effective, programs designed to assist the adults with LD should deal with academic, social, psychological, and vocational issues. Decker

et al. also address the issue of self-perception. They advocate that training individuals to modify their thinking and unrealistic belief systems (if unproductive) should be an integral part of a multiple component program providing service for college students with learning disabilities. Although attention to a student's belief system, as part of a multiple component program, is thought to hold promise for improving the academic effectiveness of students with learning disabilities, little work has been done in this area (Decker et al., 1985).

Implications of the Study

If self-perception is a mediating factor in the transfer of study skills into study behaviors, as Bliss and Mueller (1987) found it to be in a non-learning disabled sample, and if issues pertaining to self-perception should be an integral part of programs serving college students with LD as Decker et al. suggested, then understanding how students with LD perceive themselves is of fundamental importance to those interested in maximizing the success of this population. Knowledge of the belief system of individuals with learning disabilities and the possible role the beliefs play in determining behavior would be valuable information for college service providers, parents, teachers, and for the students themselves. Students could be invited to assess their feelings and self-perceptions and observe how these influence their behavior, then possibly begin to use this information to create personal goals.

Purpose of the Study

The purpose of this study is to examine the ways college students with learning disabilities describe both their perceptions of self and what is necessary for success at the college level, and to examine the relationships

which may exist between these perceptions and the student's school performance and between these perceptions and the student's life satisfaction.

Research Questions

Based on the purpose of this study and the Q-sort which has been developed for it, the following questions will be posed:

1. What belief types (or factors) are characteristic of college students with learning disabilities in terms of perceived self?
2. What belief types (or factors) are characteristic of college students with learning disabilities in terms of how they perceive success at the college level?
3. On what belief types (or factors) would students with high-life satisfaction load?
4. On what belief types (or factors) would students with high GPA load?

CHAPTER II

REVIEW OF RELATED LITERATURE

Background

It is first necessary to define a learning disability and to examine the commonalities of manifestations of learning disabilities in students at the college level. Secondly, the post-secondary educational opportunities available to individuals with learning disabilities will be addressed, as well as the response of higher education to the presence of this population on college campuses. As found in the literature, research pertaining to LD adults will be critiqued and six variables thought to be related to success in college students with LD will be discussed.

Learning disabilities do not disappear in adulthood; they continue to be persistent and pervasive (National Joint Committee on Learning Disabilities [NJCLD], 1987; Silver & Hagin, 1964; Vogel,1982). The ways in which the disability manifests itself, however, change through the life span and vary in degree from one individual to the next (NJCLD, 1987). A learning disability manifests itself in ways unique to each individual. The areas which may be affected are reading comprehension, spelling, writing, math computation, and problem solving. Other possible areas of difficulty are organization skills, time management, and social skills (Barry, Brinkerhoff, Keeney, & Smith, 1983).

The most commonly accepted definition of learning disabilities was formulated in 1968 by the National Advisory Council on Handicapped Children

and later incorporated in the Education for all Handicapped Children Act of 1975, PL 94-142. It states:

> Children with special learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or using spoken or written languages. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc.. They do not include learning problems which are due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional disturbances, or to environmental disadvantages. (Section 121a.5, Federal Register, August 23, 1977)

This definition was revised several times, most recently by the National Joint Committee on Learning Disabilities to include both young children and adults. It states:

> Learning disabilities is a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic to the individual and presumed to be due to central nervous system dysfunction.
>
> Even though a learning disability may occur concomitantly with other handicapping conditions (e.g., sensory impairment, mental retardation, social and emotional disturbance) or environmental influences (e.g., cultural differences, insufficient/inappropriate instruction, psychogenic factors), it is not the direct result of those conditions or influences. (1987)

While the population of adults with learning disabilities is a heterogeneous one, in an attempt to assist in identification of college students with LD, Vogel (1982) isolated certain commonalities which exist in the population of college-bound LD adults. The first of which is the presence of average or above average intellectual functioning. Due to the relative immaturity of the field of study, those students identified with learning disabilities in elementary schools are arriving on college campuses that have little or no experience in identifying or addressing their needs. In many cases, college faculty are uncertain about the intellectual functioning of students with learning disabilities, at times confusing them with students of limited intelligence and suggesting that they are unfit for a college environment. This misperception on the part of faculty affects their expectations of LD students. Indeed, a study conducted by Minner and Prater (1984) revealed that the expectations of college faculty for students identified with LD tend to be negative. Faculty were not optimistic about the academic abilities of these students, and they were not confident in their ability to work with them. In most colleges and universities, class size prohibits the kind of one-on-one interaction between students and instructors which would allow the student to demonstrate his or her ability to adjust and succeed with only minimal instructional adaptation (Minner & Prater, 1984). Thus the negative perceptions on the part of instructors remain unchallenged. Recommendations were made by Minner and Prater for development and training programs designed and implemented for college faculty members. Greater understanding of the intellectual abilities of college students with learning disabilities may improve professors' attitudes and eventually result in increased educational opportunities for learning disabled students.

In addition to average or above average intelligence, the second commonality LD college students share is what Vogel (1985) describes as intra-individual differences, referring to the unevenness of their abilities. Confusion may ensue when a student appears to master the material in one part of the course with ease, but when the course material changes throughout the semester, calling on proficiencies in other skill areas, the student's weaknesses become apparent and he/she experiences significant difficulty.

The third commonality Vogel cites is a severe discrepency in the area of basic skills. While deficits in listening and speaking may not be readily apparent, deficits may actually exist. In addition, despite adequate intellectual functioning, college students with learning disabilties often have significant inadeqacies in reading, written language, and mathematical ability.

It is still common practice to label students with LD as lazy or slow (Collison, 1989). Counseled towards vocational education or general education tracks in high school, these students are often discouraged from pursuing higher education. Many students drop out of high school in frustration, while those who do graduate find themselves underemployed or unemployed as adults (Collison, 1989; NJCLD, 1987; Vogel & Adelman, 1989). Of those who are accepted at a two or four year institution, many flounder because they lack the skills necessary to succeed (Dexter, 1982).

Response of Higher Education

Since serving students with learning disabilities at the secondary level was the focus of the 1970s, the 1980s called for a response to these students' needs at the postsecondary level (Vogel, 1982). While federal law requires colleges to accommodate individuals with LD, these accommodations "range from primitive to sophisticated" (Collison, 1989, p. A29). The Learning

Disability College Unit at the University of Connecticut helps other colleges and universities develop programs for students with LD. Stan F. Shaw, the director of the program, relates that colleges have not yet learned how to deal with students with LD, and he cautions parents and students to regard college guides lightly due to false impressions they give about services provided (Shaw in Collison, 1989). Rogan from College Miseracordia explains how colleges may falsely advertize adequate suppport services for students with LD, leaving parents and students misinformed. He states:

> Many colleges mistakenly believe that the tutoring and remedial programs will help learning-disabled students. A college might not know it is lying. It might not know what it is getting into when it is dealing with a learning-disabled student. (Collison, 1989, p. A29)

The impetus for institutions of higher education to meet the needs of students with learning disabilities is created by pressure from the students, their parents, and professionals to accommodate the students' needs at the college level, and the requirement to comply with section 504 of the Rehabilitation Act of 1973 (Vogel, 1982). Additionally, as enrollment declines at the postsecondary level, interest grows in providing services for students with learning disabilities, viewing these students as a desirable target population for recruitment (Collison, 1989). One percent of college freshmen are said to have a learning disability according to the most recent edition of the annual survey "The American Freshmen: National Norms" (Collison, 1989). However, because data on this population are not universally documented, it is difficult to determine the actual number of college students who have learning disabilities (Polloway, 1987).

Models of Success Versus Deficit

A growing body of professional literature on students with learning disabilities compares LD individuals and non-LD individuals. These studies often find students with learning disabilities to be lacking in a significant number of areas. If one compares individuals with and without LD, the deficit of the student with a learning disability becomes the focus. This approach contributes to our understanding of the difficulties experienced by students with learning disabilities yet, it does not help pinpoint what successful students with LD do that distinguishes them from their less successful peers with LD. It has been suggested that the deficit model be reevaluated and that a body of literature which focuses on a "model of success" be utilized as well (Spekman, et al., 1989).

There is an increasing interest in taking a "model of success" approach (Gerber, 1990; Spekman et al., 1989). Gerber (1990) states in a description of his current study that ". . . instead of emphasizing obstacles and problems inherent in the LD adult . . .[his study] seeks to investigate commonalties of success that many LD people have experienced" (p. 16). Gerber's study focuses on vocational issues and attempts to ascertain the unique characteristics which highly successful adults with LD possess that enable their success in the work world. Using a high success group of adults with LD (N = 46) and a moderate success control group (N = 25), he was able to isolate key themes that were indicative of high levels of vocational success. He found that an overiding theme related to the subjects' level of success was the ability to take control of their lives. The greater the degree of control, greater was the likelihood for success. Taking control was characterized by several themes categorized as internal and external decisions. Internal decisions included

desire, goal orientation, and reframing or "reinterpreting the LD experience in a more positive or productive manner" (Gerber, 1990, p. 14). External decisions related to adaptability and included persistence, learned creativity, social ecology, and goodness of fit, or putting oneself "in a surrounding where they could succeed" (Gerber, 1990, p.20). Gerber's main method of data collection was retrospective interviews. Subjects were identified by a nomination process from various national organizations and subjected to additional screening criteria (Gerber, 1990).

Also using a model of success, Spekman and colleagues' (1989) eight year follow-up study attempts to find patterns of success in young adults with LD who have graduated from their educational center. The two main purposes of their study were to examine and describe the current educational, social-emotional, and vocational adjustment of former students from their educational center and to determine what trends or themes the students perceived as being most important in enabling their success and life satisfaction.

This study defined success in four ways; 1) an individual's achievement of certain accomplishments that are both societally accepted and expected for the developmental period they were in, 2) the individual's perception of themselves as doing well and being satisfied with their current life situation, 3) a match between the individual's actual current activities, accomplishments and accounts of relationships and their perception of these events and aspirations, and 4) evidence of effective coping strategies to overcome academic, interpersonal, and/or career hurdles (Speckman et al., 1989). This study utilized information gathered from parents and from the young adults themselves.

Another study which utilized the success model approach was conducted

by Brozo (1986). He presented case studies of successful college students with LD in an effort to isolate factors of success that set successful students apart from their unsuccessful counterparts. He defined success as having a GPA of 2.0 on a 4.0 scale and reaching junior status. Results indicated that subjects overcame their learning disabilities by employing sound reading skills and a range of strategies which allowed them to capitalize on their strengths and cope with their learning disabilities.

Variables of Success

Certain variables relating to success in adults with learning disabilities appear repeatedly in the professional literature. The variables found most frequently in the literature can be categorized into five major headings: Acceptance and Awareness, Support Systems, Personal Responsibility, Academic Coping, and Problem Solving.

Acceptance and Awareness

The most fundamental variable found to set successful individuals apart from non-successful individuals is the concept of acceptance and awareness of one's learning disability. In the study conducted by Spekman et al. (1989) one of the themes they found that sustained and nurtured their successful students was the ability to adapt to the learning disability and other life stressors. An acceptance and awareness of the learning disability was therefore thought to be fundamental to realistic adaptation. These researchers found that the successful group referred to themselves directly as learning disabled in a relaxed and comfortable manner. Spekman et al. (1989) further explained how the successful individuals with LD perceived their disability in relation to their self-perception in the following passage:

> Somehow these successful individuals had effectively integrated their learning disability into a positive self- concept. They appeared to have been able to compartmentalize their learning disability and see it as only one aspect of their identity rather than defining themselves entirely by their learning disability. (p26)

Longo (1989) also states that a successful way to adapt is to disassociate the learning disability from the total personality and to focus instead only on the skill range it effects.

While college is a difficult and a stressful time for most students, success is significantly harder to achieve and requires more effort for the student with a learning disability. Bireley and Manley (1980) stress the importance of students with LD accepting the need to work longer and harder than their peers or be left with unresolved emotions which may inhibit success. Bireley and Manley (1980) state:

> Another problem students share is their need to spend more time and energy on their studies than do their peers. Complete acceptance of this fact-cognitively, emotionally, and behaviorally is a must. Once they have succeeded in accepting this, then they do not feel emotionally frustrated about the extra time they have to devote, and they can then proceed to use their time productively. Without the working through of this problem area, students with learning disabilities will be confronted with the draining away of excessive emotional energy, of being constantly frustrated by self-defeating statements of the "why me" variety. (p. 14)

Based on their years of working with and observing college students with learning disabilities, Allard, et al. describe an unfortunate scenario they feel is all too common for many students with LD which is the direct result of the students' failure to accept their learning disability or understand how it affects

them. They describe three stages which begin even before the student arrives at college.

Arriving at college with long established patterns of avoidance, these students are experienced in covering up their learning disability with a multitude of creative strategies. After they enter college, students perpetuate avoidance patterns. The first of which Allard et al. (1987) describe as the "hideout stage", whereby the student creates an illusion of having "no problem" "They attend class, carry books, and attempt notetaking, and it is at this stage that they begin to fall far behind, [which becomes evident after their first exam]" (p. 360). Their failing grade may remind them of earlier academic failures and bring about a lowered self-concept. This next stage is aptly called "trapped", as that is how the student feels. The third stage, "crisis", occurs during the end of the first semester. Allard et al. (1987) describe how difficult it is for the student to seek help at this crisis stage in the passage below.

> The glaring reality is that without help, academic options are limited. If the self-concept allows, the student may seek help. To go for help is to admit a problem exists. To go for help is to give up the hope that 'there isn't any problem'. (p.361)

They go on to describe an intervention strategy focusing on the fundamental role of acceptance and awareness. Allard et al. state that effective intervention at this point, ". . . combines support and realistic explanations (and evaluation if necessary) of specific learning strengths and weaknesses" (p361). By the time the student reaches the crisis stage, it is extremely difficult for them to examine strengths and weaknesses realistically. The authors explain, however, that if students had developed an awareness and acceptance of their learning disability earlier in their academic life, the common scenario described above could be avoided.

Vogel (1985) stated that though students with learning disabilities at the college level often have been tested extensively, they have an inadequate understanding of the nature and/or severity of their disability and they lack an understanding of how it effects their learning and everyday life. She continues:

> Some students have underestimated their skill levels, leading to commensurate lowering in self-esteem; while others have over-estimated them, leading to a lack of realistic expectations and career goals, inaccurate estimates of how long and how hard they will have to work to improve these skills and to succeed in an academic environment. (p.193)

A person with a learning disability should be made aware of both his/her strengths and weaknesses (Cowen, 1988; Weiss & Weiss, 1985; Vogel, 1985). To this end Cowen (1988) developed a checklist to assist individuals with learning disabilities to assess their own strengths and weaknesses before choosing a college. The aim is to help them more realistically prepare for their college experience and choose the college that best suits their needs.

College students with learning disabilities are often put in the position of explaining the nature of their learning disability to faculty, co-workers, family, or peers, thus they need to be knowledgeable self-advocates (Ealy et al., 1985). Once the learning disability has been accepted and an understanding about how it effects them has been reached, they are better able to explain to their instructors both what modifications are needed and why such modifications are necessary (Vogel, 1986).

Support Systems

Once individuals with learning disabilities have achieved this acceptance and awareness of their disabilities, they must seek out and be accepting of

support. The Spekman et al. (1989) study found that their successful subjects spoke often and positively about support, guidance, and encouragement that they had received from significant people in their lives. Often support came from family members, though the authors noted that many of their successful subjects did not have the support of their families. In those cases they received support from other people in their lives, such as a therapist, tutor, friend, or employer. Many of the subjects in the study continued tutoring or therapy after leaving their educational center. The researchers describe the importance the individuals placed upon continuing these relationships in the following passage:

> These individuals (tutor, therapist) became very significant and were referred to with great admiration as a combined savior and montor. It was as though these "helpers" were necessary to the coping strategies of the successfuls and necessary as preventative measures. (p. 33)

In contrast, the unsuccessful individuals tended to view tutoring or therapy as a short term response to crisis situations, rather than as a continuous and preventative measure.

The successful students expressed the importance of seeking out and developing relationships that would provide the support needed at each stage of their development and that these relationships were especially critical during periods of transition. The importance of an effective support system is frequently viewed as a necessity for the success of the individual with learning disabilities (Longo, 1988).

Support may come from both professional and non-professional sources (Weiss & Weiss, 1985). Students must first be willing to discuss their learning disability with others, be informed of support services provided by the college,

know how to seek appropriate assistance from those resources (Cowen, 1988), and then accept the help that is offered.

Personal Responsibility

"I know I have to study more, but it is worth it. No one is going to help me get over my disability. I have to use my own initiative to get where I want in life" (Collison, 1989, A29). Personal responsibility incorporates independence, motivation, perseverance, resiliency, and an internal locus of control. Decker et al., recognized the importance of personal control over life events and developed a program for college students with learning disabilities that addresses the academic, social, psychological, and vocational problems with which they may be confronted. The program emphasized the need for an individual with LD to take personal responsibility for his/her learning. The intended outcome of the program is an enhanced sense of personal control over life events.

Bireley and Manley (1980) further underscored the importance of independence and motivation in looking back at lessons learned from an LD program at Wright State University that began in 1974. They found that those students who handled their own correspondence and interview with the school had a much easier transition and a better success rate than those who relied on parents to handle such matters.

Brozo's case study (1986) of four successful college students with LD revealed personal responsibility for learning outcome to be related to the success his subjects experienced. Thus, he concluded that internal attribution for success and failure should be encouraged.

Academic Coping

Academic coping refers to strategies which compensate for areas of deficit of the student with learning disabilities. Many studies have been conducted which focus on the strategies that enable students to cope in an academic environment (Allard et al., 1987; Brozo & Curtis, 1986; Cowen, 1988). Cowen (1988) reported on strategies used by 57 subjects who attended a competitive university. The students had developed a variety of coping strategies such as time management (adhering to daily/weekly schedules), creating a conducive study environment, seeking help from university resources, using course selection as a coping strategy, balancing more difficult courses with easier ones, and simply devoting more time and effort to their studies than their peers.

Allard et al. (1987) report on academic coping strategies that have been successful with the college students with LD who they have worked with over the past decade. These strategies include registering early (to facilitate the ordering of books on tape in time for class), analyzing courses (to be sure they are suitable), and requesting permission to alter time requirements (because many LD students require longer time to complete their programs).

Additional literature concerning compensatory strategies is available to students. Information exists on how to analyze college courses for course difficulty and teaching style (Polloway, 1987), how to learn information using learning strategies which utilize a multisensory approach (Scheiber & Talpers, 1985), and guidelines for how to select a college that meets the needs of the individual (Cowen, 1985; Mangrum & Strichart, 1989). The necessity of these coping strategies is well documented by researchers in the field (Allard et al., 1987; Cowen, 1988; Longo, 1988; Ness, 1989).

Problem Solving

Good problem solving skills, the ability to prioritize, set goals, and make decisions were seen as necessary skills for enabling success in college students with learning disabilities (Decker et al., 1985; Spekman et al., 1989; Wren, Williams, & Kovitz 1987). Spekman et al. (1989) found that the successful subjects in their study made frequent references to goal setting and future planning, seemed to recognize the importance of planning, and had a sense of controlling their own destiny. They also showed an appreciation for the step-by-step process of obtaining skills and the realization that each step is important preparation for the next.

Much has been learned about the variables that support success in college students with learning disabilities. Based on the importance of academic coping strategies, many researchers call for training students with LD in the study and coping strategies found to be helpful to students with LD at the college level. Though will mere training in this area ensure employment of those skills by the student?

A study conducted by Bliss and Mueller (1987) investigated the relationship between study skills and study behaviors of college students. This study was not conducted with individuals with LD, yet may still have significant implications for college students who do have learning disabilities. An instrument created for the study was comprised of three sections: 1) general study attitudes and behaviors, 2) reading and note-taking techniques, and 3) strategies for coping with exams. This instrument attempted to distinguish between what students actually do and what they have the ability to do. Bliss and his colleagues found that self-perception was the determining factor in whether students put into practice whatever coping and study skills they had.

Thus, they recommended self-concept counseling as a critical component of coping and study skills training. Study skills and study behaviors are often used synonymously, they note, but are actually quite different. Study skills are define as what the student is capable of doing and study behaviors are what they actually do. Furthermore, it is often assumed that when students do not use good study and coping skills, it is because they do not have such skills. This assumption, however, may be erroneous. Determining what students are able to do (study skills) and what they actually do (study behaviors) may be an extremely useful step in the process of assessing the needs of college students with LD and possible reasons for their failure or success.

While it has generally been found inappropriate and unsuccessful to utilize programs designed for underachievers with students with LD (Longo, 1988; Decker et al., 1985), Decker and colleagues posit that

> ...because of similarities in emotional, psychological, and personal characteristics of LD and underachieving college students, it is important to consider various interventions that have proven successful with underachievers because of their potential as effective treatment components for LD college students (p. 340).

Research leads us to believe that there are certain variables that are related to success for college students with learning disabilities. The critical difference between success and failure of a student with LD may not simply be reduced to his/her acquisition of study skills or coping strategies but could lie in the student's perception of self and success. Though professionals attempt to seek a better understanding of this issue, they often overlook this key source of information in solving the puzzle. Clearly something more can be learned by giving these individuals an opportunity to contribute to the development of services. If professionals could consider students themselves as an integral

source of information on what services needed to be provided they might develop more valuable and relevant methods to better serve this unique student population.

CHAPTER III

METHODS

Subjects

Subjects of this study were 43 college students with learning disabilities (31 males and 12 females) who attended a small, private university in the South Central states. All subjects were concurrently enrolled in the Learning Center of the university. The Learning Center students made up 90 of the 800 or 11% of the total student body. The Learning Center provides extensive support and assistance for students with learning disabilities, the LD students are well integrated in the larger non-LD population. According to a published brochure, the two major purposes of the Learning Center are first, to provide services for college students with learning disabilities enrolled in regular college courses and working toward a bachelor degree and second, to provide these students with remedial teaching and skills instruction in areas of deficit. The students have available to them, comprehensive accommodations, such as extended time on tests, oral exams, the opportunity to have questions rephrased for clarity, copies of lecture notes, taped textbooks, and assistance with research papers (planning, proofreading, and typing). Each student is assigned to one of six program coordinators who the student may rely on for help with academic and/or social problems. The Learning Center offers special remedial courses in communication, reading, and study skills. Criteria for admission to the learning center are a diagnosis of a learning disability, ability and motivation satisfactory for college work, and lack of serious emotional

disturbance. The existence and exact nature of the learning disability is determined through extensive professional diagnostic evaluation.

The subjects were volunteers and were solicited by two methods, brochures distributed at the Learning Center and on-site examiner recruitment. After receiving and signing a permission-to-test consent form, students provided demographic information. In addition to the basic information needed to code data to ensure confidentiality, the following information was collected: major; total number of semesters in a postsecondary institution; the total number enrolled in the learning center; current status (i.e. freshman, sophomore, junior, senior); at what age students were diagnosed with a learning disability; special education classes received in the elementary and high school years; extracurricular activities in high school and college; a self-report of being learning disabled; and the severity of their disability as they perceive it (see Appendix A).

Q Methodology

The methodology chosen for this study is based on Q methodology, a method for the scientific study of human subjectivity or one's communication of their viewpoint (Stephenson, 1953). Basic to Q methodology is the understanding that subjectivity is always self-referent, originating from a person's internal frame of reference, however, this does not render it inaccessible to rigorous examination (McKeown & Thomas, 1988). Self-referent subjectivity is at issue any time a person says "It seems to me..." or "In my opinion...". They are saying something meaningful about their personal experiences, and Q methodology provides a way to examine such experiences (McKeown & Thomas, 1988). Brown (1980) addresses the measuring of subjectivity below:

> Only subjective opinions are at issue in Q, and although they are typically unprovable, they can nevertheless be shown to have structure and form, and it is the task of Q-technique to make this form manifest for purposes of observation and study. (p.12)

The Q-sorting process is the means by which a subject models their viewpoint on a particular topic by rank ordering stimuli/item known as the Q-sample. The subject reponds to these items by placing them on a continuum from those that are most like their viewpoint to those that are most unlike their viewpoint, keeping in mind a specific condition of instruction. Conditions of instruction provide a guide or direction for sorting the items. In this study two conditions of instruction were used: first, describe yourself; and second, describe a successful college student with a learning disability. Individual items in a Q-sample are assigned meaning and significance only upon being sort by the subject. Q methodology was chosen for this study because it is believed that access to beliefs and perceptions of college students with learning disabilities is central to understanding what defines and enables success for this population.

Pilot Study

A pilot study was conducted with six individuals with LD who were enrolled in college courses or were recent college graduates (not exceeding three months post-graduation). The purpose of the pilot study was to field test the Q-sort procedures and finalize the items derived from professional literature. The pilot study subjects were asked to sort 41 statements twice under two different conditions of instruction. The data collected during the pilot study consisted of feedback from the subjects on the wording of the items, the length of time required to complete the sorting process, the clearness of the directions given, and other adaptations needed to modify the task for a population with

LD. A group interview was conducted with pilot study subjects after completion of the Q-sorts. Based on this feedback revisions were made to the wording of the items and testing procedure. The pilot study was not conducted for the purpose of comparison with the subjects of the actual study.

Instruments

Q-sort

Central to Q methodology is the construction of the instrument to obtain information pertinent to the problems of the research. The Q-sort designed for this study is entitled "Perceptions of College Students with Learning Disabilities". The Q-sort consists of 41 items (see Appendix B) structured representationally from the contents of existing research on five variables found to enable success for students with LD at the college level. Chosen for inclusion in the Q-sort were six categories that were repeated in several studies and thought by the researcher to be most fundamental in enabling student success. The six categories felt to represent the literature and expert panel review are as follows: (a) support systems (SS)-seeking out and accepting help from others; (b) acceptance and awareness (AA)-an acceptance and awareness of the learning disability and one's own strengths and weaknesses; (c) academic coping (AC)-compensatory strategies for an academic environment; (d) personal responsibility for learning (PR)-motivation, perseverance, and internal locus of control; (e) problem solving (PS)-the presence of problem solving skills; and (f) future orientation (FO)-career planning. Items were then chosen which represented the above categories. These items came from research on variables found to enable success for college students with LD. Some items were direct quotes from the college students with learning

disabilities as reported in the literature. Items were coded according to the category they represented (see Appendix C).

Construct validity was obtained by engaging eight experts in the field of learning disabilities in a concept development strategy (Taba, 1966). Ten experts were invited to participate, with eight participating (an 80% response rate). The criteria used for inviting these particular professionals to participate in the concept development strategy were that he or she had at least five years of direct service with adolescents or adults with learning disabilities and had fulfilled one or more of the scholarly activities in the field of learning disabilities: (a) research and writing, (b) presentations at national conferences, (c) conference directors, (d) director of university practicum experience, or (e) student personnel services. Many of the experts have published widely and are nationally noted for their work in the field of learning disabilities (see Appendix D for a list of participants). Each expert received the items in random order, and titles of the six categories were not included. The experts were directed to read each item, to group them according to likeness, and to assign an appropriate title to each group. These results were recorded and alterations were made based on the analysis. For instance, an item which was reported in the literature and perceived by the researcher as a positive statement was perceived as having negative connotations by some of the experts. The item was removed due to the ambiguity. Other items were reworded and the titles of the categories changed to reflect majority opinion. The expert panel of judges provided the foundation for the development of the sixth category - Future Orientation (FO). In addition to the analysis by item, consensus was sought as to the representativeness of each category. Through this concept development strategy, the intent and language of the items was clarified and representativeness of each category assured.

The Satisfaction With Life Scale

The Satisfaction With Life Scale (SWLS) (Diener, Polloway, Decker, & Brundigeis, 1985) is a five-item instrument designed to measure an individual's own judgement of his or her quality of life (see Appendix E). It was developed with a sample of 176 undergraduate students. Each item is scored from one to seven in terms of "strongly disagree" to "strongly agree". Item scores are summed for a total score, with a range from five to thirty-five with higher scores reflecting more satisfaction. The manual reports very good internal consistency with an alpha of .87 and a test-retest reliability correlation of .82 for a two month period.

Administration

The Q-sorts were administered in groups of 6-8 students with the exception of students who, because of reading difficulty or high distractibility, required private administration. Each subject received an envelope containing 41 cards with statements written on them (see Appendix B), a pre-sort form board (see Figure 1), a form board on which the distribution was printed (see Figures 2 and 3), and a record sheet with two miniature form boards on which demographic information and the results of each sort were to be recorded (see Appendix A). The testing session, which lasted approximately one hour, began with the examiner giving oral directions to each student or group of students.

Subjects were instructed to read each of the statements, which were printed on small cards, and in response to a particular condition of instruction, place each card on the form board. It was a forced distribution, requiring the subjects to place each statement card on one of 41 squares of the form board. The students sorted the same deck of cards two different times in response to

two separate conditions of instruction. The first condition of instruction was to describe self and the second condition of instruction was to describe a successful college student with a learning disability. When the subjects finished the first sort, they were encouraged to take a brief break while the examiner recorded their responses on the record sheets. While most students complied, some chose to record their own responses before taking a break.

After the second sort was completed, a life satisfaction questionnaire was administered. This was followed by a brief small-group interview (see questions in Appendix F) to allow the subjects to share any further perceptions of both themselves as college students with learning disabilities and their perceptions of what most fosters success in college.

The study was conducted one week before mid-term examinations in the first semester of the school year. Subjects seemed to enjoy the Q-sorting process and were eager to share their feelings and perceptions during the small-group interview.

Method of Analysis

Q-sort data were factor analyzed using p.c.q. Factor Analysis Program for Q Technique (Stricklin, 1990) and program defaults were used except where noted. The data were correlated and factor analyzed by centroid method followed with a varimax rotation. The factor loadings were used to calculate factor scores for each item for each factor producing a factor array. Items were ranked in a theoretical array according to the prescribed formboard based on their descending and ascending order ($^-$ 4 to $^+$ 4) from a resultant z score. The factors created by the analysis are specific ways that the items could be sorted. The more similar the subject's sort is to the theoretical factor array, the closer the loading is to $^+$1, while the more dissimilar, the closer it is to $^-$1. The varimax

factor rotation is designed to find factors with a greater likelihood of a subject loading on only one factor, to the extent the data allow. Resulting factor arrays represent points of view and are the basis of interpretation of the data.

CHAPTER IV

RESULTS

The data for this study were obtained from three different sources. The first and primary source was a Q-sort designed for the study, while an analysis of grade point average (GPA) and results from the Satisfaction With Life Scale (SWLS) (Diener et al., 1985) provided additional data. The Q-sort data were analyzed using a computer program specially designed for Q-sort data, p.c.q. Factor Analysis Programs for Q-Technique (Stricklin, 1991). The GPAs were used as a standard measure of academic success. The students were divided into two groups based on GPA, with those scoring above the mean considered to be in a high GPA group and those scoring below the mean in a low GPA group. The students were similarly divided into two groups based on the SWLS with those scoring above the mean placed in a high-life satisfaction group and those scoring below the mean in a low-life satisfaction group.

Two questions, or conditions of instruction, were posed to the subjects during the Q-sort administration. Under the first condition of instruction subjects were asked to describe themselves. These sorts were then correlated and factor analyzed followed by a varimax rotation. The resultant factor solution (see Table 1) had 29 of the 43 subjects with significant loads (.45 or greater) accounting for 40% of the variance. Thirteen subjects did not load on any of the four factors and one person had a significant load on two or more factors (known as a split load). Factor loads were used to calculate the factor scores for each item on the four factors. The split loads were excluded from the

analysis of the factor scores for each of the four factor arrays used to interpret the perception of self.

The arrays representing each factor are composed of a continuum from one through nine; however, for the purpose of analyses, it is convenient to convert this into a continuum from -4 to +4, with "most unlike me" receiving a rank of -4 and "most like me" receiving a rank of +4. In interpreting the factors, the reader is directed to the pertinent factor array and references are made to the position of an item in that array. For this discussion, the position of an item is referred to either by specific column, for example a rank of +3 or -4, or more generally by the side of the array on which an item falls; for example, the "most like me" or "most unlike me" side of the array. References to an item receiving a positive ranking or placement indicates that the item can be found on the "most like me" side of the array, while reference to an item receiving a negative ranking or placement indicates that the item can be found on the "most unlike me" side of the array. The rank score is written in parentheses to the immediate right of each item. For reference, a list of all Q-sort items with their corresponding codes can be found in Appendix C.

Interpretation of the factor arrays for condition of instruction one resulted in four factors (or belief types): (a) the Extroverted Support Seeker (factor A1), (b) the Loner (factor B1), (c) the Self-Accepting Student (factor C1), and (d) The Self-Unaccepting Student (factor D1). Before describing the distinguishing differences between these factors, attention is given to the consensus items wherein all factors were in agreement. Consensus items are items among which all factors ranked similarly, differentiated by no more than three factor array positions. There were four such consensus items for perception of self (condition of instruction one). Two of these items were significant because they provided insight into interpretations. The first

concerned whether or not a good grade on an exam is due to luck. All belief types regarded this as most unlike themselves. The second item focused on whether or not students would tell an instructor about their learning disability. There was general agreement that the individuals represented by the factors would not reveal their learning disability to an instructor; factor DI regarding this as most unlike self and the other factors indicated that it was very much unlike them. Note the similarity of the array position that follows each item below with letters A through D referring to the factors.

AC37 Tells instructor about learning disability.

(A=-4, B=-4, C=-4, D=+3)

PR17 A good grade on an exam is usually due to luck.

(A=-4, B=-4, C=-4, D=-4)

Description of Self: Sort One

Factor AI: The Extroverted Support Seeker

This person (see factor array, Figure 4) may be characterized as socially outgoing, one who likes to handle matters independently when possible, yet one who makes maximum use of available support systems. The Extroverted Support Seeker feels support and assistance from friends or family, and knows how and is willing to seek out support from others when necessary. Furthermore, this person is characterized as accepting offered help.

SS3 Has supportive, sensitive people that are willing to help with problems. (+4)

SS2 Seeks out supportive, sensitive people that will help with problems.(+3)

SS5 Accepts help from others. (+2)

PR20 Handles own matters when possible. (+2)

In fact, more than factors BI, CI, or DI, the Extroverted Support Seeker of factor AI is most described as likely to seek people out who will just listen when he/she feels the need to talk.

SS4 Seeks people out who will just listen when feels the need to talk.

(A = +4, B = -4, C = -1, D = -3)

The placement of item AC33 and SS1 on the positive side of the array, (see Figure 4) indicates that in addition to the support felt from friends and family, a network of support exists in the college setting as well. The Extroverted Support Seeker tends to reach out for support from instructors by requesting assistance and accommodations. In fact, in comparison with the other factors, he/she is most willing to request assistance from instructors, as indicated by the discrepancy score below. It follows that this is the type of person who would be likely to reveal a learning disability to an instructor. However, this is not the case. As previously stated, like factors BI, CI, and DI, this person would also choose not to inform instructors of a learning disability.

SS1 Asks instructors for assistance and accommodations when necessary.

(A = +2, B = -1, C = -1, D = -2)

Interestingly, for all the assistance the Extroverted Support Seeker reports to seek and receive, the position of item AA7 (see Figure 4) shows that this person lacks a clear understanding of his/her weaknesses. This individual does not appear to have ideas for how to circumvent areas of deficit.

The +3 rank assigned to item PS28 and the -3 ranking of item PS24, (see Figure 4) show that the Extroverted Support Seeker feels weak in the area of problem solving. Curiously, while this individual believes he/she is usually able to summon creative and effective alternatives for solving problems, this type

does not trust that the alternatives will necessarily lead to solutions. Also related to weak problem solving abilities, this person reports becoming "easily" discouraged when dealing with time-consuming tasks, and has an inability to work through frustration when dealing with problems, which are behaviors associated with poor problem solving abilities. Further, being goal-oriented is not a characteristic that this person would use as a self-descriptor, especially related to career plans. This weakness in the area of problem solving skills is indicated by the negative ranking of the statements below.

PR23 Believes that having a goal can get a person through

PR15 Doesn't get discouraged when a task or project takes a long time to finish. (-4)

FO41 Has a plan for how to move toward career goals. (-3)

FO39 Takes specific action toward goals. (-2)

AA14 Has ways of working through frustration when dealing with problems. (-2)

AC34 Sets priorities when studying so as not to get

PS25 Examines why a solution to a problem was unsuccessful.

The placement of items A10 and A13 on the "most like me" side of the array (see Figure 4) show that the Extroverted Support Seeker tends to have a positive outlook concerning his/her learning disability. This type is able to put the disability in perspective, viewing it as just one part of his/her total person. This type of person would likely say that strengths have been developed as a result of the learning disability.

In summary, the Extroverted Support Seeker represents a student who tends to be more socially outgoing and who makes maximum use of support systems available. This person believes that there is support for students with learning disabilities on campus and feels free to request assistance and

accommodations from instructors as needed. This student does not necessarily feel he/she is a good problem solver and does not report a clear understanding or acceptance of his/her weaknesses. Finally, this student is characterized by a positive attitude about having a learning disability.

Factor BI: The Loner

The Loner (factor BI) represents a highly self-directed student who feels extremely secure and confident in his/her ability to solve new and difficult problems. Moreover, this student goes to great lengths to solve problems independently. This type handles his/her own matters when possible, and in addition ranks positively many other statements of independence and belief in one's problem solving abilities (see factor array, Figure 5).

PS28 Is usually able to think up creative and effective alternatives for solving problems. (+4)

PS31 Devises creative, and sometimes unusual strategies to achieve goals. (+3)

PS26 Solves most problems that appear, given enough time and effort.(+2)

PS20 Handles own matters when possible. (+4)

PR18 Works long and hard to achieve goals. (+2)

PS24 Trusts own ability to solve new and difficult problems. (+3)

The student represented by the statements above exhibits an unusually strong sense of independence, personal responsibility, and security in his/her problem solving abilities. Related to problem solving strengths, and unlike factors AI, CI,and DI, the Loner has developed ways of working through frustration encountered when dealing with difficult situations. Similarly, this

person is able to "bounce back" after experiencing hard times, as evidenced by statements PS19 and AA14 below:

PS19 Is able to get life back in control after experiencing hard

AA14 Has ways of working through frustration when dealing with problems. (+3)

While the Loner is perceived as a good problem solver, the negative placement of items AC35 and AC36 (see Figure 5) shows that he/she is not one to take advantage of academic coping strategies designed to prevent potential problems. Such coping strategies might include investigating course expectations before enrolling or carefully balancing challenging courses with easier ones. The Loner's tendency not to create a balanced course load may be a result of not having a choice in their current plan of study, or because financial pressures force the student to proceed through school expediently.

Looking at the factor array, (see Figure 5), items AA7, AA6 and AA12 cluster together as statements to describe the Loner as an aware and accepting individual. This independent person is cognizant of personal strengths and utilizes them to succeed. The Loner is also aware of weaknesses and has developed ways to circumvent them. This acceptance of strengths and weaknesses may come from the student's understanding that a learning disability has nothing to do with one's intelligence.

Drawing on personal strengths and feeling thoroughly secure in problem solving abilities, the Loner finds it unnecessary to seek assistance and support from others. Indeed, it is unlike this individual to even accept offered help, hence giving the appearance of being a loner. Additionally and distinctly different from factors AI, CI, and DI, this person does not feel that he/she has the support of friends or family nor does he/she feel that they will be there if needed. Further, this type would not reveal his/her learning disability to an

instructor. These findings are drawn from the negative rankings and discrepancy scores of the statements below:

AC37 Tells instructors about learning disability. (-3)

SS2 Seeks out supportive, sensitive people that will help with problems. (-3)

SS5 Accepts help from others. (-2)

SS4 Seeks people out who will just listen when feels the need to

SS3 Has supportive, sensitive people that will help with problems. (A = +4, B = 0, C = +3, D = +3)

In summary, factor BI represents a self-directed student who feels exceptionally confident in solving problems independently. This student may give the appearance of being a loner as he/she does not make use of outside support. The Loner neither seeks or accepts the help of others. Unlike factors AI, CI, or DI, this person feels that support is not readily accessible. The Loner is aware and accepting of his/her strengths and weaknesses and knows that a learning disability has nothing to do with one's intelligence.

Factor CI: The Self-Accepting Student

The Self-Accepting Student (factor CI) is a person who appears to have a keen awareness and acceptance of his/her learning disability. This awareness is demonstrated in this type's belief that a learning disability is unrelated to intelligence. Further, the Self-Accepting Student is able to view the learning disability as just one part of his/her total person, rather than a trait that defines the individual. This type of person is cognizant of strengths and capitalizes on them. The degree to which this student has accepted the learning disability is further illustrated by his/her ability to see ways in which it benefits him/her. The following statements, which rank on the positive end of the array,

(see factor array, Figure 6) represent a highly accepting attitude of a learning disability.

AA10 Has developed areas of strength because of the learning disability. (+2)

AA9 Has become wiser because of having a learning disability.

AA12 Believes that a learning disability has nothing to do with a person's intelligence. (+4)

AA13 Believes that a learning disability is just one part of a person with an LD. (+2)

AA 6 Understands and accepts own strengths and uses them.

The placement of items SS5 and SS3 on the positive side of the array (see Figure 6), indicates that the positive outlook this individual holds may be nurtured by friends or family, who are available if needed. The Self-Accepting Student recognizes the importance of having support from others and accepting their assistance.

This individual has a personal sense of responsibility for learning. The Self-Accepting Student appears to be goal-oriented and believes that great determination and desire are necessary in order to succeed. The sense of direction and awareness of strengths in this individual is expressed in career exploration, as this student will tend to choose a career that matches his/her areas of strength. This sense of personal responsibility and career awareness is indicated by the placement of the following statements on the "most like me" side of the array (see Figure 6).

PR16 Believes that one has to have great determination and desire in order to succeed. (+4)

PR23 Believes that having a goal can get a person through anything. (+3)

F41 Has a plan for how to move toward career goals. (+2)

F40 Chooses a career that matches own area of strength. (+2)

A look at the characteristics on the negative end of the continuum provide more insight into the self-perceptions of the Self-Accepting Student. The placement of items AA11, AA14 and PR15 on the "most unlike me" side of the array (see Figure 6) indicates that though this student demonstrates a clear understanding and acceptance of personal strengths of his/her learning disability, and the fact that success requires hard work and determination, he/she also admits to becoming discouraged when a project takes a long time to finish. In addition, this student reports an inability to manage the stress and frustration that may accompany college life for a student with a learning disability.

This student is also not perceived as strong in the area of problem solving. The placement of item PS28 (see Figure 6) on the negative end of the array indicates that this Self-Accepting Student is unable to think up creative and effective alternatives for solving problems encountered. Nor does he/she utilize academic accommodations which could serve to prevent certain problems from occurring, as indicated by the negative placement of AC35 and AC38 (see Figure 6).

On the whole, the Self-Accepting Student of factor CI is highly aware and accepting of his/her learning disability, stating that he/she is wiser and has developed strengths because of it. Aware of strengths, this person will find a career that is appropriate for them. Though highly accepting of the learning disability, this student reports difficulty managing the stress and frustration that sometimes accompany the special circumstances of college life for a student with a learning disability. Similarly, this student is not perceived as a good problem solver.

Factor DI: The Self-Unaccepting Student

The person of factor DI believes most in taking personal responsibility for learning. However, this is not accompanied by an acceptance and awareness of the learning disability characterized by factor CI, thus factor DI is entitled the Self-Unaccepting Student. This student feels that success comes largely as a result of hard work, determination, and desire. Further this is a goal-oriented person who works to obtain goals in a creative and diligent manner, without becoming easily discouraged. The following statements ranked on the negative end of the array and represent this theme of personal responsibility.

PS31 Devises creative, and sometimes unusual strategies to achieve goals. (+2)

PR16 Believes that one has to have great determination and desire in order to succeed. (+3)

PR15 Doesn't get discouraged when a task or project takes a long time to finish. (+2)

PR18 Works long and hard to achieve goals. (+3)

PR22 Feels a good grade on an exam is usually due to studying hard. (+3)

The Self-Unaccepting Student also applies a strong sense of direction and goal orientation to career exploration, exhibited by the placement of items FO39 and FO41 in the "most like me" side of the array (see factor array, Figure 7). This type is characterized most strongly as having plans for reaching career goals. Additionally, more than factors AI, BI, and CI, this individual takes specific action toward these goals as confirmed by the discrepancy score below:

F39 Takes specific action toward career goals.

(A = -2, B = -1, C = 0, D = +4)

The negative placements of AA10, and AA12 on the array, (see Figure 7) shows that the Self-Unaccepting Student lacks a clear understanding of the learning disability, believing as no other group did that it is related to intelligence. Also, unlike factors AI, BI, and CI, who are perceived as individuals who have developed strengths as a result of having a learning disability, the person of factor DI is much less likely to view it in a positive way, as illustrated by the following discrepancy score.

AA12 Believes that a learning disability has nothing to do with a person's intelligence.

(A = 0, B = +2, C = +4, D = -4)

Further, the negative placement of items AA6 and FO40 on the factor array (see Figure 7) indicates that the Self-Unaccepting Student does not have an understanding and acceptance of personal strengths. This inability to perceive strengths appears to affect the Self-Unaccepting Student's ability to make career choices, since this type of student reports that he/she is unlikely to choose a career that matches his/her strengths.

The Self-Unaccepting Student tends to be independent, self-reliant, and takes personal responsibility for his/her education. This type of person tries to handle his/her own matters when possible, though utilizes campus support services as needed. This student who does not like to draw attention to his/her learning disability and chooses not to reveal it to instructors or request additional assistance or accommodations because of it. This type is self-sufficient, though has the support of friends or family who are available if needed. These findings are supported by the ranking of the following statements.

AC37 Tells instructors about learning disability. (-4)

AC32 Uses the recommendations suggested by advisor and/or instructor. (+2)

SS1 Asks instructors for assistance and accommodations when necessary. (-2)

SS3 Has supportive friends and/or family who are there if

PR20 Handles own matters when possible. (+2)

PR21 Feels a good grade on an exam is usually due to studying hard. (+2)

As indicated by the placement of AC35 on the "most unlike me" side of the array (see Figure 7), the Self-Unaccepting Student appears not to rely significantly on academic coping strategies, which could result in a more successful semester. This type of student does not find out what will be expected of him/her in a class before enrolling; instead they may rely on hard work to "pull them through".

To conclude, the Self-Unaccepting Student of factor DI demonstrates a strong sense of personal responsibility for learning, though does not exhibit an acceptance or awareness of his/her learning disability, and is likely to keep the fact of having a learning disability private. This hard-working, goal-oriented person is not easily discouraged when dealing with problems. This is a career oriented person who has plans for reaching career goals and takes active steps toward fulfilling those goals, though regretably does not report matching a future career with personal strengths.

Description of Successful Student with a Learning Disability: Sort 2

The second condition of instruction required subjects to describe their perspective of a successful college student who has a learning disability. The

analysis resulted in a three factor solution defined by 30 of the 43 subjects, with one subject split loading and twelve subjects not loading on any of the three factors (see Table 2). The factor scores were interpreted as (a) the Responsible and Supported Student, (b) the Individually Responsible Student and (c) the Career Planner. Although a three factor solution emerged from this condition of instruction, there were several consensus items (that is, items which were common to all three factors). In addition, there was a strong similarity between factors AII and BII as shown by the factor correlation in Table 3.

When college students with learning disabilities were asked what they feel is necessary for success at the college level, the consensus items are of particular interest. The consensus items for the second condition of instruction are statements pertaining to seeking support, understanding and accepting one's weaknesses, and the effort necessary to obtain goals. The successful student with a learning disability is portrayed as one who does not put great emphasis on seeking out supportive, sensitive people to help with problems. This person is unlikely to seek out others just to listen when he/she feels the need to talk. In most cases, however, the support of friends and family is available if necessary, but an insignificant amount of energy is expended seeking such support. The need to understand and accept weaknesses and to have strategies for circumventing deficits is perceived as more important to the successful student. Believed to be of equal importance for the college student with a learning disability is the need to work long and hard to achieve goals. The subjects represented by the three factors share certain similarities concerning what they believe to be necessary for success. However, the following description of the three factors also illustrates interesting differences in what they perceive as necessary for success.

Factor AII: The Responsible and Supported Student

Personal responsibility for learning is most fundamental for the successful student of factor AII. A successful student is perceived by subjects as a hard-working, goal-oriented person who believes that determination and desire are keys to success. This type of person feels confident in his/her ability to handle new and difficult problems. The Responsible and Supported Student is also perceived as able to get life back in control after experiencing hard times. The strong sense of personal responsibility, which characterizes this successful student, is expressed in the following positive statements.

PR16 Believes that one has to have great determination and desire in order to succeed. (+4)

PR19 Is able to get life back in control after experiencing hard

PR22 Feels a good grade on an exam is usually due to studying

PR23 Believes that having a goal can get a person through

PS24 Trusts own ability to solve new and difficult problems. (+3)

Items AA7, AA8, and AA6 (see Figure 8) clustered together indicate that the successful student is further defined as having a great deal of acceptance and understanding of personal strengths and weaknesses, and knows how to utilize their strengths and compensate for their weaknesses (see factor array, Figure 8). This student is also perceived as having a strong awareness and acceptance of what it means to have a learning disability and knows that he/she must work longer and harder than peers, and is accepting of this fact.

The array for factor AII (see Figure 8) shows that the Responsible and Supported Student has access to family or friends who can be called upon for support when needed. However, looking at the negative values, we see that this

is not the type of person who relies heavily on supportive people to help with problems or to just listen when the need to talk is felt.

The placement of items AC34, AC35, AC36, and AC37 on the "most unlike" side of the array (see Figure 8) indicate that the successful student of this type is perceived by subjects as not likely to take advantage of compensatory strategies, such as creating a carefully balanced course load, investigating course expectations prior to enrolling, or taking breaks to avoid "burn out" when studying. Nor is this someone who seeks assistance or accommodations from instructors. Likewise, this type is not one to tell instructors about the learning disability. It appears that this successful student with a learning disability is considered to be someone who does not need special assistance or accommodations.

In conclusion, this student is most characterized as one who takes personal responsibility for learning. This is a hard-working and self-directed student who has accepted his/her learning disability. This individual has developed ways to utilize strengths and circumvent weaknesses. This student does not rely heavily on support and assistance, but, nevertheless, has the support of family and friends who are available if needed.

Factor BII: The Individually Responsible Student

As stated, factors AII and BII share a significant number of similarities, but differ in the level of external support they seek and receive. Like factor AII, the successful student of factor BII is perceived by subjects as one who has a strong sense of personal responsibility for learning. This student is a hard worker with a powerful desire and determination to succeed. However, the distinguishing characteristic between the two factors is that factor BII seeks and receives much less external support and thus is referred to as the

Individually Responsible Student. The following statements, ranked on the positive end of the array, (see factor array, Figure 9) represent this high level of personal responsibility for learning characterized by factor BII, the Individually Responsible Student.

PR16 Believes that one has to have great determination and desire in order to succeed. (+3)

PR21 Feels responsible for own learning. (+3)

PR18 Works long and hard to achieve goals. (+3)

PR22 Feels a good grade on an exam is usually due to studying

The Individually Responsible Student also exhibits a realistic understanding and acceptance of his/her learning disability and of the extra time and effort it demands. In addition to merely working hard, this student is one who accepts the fact that in relation to his/her peers, a higher degree of effort must be put forth to accomplish the same amount. This acceptance is reflected in the following positively ranked statements.

AA12 Believes that a learning disability has nothing to do with a person's intelligence. (+3)

AA8 Knows it is necessary to study longer and harder than peers, but feels it is worth it. (+4)

The placement of items AA7 and AA6 (see Figure 9) on the "most like" side of the board implies that this successful student is perceived by subjects as being aware and accepting of personal strengths and weaknesses, and as striving to utilize the strengths to work around the weaknesses. The positive ranking of AA9 (see Figure 9) indicates that not only does a successful student truly accept the learning disability, but is also able to see a benefit in it. The Individually Responsible Student believes that he/she has become wiser because of the disability.

F41 Has a plan for how to move toward career goals. (+3)

Looking to the negative rank attributed to items SS1, SS2, SS3, and SS4 (see Figure 9), it is clear the subjects feel support does not play a significant role for the successful student of factor BII. It is important to note that unlike the successful student of factors AII and CII, the Individually Responsible Student does not have access to supportive people who are there if needed, nor does he/she seek support from others. As one might expect this type does not ask for assistance or accommodations from instructors.

Interestingly, the Individually Responsible Student has developed an acceptance and awareness of the learning disability without external support. The need for support, in any case, appears to be viewed as a negative quality or at least unnecessary for the successful student of factor BII.

Factor CII: Career Planner

Like factor BII, the array for factor CII (see factor array, Figure 10) shows that a successful student is perceived by subjects as a very accepting and positive individual who is both aware and accepting of the learning disability, believing it to be unrelated to intelligence. This is a person who also knows how to capitalize on strengths and compensate for weaknesses.

The successful student of factor CII is a student who is most characterized as someone who works long and hard to achieve goals and one who feels that success in studies is the result of hard work, as indicated by the placement of items PR18 and PR22 below.

PR18 Works long and hard to achieve goals. (+4)

PR22 Feels a good grade on an exam is usually due to studying

This awareness of strengths and weaknesses and sense of personal responsibility is expressed in active and realistic career exploration, thus this

factor is called the Career Planner. This person carefully chooses a career that matches personal strengths, has a plan for achieving career goals and takes specific action toward those goals. The sense of direction with regard to career is indicated by the positively ranked statements below.

F41 Has a plan for how to move toward career goals. (+2)

F40 Chooses a career that matches own area of strength. (+3)

F39 Takes specific action toward career goals. (+3)

The significant number of items having to do with problem solving skills on the "most unlike me" side of the array (see Figure 10) indicate that problem solving abilities are perceived as uncharacteristic of the Career Planner. Interestingly, while this successful student is not perceived as being a good problem solver, he/she exhibits good problem solving abilities in planning and choosing a career, as was previously confirmed. Similarly, the positive placement of item AC35 (see Figure10) indicates good problem solving skills in the sense that the Career Planner attempts to prevent future difficulties by learning of course expectations before enrolling.

Interestingly, looking at the negative values, we see that though this person works hard to achieve goals and demonstrates much direction in regard to career issues, the statements thought to be least descriptive of this type show that the Career Planner is not perceived as an independent person who feels responsible for his/her own learning or who handles his/her own matters when possible. In fact, where the person of factor AII and BII reports feeling a certain responsibility for learning, the person of factor CII certainly does not feel this same sense of responsibility. Furthermore, while the successful students of factors AII and BII were neutral concerning the handling of their own matters, the successful person of factor CII is perceived as very much

unlike that characteristic. These curious findings are indicated by the negative rankings of statements PR20 and PR21 and the discrepancy score below.

PR20 Handles own matters when possible.

(A = 0, B = 0, C = -3)

PR21 Feels responsible for own learning. (-4)

A support system also does not appear to be a strong need for this person. The Career Planner is not characterized as one who seeks support from others, as indicated by the negatively ranked statements below.

SS2 Seeks out supportive, sensitive people that will help with

SS4 Seeks people out who will just listen when feels the need to

However, concerning the issue of whether to inform an instructor of a learning disability, the person of factor CII is in direct contrast to factors AII and BII. Where factor AII and BII would not seek support by revealing their learning disability, the Career Planner would be more likely to confide in instructors.

AC37 Tells instructors about learning disability.

(A = - 4, B = - 4, C = + 2)

Grade Point Average

Grade point averages (GPA) provided additional data on the participants of the study. The mean GPA was 2.5. A grade point of 2.5 or above is considered to be a high GPA in this study, while one below 2.5 is considered to be low. Of the 43 subjects in the study, 31 were found to have a high GPA, while 12 reported GPA in the low range. Table 5 displays the factor structures of subjects in both the high and low GPA categories for the first condition of instruction. Table 6 shows the same information for the second condition of instruction.

Life Satisfaction Scale

Results of the Satisfaction with Life Scale (SWLS) were analyzed and are displayed in a bar graph in Figure 11. There appears to be a natural break in the scores, with four points separating the highest-low scorer from the lowest-high scorer. Seventeen subjects scored at or below a score of 20 and 24 subjects scored at or above a score of 25. The results of two subjects were disregarded in order to further delineate the natural break in data between high and low scoring subjects, leaving a resultant N of 41. The factor structures for both high-life satisfaction and low-life satisfaction groupings for condition of instruction one appear in Table 7, while the factor structures for the second condition of instruction are displayed in Table 8.

CHAPTER V

SUMMARY AND CONCLUSIONS

The current professional literature on learning disabilities at the college level provides information on characteristics necessary for success, but does not emphasize the role of a student's self-perception and awareness of the characteristics the student feels are necessary for success in a college environment. Further it makes only minimal suggestions for ways to assist students in examining their perceptions concerning what they deem necessary for success. The primary purpose of this study was to examine the perceptions of college students with learning disabilities, regarding their perception of self and characteristics necessary for success in college. The information obtained will enable professionals working with college students who have learning disabilities to deliver more effective services.

Forty-five college students with learning disabilities performed two Q-sorts with statements derived from the professional literature. Construct validity for the Q instrument was obtained with the assistance of eight experts in the field of learning disabilities. Using p.c.q. Factor Analysis Program for Q Technique (Stricklin,1991), the data were correlated, factor analyzed by the centroid method, and rotated by varimax to obtain factor arrays. Seven factor arrays or belief types emerged from the analysis, resulting in four belief types from the first condition of instruction (describe self), and three belief types emerging from the second condition of instruction (describe a successful college student with a learning disability). The factors or belief types can be used to define perceptions of self and perceptions of success from the sample of

students studied. Below is a summary of the results, followed by implications for programming, limitations of the study, and suggestions for further research. The study questions posed are discussed in the following section.

Summary and Implications of the Study

Question One: What belief types (or factors) are characteristic of college students with learning disabilities in terms of perceived self? This question is answered by the student's responses to the first condition of instruction, describe yourself, for which four belief types (or factors) emerged; the Support Seeker, the Loner, the Self-Accepting Student, and the Self-Unaccepting Student.

Belief Type A: The Support Seeker. The Support Seeker represents a student who tends to be socially outgoing and one who makes more use of support systems available than any other belief types. This person believes that support for students with learning disabilities exists on campus, that there are people on campus who are willing to help. More than any other belief type, this person reports asking instructors for assistance and accommodations when necessary. Interestingly, this person is reported to readily seek and receive support, yet he/she lacks a clear understanding and acceptance of personal weaknesses, which is presumably related to the reason support is sought. Related to this lack of a clear understanding and acceptance of weaknesses, the Support Seeker is also perceived as possessing weaknesses in the area of problem solving. These two areas of deficit seem related in that the first step of problem solving is defining the problem at hand (Michaels, Thaler, Zwerlein, Gioglis & Apostoll, 1988). A student unable to discern personal weaknesses would find it difficult to rectify the problems stemming from the weaknesses. Thus we may perceive this individual in a cycle of meeting a

problem, not feeling confident about solving it, seeking assistance for it, yet not truly understanding or accepting the weaknesses which may be the cause of the problem. As Vogel (1985) writes,

> Many learning disabled college students have undergone extensive evaluation and have a long history of having received support services, but have very limited knowledge about their level and pattern of intellectual abilities. They have only a vague notion of the type and severity of their learning disability, and little, if any, understanding of their underlying processing deficits. (p.193)

Thus, it appears that some of the support that students receive should be aimed at assisting the student in discerning their areas of strength and deficit. Cowen (1985) advises that it is best for this type of discovery of strengths and weaknesses to occur prior to college in preparation for the experience. For only when students truly understand how the learning disability effects them can they develop compensatory strategies to circumvent these weaknesses. This self-awareness also enables the student to make more efficient use of support they received and to have more confidence in their ability to handle problems independently when appropriate. Furthermore, a clear understanding of one's learning disability enables the student to become a better self-advocate, the need of which is well documented in the professional literature. Ealy et al. (1985) deem self-advocacy as an "essential skill" for a student with a learning disability and note that it can only occur if the student has a thorough understanding of the learning disability.

The Support Seeker generally reports a positive attitude concerning the learning disability. They are able to view the LD as just one part of their total person and recognize areas of strength that are a direct result of having a

disability. This positive, accepting attitude may be fostered by a strong support system that support seeker reports having in his/her life.

Belief Type B: The Loner. The Loner represents an exceptionally self-directed student who feels confident about solving problems independently of others. This type of student does not utilize support or even accept the help of others, giving the appearance of being a loner. One may note that the student of this belief type exhibits an unusually strong sense of independence, personal responsibility, and confidence in problem solving abilities. It is unclear whether the student's independence is born of a true desire to be self-reliant or due to a tendency to be a loner, which may contribute to the student's isolation and forced self-reliance.

The Loner appears to be cognizant of personal strengths and utilizes them. As well, they are aware of weaknesses and have developed ways to circumvent them. The Loner is secure in the knowledge that a learning disability has nothing to do with one's intelligence.

Belief Type C: The Self-Accepting Student. The Self-Accepting Student is a positive, hopeful individual who exhibits a high level of acceptance and awareness of his/her learning disability. This type of person feels that good can come from a difficult situation and reports having become wiser and having developed strengths as a result of the learning disability. The Self-Accepting Student knows that a learning disability has nothing to do with one's intelligence and he/she is able to compartmentalize it, seeing it as just one part of his/her total self, rather than a trait that defines the individual. Likewise, this person is accepting of personal strengths and will find a career that utilizes his/her strengths. This accepting, positive attitude may be fostered by supportive, sensitive people who the student can depend upon if needed. Though a highly

accepting individual, this person reports difficulty managing the stress and frustration that may accompany college life.

The investigator believes that there may be a relationship between the student's perceived weakness in the area of problem solving and the fact that they feel overwhelmed, frustrated, and unable to reduce or manage stress. The importance of strong problem solving skills for students with learning disabilities has been documented in the professional literature. Dexter discusses problem solving skills in a way that may be helpful to the student of the student of the

Self-Accepting belief type (Dexter, 1986). Dexter describes preparing a student with a learning disability for the college environment and stresses the need for students to set priorities effectively, thus enabling them to confront the multiple and complex tasks required of them without becoming overwhelmed. She further maintains that the ability to set such priorities is intimately related to and dependent upon the student's problem solving skills, implying that poor problem solvers will be unable to set effective priorities and thus will likely become overwhelmed and frustrated by the demands placed upon them in the college environment.

Belief Type D: The Self-Unaccepting Student. The Self-Unaccepting Student demonstrates a strong sense of personal responsibility for learning, feeling that success comes as a result of hard work and determination. This person has plans for how to move toward career goals and, unlike any other factor, takes specific action toward those goals. This Self-Unaccepting Student appears to have a strong sense of direction and perseverance.

At the same time, this individual feels, as no other belief type did, that a learning disability is indeed related to one's intelligence, demonstrating a misunderstanding of the nature of a learning disability. Similarly, the

Self-Unaccepting student is unable to view having a learning disability in a positive or constructive way, rating the ability to perceive strengths developed as a result of the LD as very much unlike themselves. Furthermore, this individual tends not to want to draw attention to the fact that he/she has a learning disability, choosing not to ask for any assistance or compensatory accommodations from instructors.

There appears to be an interesting relationship between the personal responsibility exhibited by this belief type and the unaccepting attitude concerning the learning disability. For the Self-Unaccepting Student, accepting the learning disability may be tantamount to accepting that he/she has inferior abilities. This student may perceive that accepting the learning disability means accepting a self-limitation, which in turn could imply to him/her that only a certain level of achievement is possible, no matter how much effort is expended. This would be unacceptable to the person of this belief type because he/she is perceived as a persevering, personally responsible student who is in control of various events and situations that effect his/her life. Accepting the learning disability may mean that control is forfeited to exterior influences.

The researcher believes the Self-Unaccepting Student to be a highly responsible individual, though this apparent responsibility may be an aspect of a possible denial of the learning disability. The attempt to assert his/her independence may in fact be a defensive behavior designed to mask insecurities concerning his/her learning disability. In addition to these conflicting feelings concerning his/her learning disability, the Self-Unaccepting Student is characterized as someone who does not understand or accept personal strengths and capitalize on them. This lack of understanding of personal strengths is also evidenced by the fact that this student is unlikely to choose a career that matches his/her strengths.

Given that this student appears uncomfortable with having a learning disability and is unaware of personal strengths, it would seem beneficial to give this student both a more accurate understanding of the learning disability and assistance toward realizing personal strengths. In the words of Allard et al. (1987), the Self-Unaccepting Student could benefit ". . . from a realistic appraisal of strengths and weaknesses so they might more accurately perceive their self". Also beneficial would be a greater acceptance of his/her learning disability, which would lead to a greater acceptance of self.

Question Two: What belief type (or factors) are characteristic of college students with learning disabilities in terms of how they perceive success? This question was answered using the responses generated from the second condition of instruction (describe a successful college student who has a learning disability). This second condition of instruction resulted in three factors or belief types. A first result is that there was more agreement among subjects concerning their perceptions of a successful student with a learning disability than there was in the students' perception of self, a finding which is demonstrated quantitatively through factor correlations (see Table 3 and 4). In addition to the high correlations between belief types' AII and BII perception of success, condition of instruction two yielded one less belief type than condition of instruction one. This appears to be quite a reasonable result because, in general, the qualities of a successful student clearly must be a subset of all possible qualities of being a student. Therefore, it is natural that there is less room for diversity among perceptions of what it takes to be successful than among perceptions of simply one's nature of being.

Belief Type AI: The Responsible Supported Student and BI: The Individually Responsible Student. Because of the similarity between the

Responsible and Supported Student of belief type AI and the Individually Responsible Student of belief type BI, the results of each of these will be discussed in conjunction with each other before turning to self perceptions of the third belief type. The Responsible Supported Student and the Individually Responsible Student share certain similarities concerning which characteristics are necessary for success at the college level for students with learning disabilities. Both belief types feel that a strong sense of personal responsibility for learning is essential to the successful student, second only to true acceptance of one's strengths, weaknesses, and learning disability. The successful student is perceived by belief types AII and BII as one who has a strong sense of personal responsibility for learning, reflected in their description of a successful student being a hard working, goal-oriented person who believes that powerful determination and desire are necessary to succeed. These types also believe the successful student to be goal-oriented, one who works arduously to achieve goals, who feels that having a goal can (as in item PR23), "get a person through anything".

In addition to a strong sense of personal responsibility, and in agreement with the consensus in the professional literature (Wiess & Weiss, 1985; Vogel & Adelman, 1989; Cowen, 1985, 1987 & Allard et al., 1985), the successful student of belief type AII and BII is perceived by subjects as having an acceptance and awareness of strengths, weaknesses, and having a learning disability. This individual understands his/her capabilities and knows how to utilize strengths to circumvent weaknesses. Such a student exhibits a realistic understanding of the fact that a learning disability has nothing to do with a person's intelligence and has an awareness and acceptance of the fact that a student with a learning disability must study longer and harder than his/her non-learning disabled peers to accomplish the same amount. The work of Birely

and Manly(1980) support this. Further, Birely and Manly state that students must be totally accepting of this fact, cognitively, emotionally, and behaviorally or be frustrated by self- defeating statements of the "why me" variety.

Turning to the issue of support, the Responsible Supported Student and the Individually Responsible Student appear not to rely on support enough to seek it out. In fact, all belief types were in consensus that the successful student was not one to seek out support. The subtle difference between the three belief types is revealed in whether or not they perceive the successful student as having access to support. The Responsible Supported Student did report that he/she had access to the support of friends or family if necessary, while the Individually Responsible Student did not report feeling that this support was available. Having supportive friends and family when needed proved to be insignificant for the student of belief type CII.

Judging by the lack of interest, the need for support seems to be perceived as a negative quality or at least unnecessary to the successful student with a learning disability. The researcher believes that the reason for this perception is that subjects felt that reliance on external support would belie a weakness or shortcoming, which a truly successful student should not have. This notion of a successful student as one who does not rely on support is further illustrated in the next topic addressed: academic coping.

Academic coping refers to utilization of compensatory strategies in the academic environment, the purpose of which is to enable the student with a learning disability to circumvent weaknesses in an attempt to equalize the learning disabled student with his/her non-learning disabled peers. Interestingly, while the Responsible Supported student and the Individually Responsible student describe the successful student with an LD as having an awareness and acceptance of weaknesses and as having developed ways to

work around them, they both perceive such a student as one who does not use coping strategies to circumvent weaknesses. Belief type AII rates those characteristics pertaining to academic coping on the "most unlike" side of the array, while the same characteristics appear to be insignificant for belief type BII. Two of the academic coping strategies warrant further attention.

The first is whether a student should reveal his/her learning disability to instructors. It is important to remember that all four belief types which emerged under condition of instruction one were clearly described as people who would not reveal their learning disability to an instructor. Likewise, response to the second condition of instruction indicates that belief type AII and BII also perceived a successful student with a learning disability to be one who does not inform instructors of the learning disability. Thus, we may infer that convictions on this matter are quite strong. The researcher believes there is a possible reason for these clear feelings: Students may have had negative experiences as a result of revealing their learning disabilities to instructors. In this regard we are reminded of research conducted by Minner and Prater (1984) concerning the attitudes college instructors have toward learning disabled students. This study revealed that instructors often ". . . hold negative academic expectations for learning disabled students and are pessimistic about their ability to teach them." (p. 257) It also may be the case that the subjects believe if one is a successful student then there would be no reason to make anyone aware of his/her learning disability, much less an instructor. This latter attitude appears to be central to belief types' AII and BII perception of success. The issue of self-disclosure is illuminated by considering their placement of items SS1 and AA7, the first of which focuses on asking instructors for assistance and accommodations, while the second pertains to students' understanding and acceptance of their weaknesses and their ability to work

around them. By placement of AA7 on the positive side of the board, we see that AII and BII regard the successful student as one who is aware of and accepting of weaknesses and who has ways to work around them. The placement of SS1 on the negative side of the array, however, reveals that while the successful student does have methods for working around his/her weaknesses, requesting assistance and accommodations from instructors is not one of these methods.

Thus, we see that the successful student with a learning disability is aware and accepting of weaknesses, but nevertheless achieves success without requesting special assistance or accommodations. The researcher believes that when subjects perceive a successful student as circumventing weaknesses, in fact what they may be referring to is overcoming weaknesses by improving their skills to the point where accommodations are no longer necessary. Sonday (1989) in her work with students with LD supports the hypothesis that students would rather overcome than accommodate the learning disability . Sonday divides working with college students with learning disabilities into three possible approaches. The first approach is referred to as bypass strategies designed to circumvent the area of deficit, such as taking oral exams, hiring a notetaker, using taped texts, etc.. The second approach is referred to as accommodation, and may include giving the student an untimed exam or testing a student in a private, distraction-free environment, or allowing the use of an electronic speller in an exam situation to accommodate poor spelling skills. The third approach is remediation, or improving basic skills to a point where accommodations are less necessary. Often support services at the college level are comprised of bypass strategies and accommodation, while few attempts are made to remediate basic skills. Yet Sonday reports that many students are more interested in improving language skills so that accommodations are less

necessary. She believes that students' desire to improve basic skills may be a result of concerns for future employment success, which may be dependent upon the mastery of language skills.

Belief Type CI: The Career Planner. Like belief type AII and BII, the Career Planner of belief type CII describes the successful student as one keenly aware and accepting of strengths, weaknesses, and having a learning disability. One aspect which differentiates belief type CII from belief type AII and BII is the extent to which CII is career oriented. This type ranked positively all three statements pertaining to career.

We may recall that although the Career Planner is not regarded as being a good problem solver, he/she does appear to exhibit good problem solving behaviors, if only related to career and academic coping. For example, this type matches a career to personal strengths, has plans for how to reach career goals, discerns course expectations before enrolling, utilizes strengths, and works around weaknesses.

Curiously, belief type CII perceives a successful student is one who neither handles matters independently when possible nor feels responsible for his/her own learning. Distinct from belief types AII or BII, the Career Planner is perceived as one who would reveal a learning disability to instructors. The investigator believes that one way to interpret the placement of these items described could be that successful students are perceived as those who put more responsibility for their learning in the hands of their instructor rather than their own. We note that because relatively few people loaded on this factor, the Career Planner appears to be the least significant belief type which emerged from condition of instruction two.

Question Three: On what belief type (or factors) would students with high

life-satisfaction load? Question three is answered using frequency and percentage data from results from the SWLS (Diener et al., 1982). The results appear reasonable. For example, the salient aspect of the loadings on condition of instruction one (see Table 7) is that the greatest number (40%) of high-life satisfaction subjects loaded on factor BI, the Loner (which is the most self-confident, self-reliant and independent belief type), while only one high-life satisfaction subject (7%) loaded on belief type AI, the Support Seeker (which characterizes a more dependent and insecure individual). Similarly, with respect to condition of instruction two (see Table 8) we find that over 80% of high-life satisfaction subjects loaded on either belief type AII or BII. Both types exhibit a strong sense of personal responsibility and awareness and acceptance of strengths, weaknesses, and learning disabilities, qualities which one very well might associate with any satisfied person. Interestingly, a majority (53%) loaded on factor AII which, in addition to the above-mentioned characteristics shared with BII, is an individual who has many supportive friends and/or family members.

A comparison of condition of the low-life satisfaction loadings of condition of instruction one versus the high-life satisfaction subjects also reveal a reasonable result. Namely, when relatively few low-life satisfaction subjects load on a factor, a relatively greater number of high-life satisfaction subjects load on the same factor and vice versa (see results for belief type AI and DI in Table 7).

Finally, we note that distinguishing aspects did not emerge from the loadings of low life satisfaction subjects on the factors for condition of instruction two. These subjects loaded more or less uniformly on all factors.

Question Four: On what belief type (or factors) would students with high GPA load? Question four is answered using frequency and percentage data of grade point averages. For condition of instruction one, the results of subjects with high GPA were more or less uniformly distributed, with only 14% difference between the lowest and the highest loadings. Concerning the GPA data of condition of instruction two, however, a decidedly more differentiated loading is revealed, whereby the majority of subjects with high life satisfaction loaded on belief type AII. The results appear reasonable and coincide with life satisfaction data. Significantly more of the high life satisfaction subjects (53%) loaded on the self-reliant, confident and independent belief type AII for condition of instruction two, as did more high GPA subjects (59%) load on that same factor for condition of instruction two.

A comparison of condition of instruction one low and high GPA loadings reveals results similar to those pertaining to the life satisfaction data. Namely, when a relatively few low life satisfaction subjects load on a certain belief type, a relatively greater number of high life satisfaction subjects load on the same factor and vice versa. Looking at belief type CI as an example, (Table 5) we note only one subject (11%) from the low GPA group loaded on belief type CI, while 7 subjects (33%) with high GPA loaded on that same factor.

Implications for Programming

The subjects' perceptions of self and success suggest certain implications for programming for college students with learning disabilities. The main implications pertain to awareness and acceptance of one's weaknesses, the type of support services available to students with learning disabilities and the education of college instructors on issues related to students with learning disabilities.

The importance of a student with learning disabilities being aware and accepting of strengths and weaknesses has been stressed in the literature and by the students themselves. Enabling a student to better understand his/her LD should be a priority of college support programs. Further, students should be encouraged to focus on their strengths and use them to their benefit, while developing strategies to compensate for their weaker areas. To this end, Minner and Prater (1984) suggest that training programs should be designed and implemented for college staff and faculty members.

Concerning the area of deficit created by the learning disability, the subjects' perceptions of success revealed the need to have support services include remedial assistance as well as accommodation in the services they provide. Students expressed the desire to overcome the LD by improving basic skills, rather than solely accommodating the weaknesses. Based on both professional literature citing misperceptions that college instructors have of students with learning disabilities, and the reluctance of students to reveal their LD to their instructors, it appears college instructors may benefit from learning more about learning disabilities and the individuals who have them.

Limitations

One of the limitations of this study is that the results are only generalizable to students with similar academic opportunities to those subjects in the study. The subjects from this study were from a small private university which had a unique and extensive support program for students with learning disabilities. In addition, these subjects were self-selected volunteers, which also limits the generalizability of the study.

Another potential limitation of the study has to do with the Q instrument itself. While factors which emerged from condition of instruction one accounted

for 40% for the total variance, factors from condition of instruction two accounted for only 32% of the total variance, indicating that this group held opinions regarding characteristics of a successful student which the statements comprising this Q-sort did not fully address.

Recommendations for Future Research

It is recommended that future research investigate the reason for the relatively low percentage of the total variance accounted for in the second condition of instruction. A limitation of a Q study is that subjects are only able to convey their perceptions if the characteristics they would use in their description are in the concourse. While the existing study was constructed based on current educational theory, a possibility for future research would be to construct a Q study with more items to address the question of how college students perceive a successful student.

The next recommendation for future research pertains to further analysis of discrepancy scores and relationships utilizing GPA and life satisfaction data. One study might focus on the discrepancy scores between perceptions of self and perceptions of success. Those subjects with high discrepancy scores could be studied as well as those subjects with low discrepancy scores to obtain further information to distinguish these two groups. Utilizing the GPA and life satisfaction data, a study could be conducted to investigate the relationship between subjects with low-life satisfaction and high GPA versus those subjects with high- life satisfaction and low GPA.

Finally, future researchers might compare students' perception of self and success to perceptions that others, such as parents and disabled student service providers have of the student and characteristics deemed necessary for the success of a learning disabled student.

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APPENDICES

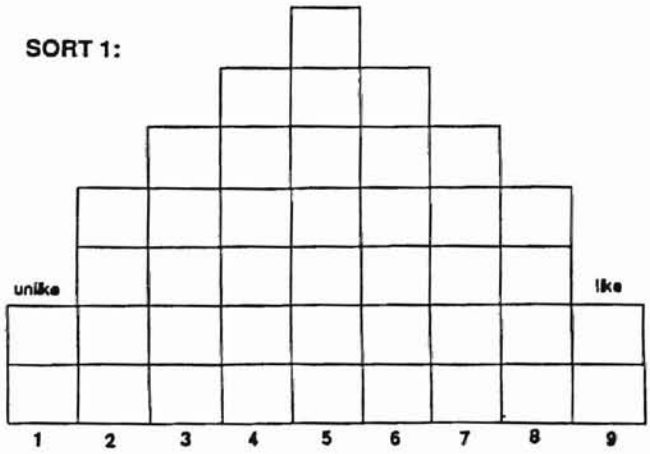
APPENDIX A

RECORD SHEET

RECORD SHEET

1. Date _____ Code number _____
2. Full name _____
3. Gender: ___ M ___ F Race _____
4. Age ____ Date of birth _____
5. Major _____
6. Total number of years in college _____ vo-tech _____ U of O L. C. _____
7. Current Status: ___ Frsh ___ Soph ___ Jr ___ Sr
8. High school special ed? ___ yes ___ no If yes, how many years? ___
9 Age you were diagnosed with a learning disability ____
10. Extra curricular activities in h. s. _____
11. Extra curricular activities in college _____
12. Interested in results of the study? ___ yes ___ no Coordinator _____

SORT 1:



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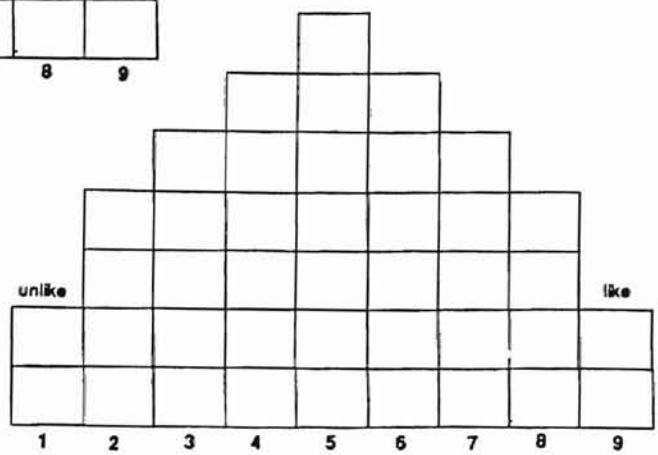

G.P.A. _____ (h, p, g) L.S. _____ c. r. ___ off. ___ G ___ # ___ / P___

APPENDIX B

Q SORT ITEMS - CARDS

Q SORT ITEMS - CARDS

Asks instructors for assistance and accommodations when necessary. 1	Understands and accepts own weaknesses and works around them. 7	Believes that a learning disability is just one part of a person. 13	Is able to get life back in control after experiencing hard times. 19	Examines why a solution to a problem was unsuccessful. 25	Devises creative, and sometimes unusual, strategies to achieve goals. 31	Tells instructors about learning disability. 37
Seeks out supportive, sensitive people that will help with problems. 2	Knows it is necessary to study longer and harder than peers, but feels it is worth it. 8	Has ways of working through frustration when dealing with problems. 14	Handles own matters when possible. 20	Solves most problems that appear, given enough time and effort. 26	Uses the recommendations suggested by advisor and/or instructors. 32	Plans frequent breaks to avoid "burn-out" when studying. 38
Has supportive friends and/or family who are there if needed. 3	Has developed areas of strength because of the learning disability. 9	Doesn't get discouraged when a task or project takes a long time to finish. 15	Feels responsible for own learning. 21	Determines which tasks to do first when many things need to be done. 27	Believes that there are people on campus who are willing to help. 33	Takes specific action toward career goals. 39
Seeks people out who will just listen when feels the need to talk. 4	Has become wiser because of having a learning disability 10	Believes that one has to have great determination and desire in order to succeed. 16	Feels a good grade on an exam is usually due to studying hard. 22	Is usually able to think up creative and effective alternatives for solving problems. 28	Sets priorities when studying so as not to get overwhelmed. 34	Chooses a career that matches own area of strength. 40
Accepts help from others. 5	Has effective ways of managing and reducing stress. 11	Believes that a good grade on an exam, is usually due to luck. 17	Believes that having a goal can get a person through anything. 23	Believes that one way to solve problems is to break large tasks into smaller ones. 29	Finds out what will be expected in each class before enrolling. 35	Has a plan for how to move toward career goals. 41
Understands and accepts own strengths and uses them. 6	Believes that a learning disability has nothing to do with a person's intelligence. 12	Works long and hard to achieve goals. 18	Trusts own ability to solve new and difficult problems. 24	Keeps trying different ways to solve a problem, until one of them works. 30	Balances course load with difficult and easier courses for a more successful semester. 36	

APPENDIX C

Q-SORT ITEMS - LIST

Q SORT ITEMS - LIST

ITEM CODE;

SS = Support System

AA = Acceptance and Awareness

PR = Personal Responsibility

PS = Problem Solving

AC = Academic Coping

F0 = Future Career Goals

SS1	Asks instructors for assistance and accommodations when necessary.
SS2	Seeks out supportive, sensitive people that will help with problems
SS3	Has supportive friends and/or family who are there if needed.
SS4	Seeks people out who will just listen when feels the need to talk.
SS5	Accepts help from others.
SS6	Understands and accepts own strengths and uses them.
AA7	Understands and accepts own weaknesses and works around them.
AA8	Knows it is necessary to study longer and harder than peers, but feels it is worth it.
AA9	Has become wiser because of having a learning disability.
AA10	Has developed areas of strength because of the learning disability.
AA11	Has effective ways of managing and reducing stress.
AA12	Believes that a learning disability has nothing to do with a person's intelligence.
AA13	Believes that a learning disability is just one part of a person

	with an LD.
AA14	Has ways of working through frustration when dealing with problems.
PR15	Doesn't get discouraged when a task or project takes a long time to finish.
PR16	Believes that one has to have great determination and desire in order to succeed.
PR17	Believes that a good grade on an exam is usually due to luck.
PR18	Works long and hard to achieve goals.
PR19	Is able to get life back in control after experiencing hard times.
PR20	Handles own matters when possible.
PR21	Feels responsible for own learning.
PR22	Feels a good grade on an exam is usually due to studying hard.
PR23	Believes that having a goal can get a person through anything
PS24	Trusts own ability to solve new and difficult problems.
PS25	Examines why a solution to a problem was unsuccessful.
PS26	Solves most problems that appear, given enough time and effort.
PS27	Determines which tasks to do first when many things need to be done.
PS28	Is usually able to think up creative and effective alternatives for solving problems.
PS29	Believes that one way to solve problems is to break large tasks into smaller ones.
PS30	Keeps trying different ways to solve a problem, until one of them works.
PS31	Devises creative, and sometimes unusual, strategies to achieve goals.
AC32	Uses the recommendations suggested by advisor and/or instructors.

AC33	Believes that there are people on campus who are willing to help.
AC34	Sets priorities when studying so as not to get overwhelmed.
AC35	Finds out what will be expected in each class before enrolling.
AC36	Balances course load with difficult and easier courses for a more successful semester.
AC37	Tells instructors about learning disability.
AC38	Plans frequent breaks to avoid "burn-out" when studying.
F039	Takes specific action toward career goals.
F040	Chooses a career that matches own area of strength.
F041	Has a plan for how to move toward career goals.

APPENDIX D

PARTICIPANTS OF CONCEPT

DEVELOPMENT STRATEGY

PARTICIPANTS OF CONCEPT

DEVELOPMENT STRATEGY

1. Dr. James Baucom, Dean of Students, Landmark College, Putney Vermont
2. Dr. Loring Brinckerhoff, Program Coordinator, Disabled Student Services Center, University of Connecticut at Storrs.
3. Dr. Martha Jordon, Assistant Director Counseling Department, Oklahoma State University, Stillwater, Oklahoma. Facilitator, "Unique Learners", support group for students with learning disabilities.
4. Mr. Robert Kahn, Director, Landmark School - North Campus, a residential school for students with dyslexia, Manchester Massachusetts.
5. Ms. Joan Sedita, Program Director, Landmark School, Beverly, Massachusetts.
6. Dr. Nancy Spekman, Director of Research Projects, Marianne Frostig Center of Educational Therapy, Pasadena, California.
7. Ms. Helen Wiess, Learning Disabilities Consultant.
8. Dr. J. Barbara Wilkinsen, Professor, Applied Behavioral Studies Department, Oklahoma State University, Stillwater, Oklahoma.

APPENDIX E

SATISFACTION WITH

LIFE SCALE (SWLS)

SATISFACTION WITH LIFE SCALE (SWLS)

Below are five statements with which you may agree or disagree. Using the scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your response.

1 = Strongly disagree

2 = Disagree

3 = Slightly disagree

4 = Neither agree nor disagree

5 = Slightly agree

6 = Agree

7 = Strongly agree

____ 1. In most ways my life is close to my ideal.

____ 2. The conditions of my life are excellent.

____ 3. I am satisfied with my life.

____ 4. So far I have gotten the important things I want in life.

____ 5. If I could live my life over, I would change nothing.

APPENDIX F

GROUP INTERVIEW

QUESTIONS

GROUP INTERVIEW QUESTIONS

1. Tell me what success in college means to you.

2. In what ways are you successful in college?

   What is the reason for it?

   Why is this?

   What helped you be successful in that way?

3. What things get in the way of being successful in college?

4. What does being in college with a learning disability mean to you?

5. In your life, what or who has been your most important source of support in helping you to keep going, keep trying.

APPENDIX G

TABLES

TABLE 1

FACTOR STRUCTURE - SORT 1

	Factors			
Subjects	A	B	C	D
1				
2				
3		X		
4				X
5				
6				X
7				
8				X
9		X		
10				
11		X		
12				X
13		X		
14		X		
15			X	
16	X			
17				
18		X		
19		X		
20			X	
21		(X)	(X)	
22				
23	X			
24	X			
25			X	
26			X	
27				
28		X		
29			X	
30	X			
31				X
32	X			
33				
34			X	
35				
36				X
37	X			
38				
39			X	
40				
41		X		
42				
43			X	
Frequency	6	9	8	6
Percent	21%	31%	28%	21%

TABLE 2

FACTOR STRUCTURE - SORT 2

	Factors		
Subjects	A	B	C
1			
2			
3	X		
4	X		
5	X		
6			
7		X	
8	X		
9	X		
10			
11			
12		X	
13			X
14			
15	X		
16		X	
17	X		
18			
19		X	
20			X
21	X		
22			
23			X
24		X	
25	X		
26		X	
27	(X)	(X)	
28	X		
29			
30			
31		X	
32		X	
33	X		
34			X
35			
36	X		
37			
38			X
39			X
40	X		
41		X	
42		X	
43	X		
Frequency	14	10	6
Percent	46%	33%	20%

TABLE 3

FACTOR CORRELATIONS - SORT 1

Factor	A	B	C	D
A	--	3	26	8
B	3	--	22	45
C	26	22	--	31
D	8	45	31	--

TABLE 4

FACTOR CORRELATIONS - SORT 2

Factor	A	B	C
A	--	46	40
B	46	--	43
C	40	43	--

TABLE 5

GPA FACTOR STRUCTURE - SORT 1

		Factors			
Low GPA	Subjects	A	B	C	D
1.	7				
2.	8				X
3.	10				X
4.	12				X
5.	13	X			
6.	16	X			
7.	18		X		
8.	19		X		
9.	23	X			
10.	27				
11.	33				
12.	39			X	
	Frequency	3	2	1	3
	Percent	33%	22%	11%	33%
High GPA					
1.	1				
2.	2				
3.	3		X		
4.	4				X
5.	5				
6.	6				X
7.	9		X		
8.	11		X		
9.	14		X		
10.	15			X	
11.	17				
12.	20			X	
13.	21		(X)	(X)	
14.	22				
15.	24	X			
16.	25			X	
17.	26			X	
18.	28		X		
19.	29			X	
20.	30	X			
21.	31				X
22.	32	X			
23.	34			X	
24.	35				
25.	36				X
26.	37	X			
27.	38				
28.	40				
29.	41		X		
30.	42				
31.	43			X	
	Frequency	4	6	7	4
	Percent	19%	29%	33%	19%

TABLE 6

GPA FACTOR STRUCTURE - SORT 2

		Factors		
Low GPA	Subjects	A	B	C
1.	7		X	
2.	8	X		
3.	10			
4.	12		X	
5.	13			X
6.	16		X	
7.	18			
8.	19		X	
9..	23			X
10.	27	X		
11.	33	X		
12.	39			X
	Frequency	3	4	3
	Percent	30%	40%	30%
High GPA				
1.	1			
2.	2			
3.	3	X		
4.	4	X		
5.	5	X		
6.	6			
7.	9	X		
8.	11			
9.	14			
10.	15	X		
11.	17	X		
12.	20			X
13.	21	X		
14.	22			
15.	24		X	
16.	25	X		
17.	26			
18.	28	X		
19.	29			
20.	30			
21.	31		X	
22.	32		X	
23.	34			X
24.	35	X		
25.	36	X		
26.	37			X
27.	38			X
28.	40	X		
29.	41		X	
30.	42		X	
31.	43	X		
	Frequency	13	5	4
	Percent	59%	23%	18%

TABLE 7

LIFE SATISFACTION FACTOR STRUCTURE - SORT 1

		Factors			
Low Life Sat.	Subjects	A	B	C	D
1.	1				X
2.	4				
3.	10				
4.	16	X			
5.	17				
6.	19		X		
7.	20			X	
8.	22				
9.	24	X			
10.	25			X	
11.	28		X		
12.	29			X	
13.	30	X			
14.	32	X			
15.	34			X	
16.	35				
17.	40				
18.	41		X		
	Frequency	4	3	4	1
	Percent	33%	25%	33%	8%
High Life Sat.					
1.	2				
2.	3		X		
3.	5				
4.	6				X
5.	7				
6.	8				X
7.	9		X		
8.	11		X		
9.	12				X
10.	13		X		
11.	14		X		
12.	15			X	
13.	18		X		
14.	21		(X)	(X)	
15.	31				X
16.	33				
17.	36				X
18.	37	X			
19.	38				
20.	39			X	
21.	42				
22.	43			X	
	Frequency	1	6	3	5
	Precent	7%	40%	20%	33%

TABLE 8

LIFE SATISFACTION FACTOR STRUCTURE - SORT 2

		Factors		
Low Life Sat.	Subjects	A	B	C
1.	1	X		
2.	4			
3.	10		X	
4.	16	X		
5.	17		X	
6.	19			X
7.	20		X	
8.	22			
9.	24			
10.	25			
11.	28	X		
12.	29			
13.	30			
14.	32		X	
15.	34			X
16.	35			
17.	40	X		
18.	41		X	
	Frequency	4	5	2
	Percent	36%	45%	18%
High Life Sat.				
1.				
2.	2			
3.	3	X		
4.	5	X		
5.	6			
6.	7		X	
7.	8	X		
8.	9	X		
9.	11			
10.	12		X	
11.	13			X
12.	14			
13.	15	X		
14.	18			
15.	21	X		
16.	26		X	
17.	27	(X)	(X)	
18.	31		X	
19.	33	X		
20.	36	X		
21.	37			
22.	38			X
23.	39			X
24.	42		X	
	43	X		
	Frequency	9	5	3
	Percent	53%	29%	18%

APPENDIX H

FIGURES

Figure 1. Pre-Sort Form Board

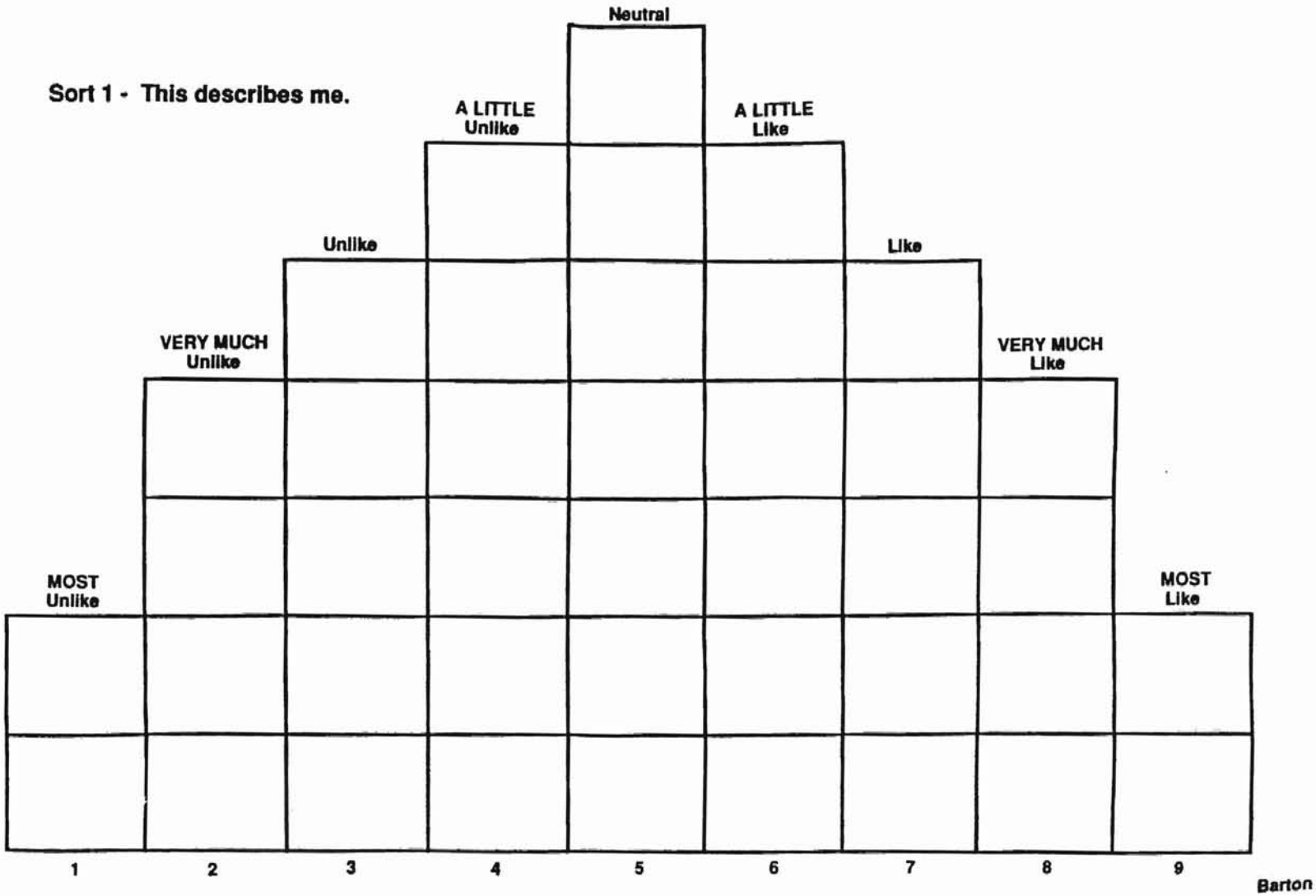

Figure 2. Q Sort Form Board - Sort 1

Sort 2 - This describes a successful college student with a learning disability.

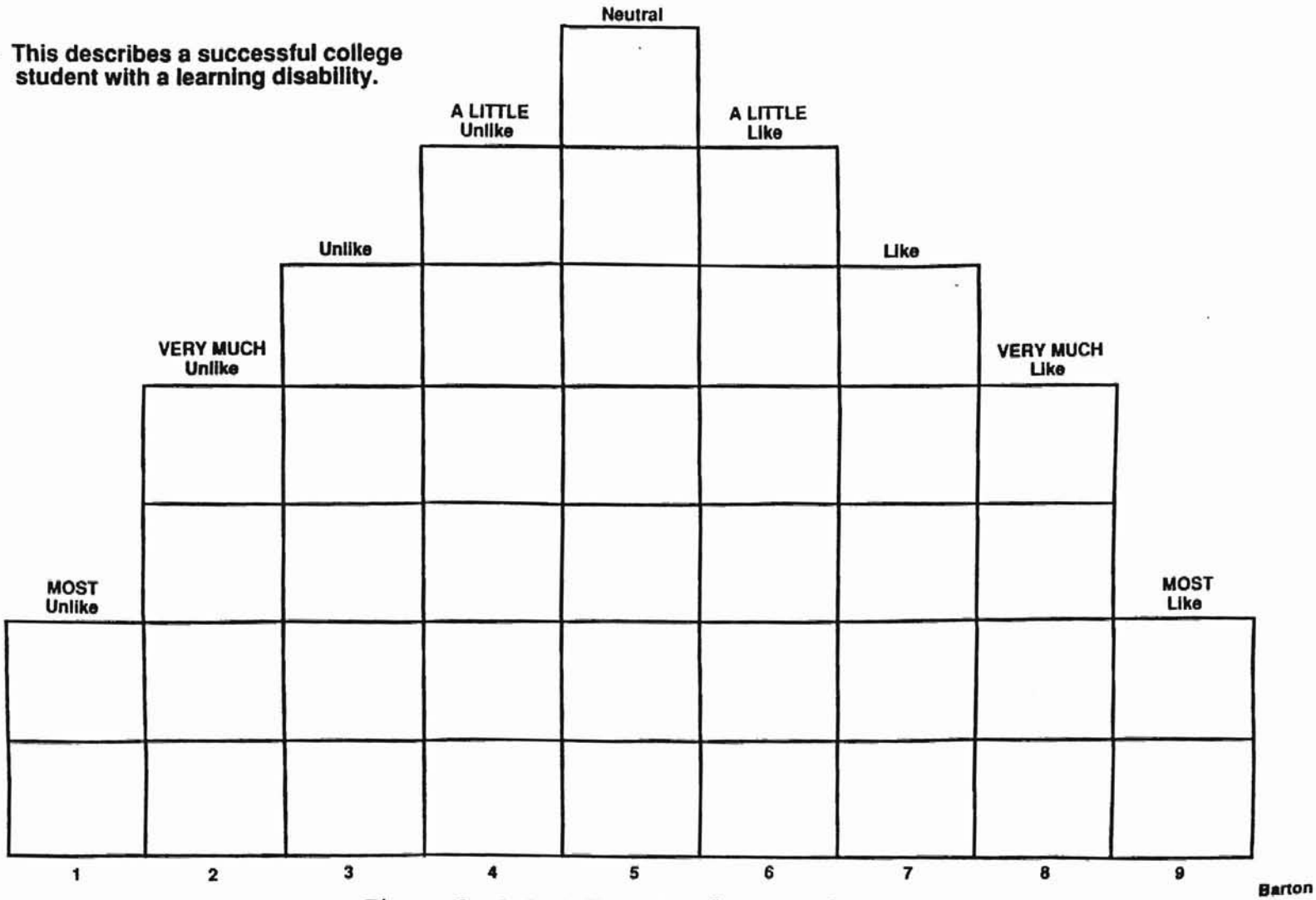

Figure 3. Q Sort Form Board - Sort 2

-4	-3	-2	-1	0	+1	+2	+3	+4
15	23	14	35	18	8	10	28	4
17	41	34	40	16	21	20	33	3
	24	25	6	30	36	1	13	
	37	39	11	12	19	5	2	
		7	27	31	26	38		
			29	32	9			
				22				

Figure 4. Q Sort Factor Array - Factor AI

-4	-3	-2	-1	0	+1	+2	+3	+4
17	2	36	23	41	30	7	14	28
4	35	8	13	22	25	19	31	20
	34	38	39	9	10	18	6	
	37	27	29	15	33	12	24	
		5	32	3	21	26		
			1	40	11			
				16				

Figure 5. Q Sort Factor Array - Factor BI

-4	-3	-2	-1	0	+1	+2	+3	+4
11	37	35	27	34	2	41	9	12
17	15	38	36	29	20	10	3	16
	28	30	32	26	21	5	6	
	14	25	4	22	33	13	23	
		19	24	39	18	40		
			1	8	7			
				31				

Figure 6. Q Sort Factor Array - Factor CI

-4	-3	-2	-1	0	+1	+2	+3	+4
37	4	14	30	38	25	21	22	39
17	35	34	29	5	27	15	3	41
	12	1	13	24	9	32	16	
	10	40	2	7	8	31	18	
		36	6	11	26	20		
			33	19	28			
				23				

Figure 7. Q Sort Factor Array - Factor DI

-4	-3	-2	-1	0	+1	+2	+3	+4
17	36	34	40	5	28	8	24	18
37	35	29	27	14	31	39	19	16
	4	1	15	11	30	6	7	
	2	13	26	20	10	23	3	
		38	33	9	41	22		
			32	12	21			
				25				

Figure 8. Q Sort Factor Array - Factor AII

-4	-3	-2	-1	0	+1	+2	+3	+4
17	10	19	28	32	30	9	16	22
37	4	25	27	20	39	7	21	8
	23	1	15	14	34	41	18	
	3	2	24	31	35	6	12	
		13	33	5	40	26		
			11	29	36			
				38				

Figure 9. Q Sort Factor Array - Factor BII

-4	-3	-2	-1	0	+1	+2	+3	+4
17	20	2	10	16	32	35	39	6
21	4	25	11	1	9	14	40	18
	27	24	38	19	3	12	22	
	15	29	34	28	5	41	7	
		26	30	8	36	37		
			23	31	33			
				13				

Figure 10. Q Sort Factor Array - Factor CII

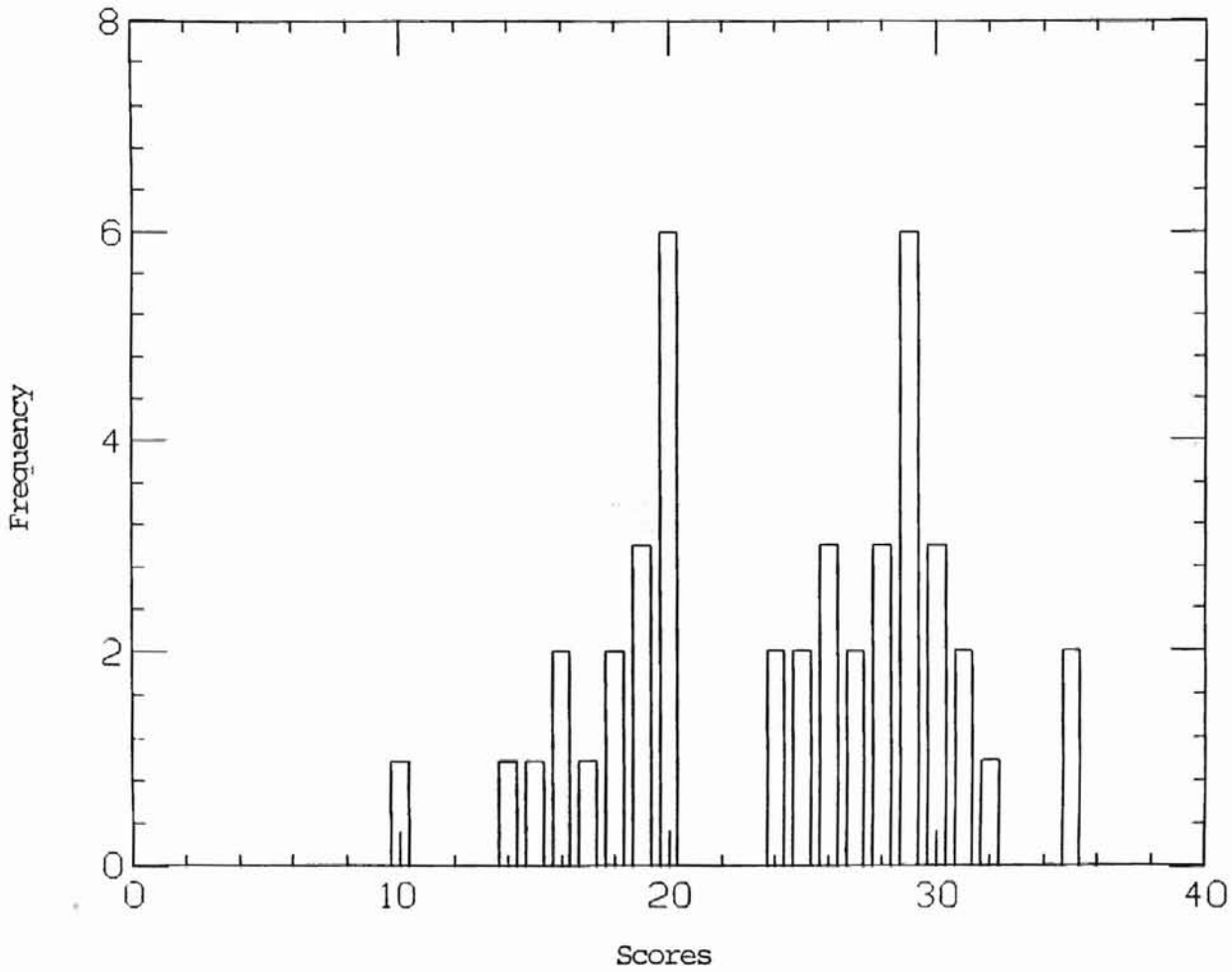

Figure 11. Frequency of Satisfaction with Life Scale Scores

VITA

Catherine M. Barton

Candidate for the Degree of

Master of Science

Thesis: A STUDY OF PERCEPTIONS OF COLLEGE STUDENTS WITH LEARNING DISABILITIES

Major Field: Applied Behavioral Studies with a specialization in Special Education - Learning Disabilities

Biographical:

Personal Data: Born in Marlborough, Massachusetts, April 14, 1961, the daughter of Arthur A. and Monica F. Barton.

Education: Graduated from Our Lady of Mercy High School, Rochester, New York in June 1979; received Bachelor of Science Degree in Elementary Education from University of Wisconsin at Madison in December, 1987; completed requirements for the Master of Science degree at Oklahoma State University in May 1995.

Professional Experience: Teacher, Landmark School, Manchester, Massachusetts, August, 1987 to August, 1988. Private consultant/tutor in the area of learning disabilities, August 1988 to July 1991.

Professional Organizations: Adults and Children With Learning Disabilities; National Orton Dyslexia Society

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
FOR HUMAN SUBJECTS RESEARCH

Proposal Title: The Perceptions of College Students with Learning Disabilities

Principal Investigator: J. Barbara Wilkinson/Catherine Barton

Date: March 9, 1990 IRB # ED-90-027

This application has been reviewed by the IRB and

Processed as: Exempt [X] Expedite [ ] Full Board Review [ ]

Renewal or Continuation [ ]

Approval Status Recommended by Reviewer(s):

Approved [X] Deferred for Revision [ ]

Approved with Provision [ ] Disapproved [ ]

Approval status subject to review by full Institutional Review Board at next meeting, 2nd and 4th Thursday of each month.

Comments, Modifications/Conditions for Approval or Reason for Deferral or Disapproval:

Signature: Steven W. Edwards Date: August 27, 1990

Chair of Institutional Review Board