Making the Transition from Secondary to Post-Secondary Education: A Retrospective Study of Students with Learning Disabilities

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Abstract

The purpose of this study was to investigate what students with Learning Disabilities perceive are the personal characteristics they possess and services they require to assist them to complete secondary school and to continue their education in a postsecondary setting. Twenty-one students (12 female and 9 male) participated in the study which consisted of an interview and completion of a questionnaire.

The central findings were as follows: 1) the participants perceived that personal characteristics were important in secondary school and still remain of importance at the postsecondary level; 2) Many of the typical accommodations and services supposed to be provided in secondary schools were not provided to the participants in this study; 3) the participants believed that they had more academic than social problems.

Recommendations for future research in this field are based on findings related to the transition of LD students from secondary school to postsecondary education.
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I am also grateful to the insightful staff at the two community colleges where I interviewed the participants for this study. They served as important resources and enhanced my understanding of learning disabilities.

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CHAPTER ONE: INTRODUCTION

Background of the Problem

Although the term "transition" is a relatively new term when applied to education and was not used before the 1980s, a number of individuals concerned with young adults with disabilities have designed secondary education programs for "life after high school" (Gajar, 1992).

Within this context, the transition process from high school to postsecondary occurs in a number of different social environments, such as: the educational community, employment, health, and the family. Transition from school to adult life and postsecondary education can be filled with challenges and a successful transition benefits from varying degrees of support from family, friends, and school personnel. Students with learning disabilities (LD) may often need extra support to make a successful transition from one stage to the next.

In the United States transition programs are designed to help learning disabled high students make the transfer from adolescence to adulthood and to assist them in obtaining educational services to help them lead successful and productive lives. In Canada, educational transition programs are in their infancy. The Canadian Human Rights Act (1977) guarantees that every person is given equal access to services and cannot be discriminated against on the basis of any handicap. However, Bill 82 (Ontario
Ministry of Education, 1980) of Ontario does not legislate for service, only for identification and placement. Each province develops laws to implement services guaranteed in the Human Rights Code and these vary. Although the Canadian Human Rights Act provides a good legal framework for access to education, it is a slow and cumbersome way ofremedying inequities (Lepofsky, 1995 as cited in Ahead).

This cumbersome process is in some way mitigated by the Ontario Human Rights Code (1981) which exists to protect every person from discrimination and stipulates in Section 1 that every person has a right to equal services without being distinguished because of a disadvantage. This is a key word and covers a multiplicity of situations — social disadvantages being but one of them.

The groundwork for effective transition planning for students with learning disabilities is set, but issues of implementation have only been addressed relatively recently and there is a dearth of research in this area. What information exists generally looks at a few areas. First, on the services and accommodations provided in the postsecondary settings and to a lesser extent in high schools (Armstrong & Davies, 1995; Bursuck, Rose, Cowen, & Yahaya, 1989; Williams, 1988). Second, much of the existing research has looked at the difficulties encountered and postsecondary service requirements for specific groups, including those students with learning disabilities (Nelson

There has not been much focus on individuals who have successfully made the transition and who are staying in the education system in a postsecondary setting. To date, there is little information available of the effectiveness of services available. Further, there appear to be few studies where students have expressed their feelings on the effectiveness of services and accommodations or where they have given suggestions for change (Greenbaum, Graham, & Scales, 1995).

Statement of the Problem

The purpose of this study was to investigate the following:

(1) What perceived personal characteristics have LD students found to be most useful in helping them make the transition from secondary to postsecondary education?

(2) What services did they require to further facilitate successful transition from secondary to postsecondary education?

Within the above context the following subquestions are derived:

(a) What perceived educational and social problems did
secondary students with learning disabilities have in school?

(b) What accommodations made in secondary school did they presume as being useful to them?

(c) What accommodations did the students think that they needed that they did not get in secondary school that would have been helpful?

(d) What accommodations were actually available in secondary school?

(e) Are these accommodations in use in postsecondary education?

(f) What personal characteristics did the students believe helped them to continue in school?

(g) Do the personal characteristics which were useful to them in secondary school continue to be useful in postsecondary education?

Rationale for the Study

From personal classroom observations, the researcher noticed students who appeared not to process information in the same way as students who did not have a learning disability. The researcher’s interest in undertaking this study has been stimulated by these experiences. In addition, there are few studies which look at what students with learning disabilities perceive are the personal characteristics and services that they require to assist
them in secondary school and also in a postsecondary setting.

Most of the research appears to examine what services and accommodations exist at the postsecondary level (and to a lesser extent at the secondary level), the difficulties and postsecondary service requirements, and what strengths and skills students with learning disabilities require. The researcher believes that students with learning disabilities who have been able to complete secondary school and enter postsecondary level education and remain in the education system can provide information about their experiences which can assist others in making the transition.

Limitations and Assumptions

One limitation of this study is related to its design. McMillan & Schumacher (1993) state that the limitations of the design cites the limitations that the researcher can identify at this time: the scope of the study, methodology, and the design. The limitation of scope relates to the problem statement. The foreshadowed problems usually focus on one aspect of possible research foci at the selected site, such as to describe instructional processes but not to evaluate the effectiveness of these processes for student learning. Methodological limitations refer to possible difficulties in assuming the research role, purposeful
sampling, and naturalistic events that the researcher cannot interrupt legitimately (p. 576)

A second design limitation was that there was no control group with which to compare the participants, and the data obtained were analyzed from the researcher's perspective. However, a number of strategies were used to account for this. A combination of participant observation, detailed recorded interviews, questionnaire completion, and educational documents from the participants were utilized. These results are not generalizable to non LD students.

A third limitation was that the respondents had different learning disabilities and although the instructions for completing the questionnaire were explained in the same way to all participants, some required more assistance. The participants were not homogeneous in their comprehension abilities and some of them had difficulty in understanding simple instructions.

A fourth, was that what might be true for these participants at the time the research was conducted, might change over time due to the acquisition of new perspectives and the maturing process.

A fifth limitation was that the sample size was small (n=21), only students attending two community colleges were interviewed, and the sample was one of convenience. It is not known if other similar students would respond similarly, but they might.
Definitions

**Accommodations** - Services, teaching methods, or strategies that assist learning disabled students to manage their problems and communicate their skills.

**Community College** - A publicly funded postsecondary school offering 2 or 3-year programs in the Arts, Social Services, Industry & Commerce, and Technology.

**Counsellor** - A counsellor is an employee whose role in an educational institution is to provide guidance and information pertaining to educational or personal matters.

**Exceptional Pupil** - Students whose behavioural, communicational, intellectual, physical, or multiple exceptionalities are such that they are considered to need placement in a special educational program (Ontario Ministry of Educ: Education Act, 1980, Section 1, Subsection 1.21).

**IEP** - Individual Education Plan. The Plan is based upon the identified needs of the pupil, as determined by the Identification, Planning and Review Committee. It spells out goals, objectives, and a timetable for the learning process. These should be measurable and form the basis of the annual review process. The plan should include strengths of the student as well as deficits and information about any coping strategy from which the pupil might benefit.

**Learning Disability** - A learning disability evident in
both academic and social situations that involves one or more of the processes necessary for the proper use of spoken language or the symbols of communication, and that is characterised by a condition that:

results in a significant discrepancy between academic achievement and assessed intellectual ability, with deficits in one or more of the following:

- receptive language (listening, reading)
- language processing (thinking, conceptualizing, integrating)
- expressive language (talking, spelling, writing)
- mathematical computations

**Personal Characteristics** - Those individual traits which may provide motivation or lack of it in individuals.

**Postsecondary Education** - In this study, Community College and University Education in Ontario.

**SAT** - Scholastic Aptitude Test. This test was developed in the US in 1927 as there were a large number of postsecondary institutions and much variance in graduation scores. The universities and colleges wanted an objective test as it would be a useful vehicle to judge students' results. The SAT is an objective way of comparing students and it is an important part of students college and university applications. It is a 3-hour test comprised of verbal and mathematics sections.

**Secondary Education** - High School--from Grade 9 to OAC
Special Needs Services - Services and accommodations to help learning disabled students to succeed in school and/or community college and university. Learning Disabilities is only one of the categories of special needs services in the postsecondary system.

Tracking System - A method of following students to find out if they are remaining in the educational system or dropping out.

Transition - is an organized means of preparing students for further education or work after secondary school. It is a term that centres around the idea of a journey to an unfamiliar place and within this context transitions are made from birth to infancy, infancy to childhood, childhood to puberty and adolescence, adolescence to young adulthood, middle age, old age and death. Cross-cultural transitions refer to moving across cultures, usually from one country to another or across subcultures.

Transition Program - refers to the particular elements of the procedure that a student employs to equip themselves for postsecondary education. These programs were initiated in the United States.

Vocational - Programs to prepare students for employment. These programs teach skills in many occupational areas and can be adapted to include students with learning disabilities.
Summary

Much research has looked at the services and accommodations provided in the postsecondary settings and to a lesser extent in secondary schools (Armstrong & Davies, 1995; Bursuck, Rose, Cowen, & Yahaya, 1989; Williams, 1988). Some research has been conducted into the strengths and skills students require to continue in postsecondary education (Aune, 1991; Durlak, Rose, & Bursuck, 1991).

This study was carried out to analyze what students thought about the transition services that were provided in secondary school and subsequently in community college -- also, what characteristics they perceived that they required to assist them.

Chapter 2 examines literature which relates to the transition from school to postsecondary education and some important areas that need to be addressed. Chapter 3 reviews the methodology used to investigate LD postsecondary students in two community colleges. Chapter 4 analyzes the results of the interviews and Chapter 5 discusses the implications of the findings.
CHAPTER TWO: REVIEW OF THE LITERATURE

Introduction

The concept of transitions is centred around the notion of a journey to an unfamiliar destination. Every day, transitions are made: Birth to infancy, infancy to childhood, childhood to puberty and adolescence, adolescence to young adulthood, middle age, old age, and death; from elementary school to secondary school, from secondary school to college or university or work. Transitions are either positive or negative, voluntary or involuntary. Change is experienced and separation anxiety can occur when children leave home, or when small children attend school for the first time. Loss may be encountered when someone separates in a relationship or if someone close to us dies. If we move house or relocate to another province or emigrate, our lives can change.

Cross-cultural transitions refer to moving across cultures, usually from one country to another, or across subcultures in a community. Women’s experiences differ from men’s as a result of their socialization (Bystydzienski & Resnik, 1994). In many societies, women have lower status and are responsible for the care of their children and their households. These factors shape women’s lives and give them a sense of commonality. Bystydzienski and Resnik (1994) explained that as women are kind and compassionate, it is more likely to make them be flexible and accept different opinions and be less territorial than men. Furthermore,
women are less likely to feel uncomfortable than men, if they find themselves in lower level jobs when they move. Although women may adjust to cross-cultural transitions in terms of everyday life events, the emotional experience may be devastating and they may have to control feelings in order to cope. Ordinarily, women are encouraged to express their feelings.

There are many health-related circumstances such as physical disabilities and terminal illnesses that lead to major life changes. Individuals' lives must be modified to accommodate the loss of mobility or body functions. In war or an accident, injuries are sudden and require immediate skills in function, image, and life styles. We have to handle the difference that this will make in our lives. As Brammer (1991) wrote, "Learning to manage life transitions effectively is a combination of skillful self-management, learned coping strategies, and experience. Sometimes we need the help of others in the form of good coaching" (p. 142).

Transitions - LD Students as a Special Group

Most students face challenges as they transfer to the postsecondary system but research (Dowdy, Carter, & Smith, 1990) indicates that the problems for special groups such as the learning disabled can be even more complicated. Students face challenges learning to be independent; being separate from their families while away at community college
or university; becoming accustomed to large campuses and moving around a larger physical environment; organizing their time efficiently and being motivated to carry through with their work. In secondary school, students experience more of a nurturing atmosphere.

The transition from school to postsecondary or post-school life can be profound. If one recognizes that a disability can make life changes even more difficult, then it is essential that the secondary school system instruct students with LDs in skills that will help them to progress through their transitions more smoothly (Schumaker & Deshler, 1987).

Many studies state that schools inadequately address transition issues, particularly for students with LDs. Prater and Minner (1986) stated that more LD students could succeed in postsecondary institutions if high school and college and university faculty were better trained to meet the requirements of this population, if professors did not hold such negative views, and if students had more pertinent preparation.

Many universities offer programs for students with LDs to prepare them for university life and the literature suggests (Aune & Johnson, 1992; Brandt & Berry, 1991; Cusco, 1991) that transition programs should address the following: (1) prepare students for postsecondary education early; (2) communication between secondary and
postsecondary bodies is important to establish early career and vocational planning, (3) have an understanding of the differences between secondary and postsecondary education, with reference to academic as well as differences in support services; ensuring that students are aware of their disability and their strengths and weaknesses by the time they reach higher education; (4) provide affective support; (5) diagnostic evaluation; (6) provide academic reinforcement and instruction; (7) plan for strategy training; (8) be aware of campus support services; (9) made aware of the general campus (10) individual and group counselling; (11) assuring that students have the required skill base to meet required competencies; (12) that students develop good study and learning strategies and LD students are able to acquire the help they need to guarantee success. If these supports and traditional programs are beneficial to the LD population, they would also benefit all students.

Transition from High School to Postsecondary Education

High school curricular decisions, made early in a student's life, may limit postsecondary options. In her research, Vogel (1987), stated that this may be why there is a difference between the non-LD and the students with LDs participation in higher education. Many teachers advise students with LDs that they should drop certain subjects and then when these students apply to university and college
they find that they may not have the right combination of subjects for admission.

Stodden and Boone (1987) reported that in the US, 55% of students with LDs plan to go on to college or university as compared with 80% of non-learning disabled who participate in postsecondary education.

Drop Exceptional Designation

Many students are identified as having LDs between Grades 4 and 6 and many parents want to drop the exceptional designation as they proceed into the higher grades (Nichols, 1994). This may not be wise unless the label was incorrect initially. Placing students in classes without support will not help them to succeed (Nichols, 1994). More importantly, students with LDs need to be identified to be able to receive assistance both in secondary school and once they enter community college or university. Nichols (1994) states that if students with LDs are allowed to go on without this identification, it would be comparable to tying their hand behind their back and then waiting for them to carry out a task which everyone else performs with two hands.

The Quality of Secondary School Programs

Dowdy, Carter and Smith (1990) surveyed 80 secondary school students with LDs and 80 secondary school students
without LDs to find out about their transitional needs. The results showed that although more students with LDs than students without LDs were involved in transitional planning, students with LDs needed more help in this area. Also, twice as many students without LDs wanted to continue at the postsecondary level, whereas 21 students with LDs as compared to 10 students without LDs wanted to get a job. The authors suggest that these students should be counselled about studying further, as a lack of education or training could be detrimental in obtaining a good job. The authors emphasized that the high school curriculum should be more related to the students’ needs after they leave the system, hence more transitional planning.

In Ontario, in 1992, 78,000 students were identified as having an LD by school boards. Many of them would find the preparation for university and college inadequate (Nichols, 1994).

Assessment

Nicols (1994) said that assessment is a further issue which should not be used simply to evaluate the adolescent but to evaluate the effectiveness of program planning and implementation. Assessment is an essential part of a comprehensive transition process and provides information and data for the instructional decision-making process. The importance of an assessment is that it will identify the
student's strengths and weaknesses. It will also outline methods in which the students will learn effectively and what teaching modifications are necessary and what accommodations are useful for students.

If students are not tested, they will be at a disadvantage because they will not understand why they are having difficulty coping with their studies and they will not have developed any coping skills to achieve success.

Assessment for classification and/or placement is primarily concerned with establishing a student's eligibility for special services, designation of a label, and identification in a suitable service option. The Individual Education Plan is seen as very important in transition planning and one of the items it should contain is an up-to-date assessment from a psychologist, containing information regarding the student's disability, vocational goals, and postsecondary goals. Some school boards do not have psychologists on staff but Regulation 298, under the 1980 Education Act of Ontario legislates that personality and intelligence tests must be conducted by or under the supervision of a psychologist.

In Metropolitan Toronto, the Metropolitan Separate School Board (1993) has set up a referral process with five community colleges and, included in the documentation is a self-advocacy letter prepared by each student. This gives the colleges an indication of the student's learning style.
This referral process has resulted from cooperation among teachers within the Metropolitan Separate School Board and teachers within Metro Toronto Colleges of Applied Arts and Technology (Metropolitan Separate School Board Revised Draft, 1993).

Adelman and Vogel (1990) at Barat College and Northern Illinois University in the US have conducted research on college bound students with LDs and examined Scholastic Achievement Test Results. Their research has not ascertained that SAT scores are valid measurements of future college success for such students.

The Role of the Counsellor

There is also the question of the role of the counsellor in assisting the student with LDs to prepare for transition and to determine if they are doing this effectively.

Under the Ministry of Education's Curriculum Guidelines Guidance document (1994), program considerations regarding exceptional students are identified as follows:

To assist in the provision of special education programs and services, guidance counsellors shall cooperate with teachers and administration in:

(a) monitoring the educational progress of exceptional pupils

(b) consulting with parents and special services
(c) providing counselling services to meet personal, social, educational and career planning needs of exceptional pupils (p. 18, cited in Nichols, 1994).

The Ontario Learning Disabilities Association states that in many school boards the guidance counsellors currently do not have a large enough role in the special education process (Nichols, 1994). If counsellors play a role in assisting the learning disabled student, they can become facilitators of an effective and successful transition process (Nicols, 1994).

The Canadian Council for Exceptional Children (Frieze, 1995) stated that in promoting successful transitions for students with special needs there is inequitable access to guidance and career counselling, and that this may be due to the fact that academic planning for higher education is done by the guidance department and special needs students are seen by special education staff. Also, few special educators have formal training in guidance counselling or transition planning.

There is also the important issue that the curriculum should include a component on social skills. The current focus is on basic academic skills and much of the research states that the curriculum should be more relevant to students' needs and should include skills such as social
skills, self-advocacy and self-esteem, to name but a few (Durlak, Rose, & Bursuck, 1991).

**Services**

Although legislation in the US and Canada states that students with learning disabilities have the right to education and services in postsecondary education, their inclusion is not guaranteed.

Siperstein (1988) stated that the journey of a postsecondary student is comprised of three stages: (1) entering college; (2) handling academic and social changes while in college, and (3) completing and leaving college. Siperstein states that colleges could provide various activities to ensure that students are successful. These would include: (1) effective delivery of support services; (2) compensatory skill workshops to give instruction on study testing techniques that the student may not have had in high school; (3) social functioning workshops which could include stress management and assertiveness training; (4) student-initiated projects; and (5) faculty awareness workshops to inform staff about learning disabilities and assist them in the classroom. These five areas can help students develop the social skills needed for college and be able to advocate for themselves in college and afterwards.

Siperstein also emphasized that the number of students who enter college might increase if they are assisted in the
transition from high school to postsecondary education. He also emphasized that academic failure and the number of social problems could be decreased.

This article made the point that "it is only through the active participation of faculty and staff that the Three-Stage Transition Model will succeed in helping the student with learning disabilities into, through, and out of college" (Siperstein, 1988, p. 435).

This article supported points discussed by Nelson and Lignugaris/Kraft (1989) on transition issues. However, they further said that postsecondary bodies are aware of the need to provide services to students with LDs to make successful transitions. However, there is a need for more cost-effective services.

Dowdy, Carter, and Smith (1990) surveyed 80 high school students identified with LDs and 80 students identified as having no LDs to find out what their transitional requirements were. The results indicated that more students with LDs than students without LDs were involved in transition programs, and that parents, regular teachers, and counsellors were the people who assisted students with LDs in going to college. It was not the special education counsellors and vocational rehabilitation counsellors.

Very few students with LDs (two), cited special education teachers, vocational rehabilitation counsellors, or vocational education teachers (seven), as giving them
help with their transition to postsecondary education. This study supported the results of Smith and Dowdy's (1989) study that stated that a transition curriculum is not usually offered in the schools. These data validated the researcher's findings of the Metropolitan Toronto School Boards (1996) who, for the most part, do not offer specific transition programs in the last year of school (S. Henderson, personal communication, June 1996; E. Hogben, personal communication, June 1996).

Further, a study carried out by Grayson (1993) on the needs of students entering York University, found that many students without LDs felt that their preparation for university was inadequate and that they lacked the competencies essential to the accomplishment of the university's overall objectives.

There were limitations to Dowdy et al.'s (1990) study in that the design of the study did not require the students to make choices and order their answers. As a result, many answers were uncontrolled and difficult to decipher. It might be also difficult to generalize from this study as more specific details on the subjects without LDs IQ and achievement levels are required to give strength to the study when correlating and comparing groups.

In England, Armstrong and Davies (1995) examined secondary school students with moderate learning disabilities and/or emotional and behavioural problems and
stated that this group of students who continue into post secondary education tend to score below the national average on examinations. They also indicated that little was known about these students once they left full-time school.

In England, special education needs are covered by the 1981 and 1993 Education Acts and a student with a learning disability is entitled to educational resources up until the age of 19. However, this only applies if a student remains in school. If a student leaves school to go to work or enrolls in a training course at a college of education, special services and accommodations are no longer available. The researchers said that the experiences of students in transition may be fragmented because they receive assistance from a number of bodies. However, there is no research to provide a clear picture of their circumstances (Armstrong & Davies, 1995).

Armstrong and Davies (1995) interviewed 29 students from six schools in the North of England who were in their last semester at school. They also obtained information from career guidance teachers in the schools and specialist advisors from the careers service who spend time at the schools.

Armstrong and Davies' (1995) focus was on student-perceived occupational aspirations, assets and opportunities, and the difficulties that they might encounter in meeting these. They also asked questions about
career and employment education, guidance and support systems, and transitions for these students.

The results indicated that all students had career goals and that initially, teachers and career officers stated that most students had realistic employment expectations. On reflection of the students’ aspirations, the teachers and career officers claimed that work goals were more intricate than at first portrayed. The reason for this was that applications for students from special schools would probably not be as acceptable as those of students from regular schools, even though the LD students would probably be able to succeed in the various training programs.

The advantage that LD students had was that they had access to services if they were continuing with their education under the Youth Training Program. Work skills and work experience that the students perceived that they had obtained were seen by nine of them as a way of entering the labour market. Seven thought that their success depended on their personality and three on their determination to succeed.

The teachers and career guidance teachers anticipated barriers due to the fact that the 29 LD students had attended special schools. The students stated their difficulties were due to low achievement at school and being unable to compete with brighter students. On the
whole, LD students seemed satisfied with the career and employment help that they received. Interestingly enough, and in support of other research, teachers and career officers believed that the most important time for assisting the students was at the time of transition from secondary school to postsecondary education or work.

The research showed that there was little coordination between the various agencies at the transition stage and that many students were unable to get the necessary support. The Human Rights Code (1981) was supposed to extend special needs support to postsecondary education but it has disregarded advice portrayed in the Warnock Report (Dept. of Education & Sciences 1978). This report stipulated "that provision for special educational needs should be extended to cover post-school education and training (as cited in Armstrong & Davies p.74).

The study concluded that although LD students have support at school, this can change and break down after they leave school and return to their local areas. Many of the opportunities will depend on where they live and can vary in different parts of the country depending on the local economy. Subsequent lack of coherence at interprofessional and interagency levels was believed to increase the vulnerability of LD students during transition to employment or further training.
In Ontario, school boards are influenced by Special Education Advisory Committees to offer programs for all students including those students with special requirements who are in the secondary school system. Some of the programs offered include: study skills, time management, exam preparation, note taking, tutoring, learning strategies, and assistance in the learning resource room. These goals are specified in Ontario Schools, Intermediate and Senior Divisions - a document of the Ministry of Education, 1984 and it mentions that the educational system should endeavour to meet the needs of all students so that they can develop their abilities. It adds that specialized staff and equipment or facilities may be required.

Five well-defined methods are being used to serve the needs of learning disabled adolescents in high school (Ontario Ministry of Education: Handbook For Teachers of Students with Learning Disabilities, 1986):

1) The tutorial method. The main aim is to give LD students help with course content so that they may stay in a regular classroom.

2) Basic skills remediation approach. This method provides assistance to students who lack basics in reading and mathematics and the main focus is on developing adaptive strategies to mitigate for deficits.

3) Functional curriculum method. This helps students manage their lives in society and the emphasis is on work
and survival rather than on school work.

4) Work-study. As the regular school curriculum may not be suitable for some students, this method provides LD students with opportunities to spend half a day in school and the remainder at work. School work concentrates on reading, writing, spelling, and mathematics related to the world of work.

5) Learning Strategies. Alley and Deshler (1979) were among the first researchers to emphasize the learning strategies approach which concentrates on learning rather than on content. This is an area in which the literature has focused over the last decade and, from the literature reviewed, students with learning disabilities can meet with success in postsecondary education if they develop specific strategies by which they are able to manage course content. The Metropolitan Toronto School Boards offer the above services but they vary from school to school.

In some boards there are no specific programs for transitions in the last year of school (Dr. Beal, personal communication, March, 1996). Although legislation in Ontario has mandated services, it does not necessarily mean that they are being provided fully or that they are being offered equally in every board.
Skills and Personal Characteristics

With more students with learning disabilities attending postsecondary institutions, there is a lack of data on how they have adjusted to university and community college life (Saracoglu, Minden, & Wilchesky, 1989). However, many studies suggest that students with learning disabilities have problems with self-esteem and self-advocacy and that this affects their passage to postsecondary life. Gerber and Reiff (1991) state that possibly the biggest gap in quantitative research is that it does not concentrate on how learning disabilities affect adolescents in terms such as personal characteristics.

Saracoglu et al., (1989) compared 34 university students with identified learning disabilities with 31 students identified as having no learning disabilities to find out how they adjusted to the "social, personal-emotional, and academic demands of university" (p. 590). The study also focused on the relationship of self-efficacy and self-esteem to adjustment. Results showed that students with learning disabilities reported poorer academic adjustment than the students without learning disabilities and that students with learning disabilities reported low self-esteem and poor emotional adjustment.

The researchers further stated that their experience with these students showed that while many were motivated in pursuing their aims, this was not evident in the confidence...
they displayed. Conclusions suggest that more research is needed to discover "the effects of self-esteem and self-efficacy beliefs on the academic, social and emotional adjustment of university students with learning disabilities" (p. 598).

A major limitation of this study was the tendency of some students to report their social adaptation in a positive light. However, on looking at the scores of this group, the researchers felt that it was likely that not all of the students were in fact socially incompetent.

Durlak, Rose, and Bursuck (1991) researched students with learning disabilities who wanted to go to university or other postsecondary institutions. They felt that this would enhance their chances of career success. Many of these students found it difficult to complete their programs and this study was an "attempt to develop and empirically validate a model training program to teach self-determination skills to Secondary school students with L.D." p.(

Self-determination was defined as one component of secondary students' readiness for adulthood. It is the extent to which a person assumes responsibility for his or her own goals, accomplishments, and setbacks. Included are such characteristics as assertiveness, self-advocacy, creativity, and independence. Researchers think that the degree to which individuals assume control and take action
affects their eventual employment choices and how they adjust to life demands (Ward, 1988).

The researchers enquired if these students were able to acquire a number of self-determination skills through direct instruction and then generalize them to the regular classrooms. These skills included identifying one’s disability and the impact it had on school performance, and also identifying instructional accommodations and strategies for arranging those accommodations with their regular classroom teachers. The research concluded that when self-determination skills were taught systematically and students received immediate and specific feedback and the opportunity to use them, they could acquire, maintain, and generalize them.

McWhirter & McWhirter (1990) also talked about "the development of independence and responsibility, self-advocacy skills and realistic self-knowledge" (p. These skills emphasized developing positive self-esteem and effective social skills. The authors recommended that (a) students develop independence and self-advocacy skills before going to university and (b) that they fully understand their disability.

Aune’s (1991) transition model assists in providing a response to the growing inquiry about psychosocial issues. The LD Transition Project was developed at the General College of the University of Minnesota and was originally
funded for 3 years to look at (a) adolescents in transition and (b) adults with learning disabilities in secondary and postsecondary settings. The project staff soon observed that the psychosocial needs of the project participants were an important part of the transition process. Fifty-five students were chosen from about 150 referrals of individuals with learning disabilities from the seven Minneapolis public high schools. If the juniors or seniors met the four Project entrance requirements, they were eligible to participate in the project. The entrance criteria were: (a) completion of a documented Learning Disability diagnosis, (b) a current Individual Education Plan on file, (c) documented average or above-average intelligence, and (d) documented academic achievement commensurate with their peers in at least one or more mainstream academic classes.

As part of the project, participants were from time to time given various formal and informal assessments to measure their learning styles, specific vocational interests, self-esteem, self-advocacy skills, ability to interpret social cues, disability self-awareness, and knowledge of appropriate study skills. Extensive case notes were also kept on communication between the project transition counsellors, the students and their families, and other professionals involved over the 3-year period. Based on this research, the Learning Disability Transition Project found the following powerful tools helpful in addressing the
diverse psychosocial needs of the participants: (1) individual counselling, (2) group counselling, (3) disability awareness training, and (4) vocational counselling. The transition model was developed and implemented in the junior and senior years and could provide the basis for other transition programs.

The results of the Project were that students reported having better study habits; being more knowledgeable about postsecondary options available to them; knowing more about what accommodations they might need and how to request them, and being more likely to acknowledge their learning disability. Although most of the participants gained important transition skills and completed their first year of postsecondary education, it was not known if these students transferred self-advocacy skills to real-life situations and if they completed their postsecondary education. The project was limited to a year beyond high school.

Mellard & Hazel (1992) found that concerns of social competencies in the learning disability population have become more evident, although little attention has been devoted to it. They also cited several studies which conclude that broader social abilities are unlikely to be included in training at work and that people have little instruction in this area to help them to fit into postsecondary settings, work, or community life.
In this study it was determined that adolescents and young adults with learning disabilities experience many social problems and that these occur in all areas of their lives.

They further added that many secondary school curricula provide social skills instruction but the time available is often restricted as more pressing needs take precedence. Many studies stated that secondary school special education programs should reevaluate their aims and instruction "in light of students' independent functioning and fulfilment of social responsibilities" (p. 268).

Mellard and Hazel (1992) further said that if it is unsatisfactory to have so many young adults not completing high school and continuing at a postsecondary level, it is necessary to see what was happening at the secondary level. For these young adults, mastery of basic academic skills is not the foundation for economic and functional independence and socially responsible participation in time, community, work and post-secondary educational settings. The goal of completing high school, functioning independently, and demonstrating social responsibility may be reasonable for a much greater majority of students that are currently demonstrating such competencies. If this goal is to be realized, however, significant changes are needed in our understanding of
high school and post-secondary education and services (p. 268).

Teacher Attitudes

Lobosco & Newman (1992) surveyed 1,100 teachers from an 11-county area of central New York state and found that teachers who taught gifted students had increased job satisfaction, whereas those who taught students with learning disabilities had decreased job satisfaction. This negative feeling was especially apparent for those who were not specially trained to work with special needs students and those who taught at the high school level. The researchers felt that the problem had to do with the fact that the law now legislates for the mainstreaming of students with learning disabilities and that the education for excellence movement and mainstreaming puts pressure on teachers to enhance the general academic achievement levels of their students and also accommodate students with learning disabilities.

They concluded that teacher attitudes and training must be considered as they will have an impact on those wanting to be teachers and the retention of current and future teachers. Educators also need to be included about teaching students with learning disabilities and that mainstreaming is of value. This showed that more preservice training is needed on the expectations and methods of working with
students with learning disabilities for all teachers, but primarily for those at the high school level. They suggested having more information at preservice training courses and, for those already teaching, providing more staff development.

In addressing the negativism in working with students with learning disabilities, they suggested having adequate course work on mainstreaming for teachers in training as well as extra supervised fieldwork to provide them with constructive experience working with students with learning disabilities.

Peer Tutoring

Byrd (1990) assessed peer tutoring with students with learning disabilities and found that these students were successful both as tutees and tutors as long as appropriate training and supervision were given. Maheady, Sacca & Harper (1987) found that in classes where peer tutoring was used, it helped students and teachers come together. Byrd (1990) stated that because integration and peer tutoring programs are important elements in the future of regular and special education, that more study is required to look at students with learning disabilities acting as tutors in these classes.
CHAPTER THREE: METHODOLOGY

Introduction

This study is qualitative with some quantitative elements. This kind of study best lends itself to a qualitative approach.

Leedy (1997) states that the purpose of qualitative research is to describe and explain, to explore and interpret how different people in society create their worlds.

The nature of the qualitative research process is that researchers begin with flexible guidelines and are prepared for changes to occur as the research develops. Researchers interact with their subjects and unknown variables arise from the data, which leads to patterns and/or theories that assist in defining events. Data are collected through observations and interviews and inductive analysis is used where a certain group can be observed and generalized to other groups.

The researcher is using qualitative research as there is limited literature on the topic and this approach can give her the flexibility to examine a small number of LD students in a postsecondary setting so that certain facts may be identified. The researcher also believes that she will be able to establish rapport with the students.

This is a descriptive survey and Leedy (1997) outlines the basic design of descriptive surveys as a research
method. He says that observation is the primary way of compiling data. He says that the participants of a study are chosen carefully, clearly defined, and specifically delimited to set precise parameters for ensuring discreteness to the population.

Data in descriptive survey research are particularly susceptible to distortion through the introduction of bias into the research design. Particular attention should be given to safeguarding the data from the influence of bias.

Although the descriptive survey method relies on observation for the acquisition of the data, those data must then be organized and presented systematically so that valid and accurate conclusions can be drawn from them (Leedy, 1997, p.219).

Population and Sample

The sample is composed of learning disabled students in the Colleges of Applied Arts and Technology, chosen from George Brown College and Humber College, two Community Colleges in the Toronto Area. These 2 Community Colleges were chosen because of their accessibility to the researcher. The students were selected with the assistance of the Special Needs Offices in the two Community Colleges. Initially, the Special Needs Coordinators explained the
purpose of the study to the students and then the researcher telephoned each participant to further talk about the research and to set up a time for the interviews.

Initially, 26 students were to be interviewed but due to program constraints only 21 completed the interviews. The students were selected because they had a Learning Disability. Nineteen of the students were identified in either elementary or secondary school and two were identified at the postsecondary level. All of the students had or were receiving some assistance from the Special Needs Office at their college.

Instrumentation

A questionnaire was developed and a draft of the questionnaire was piloted with five preservice students at Brock University. They were asked to remark on the ease or difficulty with which they could understand and answer the questions and to write comments about the questionnaire as a whole. The feedback about the questionnaire was that it was clear but that the wording of one of the questions was revised as it appeared to be difficult to comprehend (see Appendix A).

Qualitative data were gathered through a biographical interview. The students answered a questionnaire that had both qualitative and quantitative sections.
Method

Each participant was interviewed individually by the researcher to obtain a biographical view of their lives and experiences both within and outside of the education system. They were asked (1) to describe themselves as students; (2) how their learning disabilities have affected them in their personal lives; (3) Whom do they remember as being most helpful to them when they were in school; (4) What did that person do for them; and (5) What strategies did they use that helped them?

Each interview lasted from 1 to 1 ½ hours depending on how much information the respondent had to offer.

At the onset of each interview, the participants read and signed a letter of consent (See Appendix G), stating that they understood what the study was about and what was involved.

The researcher explained to each of the respondents that a biographical interview would take place before they answered the questionnaire and that there were three parts to the questionnaire. Part A consisted of seven questions requesting demographic information, language use, etc. Part B requested information about: (i) services and accommodations that were useful to the students and are still in use; (ii) what they required and did not receive to assist them for the transition process; and (iii) about their personal characteristics. Part C included some
questions about: (i) services they no longer needed; (ii) what was new to them when they entered Community College; (iii) what personal characteristics were still useful in a postsecondary setting, and some open-ended questions regarding improvements at the secondary and postsecondary level. The researcher read some of the questions to the respondents as their comprehension levels varied. At times, they were prompted. Each interview was taped and transcribed following the interviews.

Pilot Study

Five Non LD preservice students at Brock University completed the questionnaire to determine its effectiveness for students with learning disabilities. One of the questions was revised as the students thought it was obscure. It was Question 4 in Part B of the questionnaire which stated "Which services that were available in secondary school helped you make the decision to continue your education? Is this the decision that you wanted?" This question now reads "What services\accommodations that were available in secondary school helped you make the decision to continue your education?" No other changes were necessary. Upon completion of all the interviews, the students were sent notes thanking them for participating in the study.
The Study

Interviews were set up in advance and arrangements were made with the two community colleges for the researcher to interview the respondents individually. The researcher initiated the sessions by making the students feel as comfortable as possible. She explained to each student that a short interview would initially take place to obtain a picture of them as students and in their personal lives. Then a questionnaire would be distributed to elicit more in-depth information about the students in secondary school and in their postsecondary setting. Each session lasted approximately 1 or 1½ hours for each participant. Prompting took place if a student had difficulty answering a question on the questionnaire.

Analysis

The data of this study were analyzed by giving a description of demographic data about the students. An analysis of the transcripts of the students' responses was carried out and the responses were clustered into themes. Quantitative data were collected. The Statistical Package for the Social Sciences was used to examine the information. Frequency distributions were run from Question one to Question 97 to show the most and least frequently occurring scores.

Chi-square was used to show how responses to one
variable related to responses in another.

The Mann-Whitney Non Parametric Test was used to determine if the sum of scores on the questions "Which of the following services\accommodations were provided and useful to you in secondary school" and "Which of the following services\accommodations were provided and useful to you in postsecondary school" differed between males and females.

The Pearson product-moment correlation coefficient was used to evaluate any relationships between two or more responses.

Summary

This study was undertaken to investigate what students with learning disabilities perceived were the personal characteristics and services that they needed to assist them in secondary school and to continue in a postsecondary setting.

Students from George Brown College and Humber College took part in the study. The students answered questions at a biographical interview and completed a three-part questionnaire. The interviews were tape-recorded and the researcher also took notes.

The purpose of this study was to investigate what students with learning disabilities perceive are the personal characteristics they possess and services they require to assist them to complete secondary school and to continue their education in a postsecondary setting.
The purpose of this study was to investigate the following:
I: What perceived personal characteristics have LD students found to be most useful in helping them make the transition from secondary to postsecondary education?
II: What services did they require to further facilitate successful transition from secondary to postsecondary education?

Within the above context the following subquestions are derived:
(a) What perceived educational and social problems did secondary students with learning disabilities have in school?
(b) What accommodations did the students think that they needed that they did not get in secondary school that would have been helpful?
(c) What accommodations were actually available in secondary school?
(d) Are these accommodations in use in postsecondary education?
(e) What personal characteristics did the students believe helped them to continue in school?
(f) Do the personal characteristics which were perceived to be useful to them in secondary school continue to be useful
in postsecondary education?

Twenty-one students from two Community Colleges were interviewed to ascertain their experiences with the education system. The sessions were tape-recorded and analyzed. A questionnaire was completed on the students’ experiences concerning services and accommodations available to them in the secondary and postsecondary systems.

The results report the perceived personal characteristics, services, and accommodations, that LD students believed helped them in school and to continue at the postsecondary level. It should be noted that, although this study involved the students’ perceptions, such perceptions of intrinsic characteristics and the various services and accommodations may not necessarily represent the actual events as they occurred.

Description of the Participants

Twenty-one participants were interviewed, 12 females and 9 males, with 6 participants in the 15 - 19 age range, 12 participants in the 20 - 25 age range, and 3 participants in the 26 - 30 age range. All were first generation Canadian except for one Afro Canadian, one Hispanic and one Dutch. The majority of the sample (15) spoke English as their first language and among the other languages spoken were Greek, Italian, Hebrew, Polish, Spanish, Dutch, and French. Of the participants, 19 lived in the Greater
Toronto Area, one in the Niagara area, and one in Northern Ontario. Thirteen of the participants completed Grade 12, seven completed Grade 13 and one completed Grade 10.

At the time of the study, all the participants were attending a Community College in the Toronto area and collectively the group were enrolled in various programs, such as Early Childhood Education, Business, Culinary Management, Food and Beverage Management, Pre-University Arts and Science, Marketing, General Arts and Science, Computer Programming, Civil Engineering, Child and Youth Worker Program, Office Administration and Medical Course, Travel and Tourism, Recreation and Leadership, and Accounting.

Themes that Emerged from Biographical Interviews

1) Seventy-five percent of the students were identified early in elementary school and were not retested again. They appeared to accept what was said and did not take any further steps:

"I was psychologically tested in Grade 4 as I did not fit in well at school." (S14)

Although some difficulties were recognized, it was not until he entered community college and received a bursary to have testing, that he was identified with ADD.

2) Some of the students appeared to have gaps in their education as they often changed schools and country:
"I did not remain at any school more than three years as my parents moved and I was expelled from one school." (S14)

As some teachers did not assist them, it would appear that they missed some of the essential foundation from which to develop academically:

"The teachers said that I wasn't trying hard enough, so I didn't always get help." (S09)

3) Some of the students had strategies to help them with their school work. One student had someone take notes for him so that he could listen to the teacher:

"I used to memorize details by taking the first letter of each word and making it rhyme." (S11)

"I used to take breaks and try not to become stressed." (S7)

4) Most of the students could not state what their problems were, while some were able to talk about their learning disabilities with varying degrees of awareness:

"I found it difficult communicating with people and was afraid to make mistakes. I did not do well in English in most grades at school and I did not learn how to study." (S7)

5) Most of the students had good verbal and interpersonal skills and responded appropriately to questions. However, most of the students' writing,
spelling, and grammar skills were poor. All of the participants except one were right-handed.

6) All of the participants received some assistance with their work either at home or at school:

"My boyfriend would help me with my work and explain it so that I had a better grasp of the various subjects." (S2)

"My sister helped me with my English as she is good at English and helps me make improvements in my essays." (S4)

One student remarked that her brothers helped her as her parents did not speak English. A number of students said that their teachers would reread information in a simpler way so that they could comprehend it.

7) Several students spoke about their mothers as being instrumental to them. They advised them not to give up and one stated that her mother would have made a good teacher.

8) Some of the students maintained that their teachers did not want them to go on to community college or university. Despite negativism from her teachers, Student (2) took advanced level courses in Grade 10 and was accepted into community college:

"this was despite my teachers who kept telling me that I would not make it." (S2)

"My school was not optimistic about my academic future.
"I always had to fight for what I wanted." (S15)

9) Some students accepted the diagnoses that were made in Grade 4 and did not question anything and still appeared to be unsure of the nature of their disabilities. One student stated that she had only seen her file since she was at community college, while another stated that she could not be told about her learning disability until she was 18 and still did not know what was wrong with her.

10) "No one helped me." This was an expression heard many times during the interviews with the students. Rose said that she "mostly pushed herself," while some participants stated that they succeeded without any help.

11) There were a number of students who did not possess self-esteem in their early days at school:

"I had self-esteem problems at secondary school and had therapy for it." (S5)

"I felt 'dumb' as I did not like reading and my teachers were always telling me that I was illiterate." (S20)

Two other students had physical problems in addition to their learning disabilities and due to these hurdles, they lacked self-esteem.

12) Some of the participants said that they were told that they were lazy:

"I had asked to be tested many times while I was at school and was always refused. I spoke with the
Guidance Counsellor at my school and he spoke with my teachers, who said that I was trying 'to cop out.' I am bitter that my disability was not recognized until I started at community college, because I had asked to be tested many times." (S2)

13) A few students maintained that the postsecondary system does not do a good enough job of marketing, once students are diagnosed with a learning disability:

"students do not know what options they have in choosing services and accommodations." (S21)

14) All of the students except one were right-handed. Weber (1993) stated that left-handed students often have learning disabilities, although there is not much research that states that being left-handed is a predictor of a learning disability.

Interpretation of the Results

The researcher used the $X^2$ test for goodness of fit to evaluate frequency distributions for the binary responses to each item. The results of quantitative analysis for retrospective evaluation of personal characteristics and skills prior to community college, and for current personal characteristics and skills are presented in Tables 1 through 4. Table 1 refers to the question "What personal characteristics did you possess that helped you in secondary school?" Data presented in Table 1 refer to responses for Question 6 in the questionnaire. Table 2 refers to the
question "Which of the following services\accommadations were provided and useful to you in secondary school?" Table 3 refers to the question "Which of the above services and \or accommodations do you still find useful?" Table 4 refers to the question "Are the personal characteristics that helped you in high school still in use in postsecondary education?"

**Interpretation of Results from Table 1: Responses to "Beliefs about Characteristics that LD Students found Useful."**

On the issue of motivation, the group was evenly split in acknowledging that motivation was a personal characteristic which helped them in secondary school; therefore the $x^2$ test was not significant for this item. Of the 12 students who stated that motivation was important, 8 (66.7%) were female and 4 (44.4%) were male.

The participants were relatively uniform in stating that characteristics such as self-advocacy, asking about "accommodations," "independence," "assertiveness," and "asking questions," assisted them in secondary school. Again the $x^2$ tests were not significant.

Of interest, the female participants differed from the male participants in that they found "independence" and "asking
Table 1

Perceived Personal Characteristics that LD Students Found Useful

<table>
<thead>
<tr>
<th>Question</th>
<th>Frequency of Y and N</th>
<th>Chi-Square Result</th>
<th>* denotes Significant @ P&lt;0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q6-1. Motivation</td>
<td>Y = 12, N = 9</td>
<td>0.42</td>
<td>N. S.</td>
</tr>
<tr>
<td>Q6-2. Self-Esteem</td>
<td>Y = 15, N = 6</td>
<td>3.86</td>
<td>*</td>
</tr>
<tr>
<td>Q6-3. Self-Advocacy</td>
<td>Y = 9, N = 12</td>
<td>0.42</td>
<td>N. S.</td>
</tr>
<tr>
<td>Q6-4. Clarification</td>
<td>Y = 16, N = 5</td>
<td>5.76</td>
<td>*</td>
</tr>
<tr>
<td>Q6-5. Accommodations</td>
<td>Y = 8, N = 13</td>
<td>0.42</td>
<td>N. S.</td>
</tr>
<tr>
<td>Q6-6. Independence</td>
<td>Y = 12, N = 9</td>
<td>0.42</td>
<td>N. S.</td>
</tr>
<tr>
<td>Q6-7. Assertiveness</td>
<td>Y = 12, N = 9</td>
<td>0.42</td>
<td>N. S.</td>
</tr>
<tr>
<td>Q6-8. Ability to verbalize</td>
<td>Y = 17, N = 4</td>
<td>84.50</td>
<td>*</td>
</tr>
<tr>
<td>Q6-9. Asking Questions</td>
<td>Y = 7, N = 14</td>
<td>2.34</td>
<td>N. S.</td>
</tr>
<tr>
<td>Q6-10. Asking for Assistance</td>
<td>Y = 3, N = 18</td>
<td>10.72</td>
<td>*</td>
</tr>
</tbody>
</table>
questions" more important characteristics in secondary school. Approximately 67% (8) of the female participants and 44.4% (4) of the male participants found independence useful. Approximately half of the female participants (6) and 11% (1) of the male participants found asking questions "to be extremely valuable." The results from personal interviews with the students indicated that in general males, were reticent about asking questions and were not as "independent" as the itemized questionnaire suggests!

The results revealed that self-esteem, clarification, ability to verbalize, and asking for assistance were significant.

The significant chi-square statistic indicates that a large proportion of the respondents (16) felt that these characteristics provided a substantial contribution to their ability to succeed and continue in secondary school. On the issue of asking for assistance, 85.7% (18) stated that they were unable to ask for assistance. When discussing these points, the students stated that they felt more comfortable asking for an explanation of material discussed in class than to ask for individual help. For example, the following excerpt from the interview process describes the general feelings of participants about the issue:

"I never asked teachers as I didn’t want to be laughed at." (S06)
"when I asked for clarification on various class materials it was often refused." (S01).

The participants indicated that they had the ability to verbalize their strengths and weaknesses. Approximately 81% of the participants stated that the ability to verbalize was an important characteristic. However, the interviews suggested that the participants rarely resorted to using this characteristic.

The results of the chi-square analyses suggest that the significant items were the most important self-perceived characteristics for LD students to make the transition from secondary to postsecondary education.

Question 2 (a) was posed to determine what perceived educational and social problems LD students had in secondary school. The entire group was evaluated together and the results are shown in Figure 1. The participants' perception was that they had more problems academically. Twelve students stated that academic problems were greater than social problems. Nine students stated that they had both academic and interpersonal problems, while none of the group perceived that the barriers were simply either interpersonal or other.

When discussing educational and social problems with the students in the interview process, the following was stated:
Figure 1.

Perceived educational & social problems

# of respondents

Academic  Interpersonal  Both  Other

Perceived Problems
"All classes were rough. I was good in maths but at English, I was really bad and failed. I didn’t notice that my learning disability affected my personal life." (S03)

"I found it difficult to process and apply information and would give up easily. I was not good at spelling or grammar and I also had interpersonal problems. People treated me differently." (S04)

"I did not always understand what was problematic and I had to repeat a grade and did not know the reason." (S06)

"I had difficulty in processing information and with maths and did not have much self-confidence. I was a loner and “did not like being part of a group but liked to work alone. I only had a few friends.” (S07)

"My problems were more interpersonal as I was more interested in what my friends were saying and doing and I did not pay as much attention to my academic work. I felt that my friends took advantage of me and eventually, I broke away from some of these friends." (S08)

Communication between the students and teachers were described by several students. In general, the comments illustrate the level of frustration and low self-esteem among the members of the sample:

"I had a hard time communicating with people. I was a
loner and hesitated to be part of group projects as I was afraid I'd make mistakes." (S10)
"got frustrated when I couldn't do things which effected my work and I found myself giving up easily." (S13)
"school was difficult for me. If I didn’t get help, I couldn't do it. I couldn't process information." (S20)

Interpretation of Results from Table 2: Responses to the Question "Which of the following services\accommodations made in secondary school did the students presume as being useful to them?"

Table 2 lists the typical accommodations and services provided in secondary schools to both LD and non LD students.

The qualitative data from the interviews indicate that the skills were not provided in many of the participants’ secondary schools. Therefore, the significant chi-square results indicate that the participants perceived these various skills to be missing and therefore not useful.

About 50% of the students acknowledged that Study Skills, Essay Writing, Word Processing, Extended Time on Tests, Positive Feedback, Learning Strategies, Personal Counselling, Career Counselling, and Help in the Resource Centre were useful in secondary school but the test of the goodness of fit of the frequency of responses for these items was not significant.
Table 2

Perceived Usefulness of Services Provided in Secondary Schools

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency of Y &amp; N</th>
<th>Chi-Square</th>
<th>* denotes Significance @ P&lt;0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Skills</td>
<td>Y = 9 N = 12</td>
<td>0.048</td>
<td>N. S.</td>
</tr>
<tr>
<td>Time Management</td>
<td>Y = 5 N = 16</td>
<td>5.76</td>
<td>*</td>
</tr>
<tr>
<td>Essay Writing</td>
<td>Y = 7 N = 14</td>
<td>2.34</td>
<td>N. S.</td>
</tr>
<tr>
<td>Examination Preparation</td>
<td>Y = 6 N = 15</td>
<td>3.86</td>
<td>*</td>
</tr>
<tr>
<td>Note Taking</td>
<td>Y = 1 N = 20</td>
<td>17.20</td>
<td>*</td>
</tr>
<tr>
<td>Advance Organisers</td>
<td>Y = 5 N = 16</td>
<td>3.86</td>
<td>*</td>
</tr>
<tr>
<td>Word Processing</td>
<td>Y = 11 N = 10</td>
<td>0.048</td>
<td>N. S.</td>
</tr>
<tr>
<td>Tutoring</td>
<td>Y = 5 N = 16</td>
<td>5.78</td>
<td>*</td>
</tr>
<tr>
<td>Extended Time on Tests</td>
<td>Y = 14 N = 7</td>
<td>2.34</td>
<td>N. S.</td>
</tr>
<tr>
<td>Extended Time on Exams</td>
<td>Y = 15 N = 6</td>
<td>3.86</td>
<td>*</td>
</tr>
<tr>
<td>Extended Time on Assignments</td>
<td>Y = 5 N = 16</td>
<td>5.78</td>
<td>*</td>
</tr>
<tr>
<td>Recorded Lessons on tape</td>
<td>Y = 4 N = 17</td>
<td>8.04</td>
<td>*</td>
</tr>
<tr>
<td>Buddy System</td>
<td>Y = 2 N = 19</td>
<td>13.76</td>
<td>*</td>
</tr>
<tr>
<td>Positive Feedback</td>
<td>Y = 11 N = 10</td>
<td>0.048</td>
<td>N. S.</td>
</tr>
<tr>
<td>Stress Management</td>
<td>Y = 3 N = 18</td>
<td>10.72</td>
<td>*</td>
</tr>
<tr>
<td>Assertiveness Training</td>
<td>Y = 3 N = 18</td>
<td>10.72</td>
<td>*</td>
</tr>
<tr>
<td>Learning Strategies</td>
<td>Y = 9 N = 12</td>
<td>0.42</td>
<td>N. S.</td>
</tr>
<tr>
<td>Personal Counselling</td>
<td>Y = 14 N = 7</td>
<td>2.34</td>
<td>N. S.</td>
</tr>
<tr>
<td>Career Counselling</td>
<td>Y = 12 N = 9</td>
<td>0.42</td>
<td>N. S.</td>
</tr>
<tr>
<td>Transition Counselling</td>
<td>Y = 1 N = 20</td>
<td>17.20</td>
<td>*</td>
</tr>
<tr>
<td>Help in the Resource Centre</td>
<td>Y = 12 N = 9</td>
<td>0.42</td>
<td>N. S.</td>
</tr>
</tbody>
</table>
Time Management appears important but in discussion with the students, it was not available in most secondary schools. Many of the students expressed that this service would have been useful:

"Time management was not an issue at my school as the teachers were not great in this area themselves." (S09)

Exam preparation emerges as being a significant skill. However, it was apparent from the verbal responses provided that, in general, although Examination Preparation was provided in the secondary schools, the majority of students did not think that they required it and did not avail of it.

All but one student stated that they did not require Note Taking. Again, during the interview process, students revealed that Note Taking was not available and many of them said that note taking would have been helpful. Some of the students stated that having someone to take notes for them would have allowed them to attend to what the teacher was saying in class.

Advance Organizers, Tutoring, Recorded Lessons on Tape, the Buddy System, Stress Management, and Assertiveness Training appear as important but were only available in a few secondary schools. Student (15) said that Stress Management and Assertiveness Training were provided only in relation to sports training at her secondary school.

Although Transition Counselling was significant, according to the chi-square test, the researcher discovered
that this service was not available in many secondary schools. Therefore, it must be stated that careful evaluation of the frequency of responses is important in interpreting these data.

"I was not tested as this service was not available to me." (S02)

"I was not aware of any Transition Counselling offered to the students. I had Transition Counselling at Discoverability." (S09)

The researcher carried out The Mann-Whitney Non Parametric Test, to determine if the sum of scores on the question "Which of the following services\accommodations were provided and useful to you in secondary school?" differed between males and females. The assumption of this test is that if the set of the sum of Q2 scores was taken, all the male scores would be low and all the female scores would be high. The results showed that females had significantly higher sum scores than the males (Uobs = 28; p<0.05; n₁ = 9, n₂ = 12). After talking with the participants, the researcher concluded that males were more reticent to say anything than females, and that this might account for the fact that females had higher sum scores.

The participants’ answers varied to the question regarding what accommodations they thought that they needed that they did not get in secondary school that would have been helpful.
Approximately 25% of the participants stated that they did not receive help about what to expect in college. They stated that they were unaware of how much harder it would be in a postsecondary institution.

Approximately 40% of students thought that they should have received more structure, essay writing and study skills, while only one student stated that he did not receive any service or accommodation to assist him with his studies. The following students' comments were made about what they perceived should have been available at their schools.

"I think that open-ended group discussions should have been organized on topics of interest to the students. In addition, time taken to discuss participants' fears would have been well spent and eased the transition process. Also these groups could have served as a support system for LD students." (S05)

"Taped lessons would have helped me and having access to computers, as I could have typed my notes quicker than writing them." (S06)

"I required a tutor, requested one, but never got one." (S10)

"I required guidance in understanding my learning disability and how to accommodate it, but there was no service to assist learning disabled students in this way." (S15)
When discussing what accommodations were actually available in secondary schools, students appeared to lack knowledge of what their schools actually provided and hence the brevity of my results. The gap in the students' knowledge about services appeared to be because they often did not realize that they had a problem, so they did not need to find out what services were available for them. In addition, they did not always know how to find out what would assist them and did not appear to have anyone to guide them.

The accommodations that were actually available in most of the secondary schools: were extended time on tests, extended time on examinations, and personal counselling. Study skills, word processing, positive feedback, and learning strategies were not as readily available.

Two of the students attended schools in the Niagara area and in Northern Ontario, where word processing, extended time on tests, extended time on examinations, and personal counselling were the only accommodations available.

Interpretation of Results from Table 3: Responses to the Question "Are these accommodations in use in postsecondary education?"

About 50% of students acknowledged that Study Skills, Time Management, Essay Writing, Exam Preparation, Note
Table 3
Perceived Usefulness of Services at the Postsecondary Level

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency of Y &amp; N</th>
<th>Chi Square</th>
<th>* denotes Significance @ P&lt;0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Skills</td>
<td>Y = 9 N = 12</td>
<td>0.42</td>
<td>N.S.</td>
</tr>
<tr>
<td>Time Management</td>
<td>Y = 7 N = 14</td>
<td>2.34</td>
<td>N.S.</td>
</tr>
<tr>
<td>Essay Writing</td>
<td>Y = 7 N = 14</td>
<td>2.34</td>
<td>N.S.</td>
</tr>
<tr>
<td>Exam Preparation</td>
<td>Y = 10 N = 11</td>
<td>0.048</td>
<td>N.S.</td>
</tr>
<tr>
<td>Note Taking</td>
<td>Y = 8 N = 13</td>
<td>1.20</td>
<td>N.S.</td>
</tr>
<tr>
<td>Advance Organizers</td>
<td>Y = 4 N = 17</td>
<td>8.05</td>
<td>*</td>
</tr>
<tr>
<td>Word Processing</td>
<td>Y = 11 N = 10</td>
<td>0.48</td>
<td>N.S.</td>
</tr>
<tr>
<td>Tutoring</td>
<td>Y = 8 N = 13</td>
<td>1.20</td>
<td>N.S.</td>
</tr>
<tr>
<td>Extended Time on Tests</td>
<td>Y = 13 N = 8</td>
<td>1.20</td>
<td>N.S.</td>
</tr>
<tr>
<td>Extended Time on Exams</td>
<td>Y = 15 N = 6</td>
<td>3.86</td>
<td>*</td>
</tr>
<tr>
<td>Extended Time on Assignments</td>
<td>Y = 4 N = 17</td>
<td>8.04</td>
<td>*</td>
</tr>
<tr>
<td>Recorded lessons on tape</td>
<td>Y = 2 N = 19</td>
<td>13.76</td>
<td>*</td>
</tr>
<tr>
<td>Buddy System</td>
<td>Y = 4 N = 17</td>
<td>8.04</td>
<td>*</td>
</tr>
<tr>
<td>Positive Feedback</td>
<td>Y = 10 N = 11</td>
<td>0.048</td>
<td>N.S.</td>
</tr>
<tr>
<td>Stress Management</td>
<td>Y = 5 N = 16</td>
<td>5.76</td>
<td>*</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>Y = 2 N = 19</td>
<td>13.76</td>
<td>*</td>
</tr>
<tr>
<td>Learning Strategies</td>
<td>Y = 6 N = 15</td>
<td>3.86</td>
<td>*</td>
</tr>
<tr>
<td>Personal Counselling</td>
<td>Y = 7 N = 14</td>
<td>2.34</td>
<td>N.S.</td>
</tr>
<tr>
<td>Career Counselling</td>
<td>Y = 6 N = 15</td>
<td>3.86</td>
<td>*</td>
</tr>
<tr>
<td>Other services &amp; Accommodations</td>
<td>Y = 1 N = 20</td>
<td>17.20</td>
<td>*</td>
</tr>
</tbody>
</table>
Taking, Word Processing, Tutoring, Extended Time on Tests, Positive Feedback, and Personal Counselling are still useful at the postsecondary level, but the test of the goodness of fit of the frequency of responses was not significant for these items.

Some students complained that they did not receive much positive feedback and they thought that teachers should be more understanding.

Advance Organizers, Extended Time on Assignments, the Buddy System, Stress Management, and Learning Strategies appear important but in discussion with the students, the researcher found that they did not use these services. Many of the participants were unaware of the availability of these services at their Community College:

"I have to find out everything for myself now and that's a hassle." (S06)

"The postsecondary system doesn't do a good enough job of marketing services to students, once they are diagnosed." (S14)

Extended Time on Exams emerges as a significant skill and it was apparent from the personal interviews that most students still require extra time to complete exams.

Assertiveness appeared to be an important skill but it was not a skill that was utilized by many of the students.

Although Career Counselling was significant according to the chi-square test, the researcher discovered that the
students were not availing of this service. In fact, only half the students who utilized this service in secondary school, used it in their community college.

Other services and accommodations also appeared to be important. However, during the interview process, students revealed that they did not know of other services and accommodations that were available.

The researcher carried out The Mann-Whitney Non Parametric Test, to determine if the sum scores on the question "Which of the above services and/or accommodations do you still find useful?" differed between males and females. The assumption of the test is that if the set of the sum of Q2(b) scores was taken, all the male scores would be low and all the female scores would be high. The results showed that females had significantly higher sum scores than the males (Uobs=34; P<0.05; n₁ = 9, n₂ = 12).

Interpretation of Results from Table 4: Responses to the Question "Are the personal characteristics that helped you in secondary school still in use in postsecondary education?"

Motivation was a characteristic that most of the participants (16) stated was still important and of the 16 students who stated that motivation was important, 10 (83.3%) were female and 6 (66.7%) were male.

The personal characteristics of self-esteem, self-advocacy, asking for accommodations, independence,
Table 4

Perceived Personal Characteristics that LD Students still find Useful

<table>
<thead>
<tr>
<th>Question</th>
<th>Frequency of Y and N</th>
<th>Result Chi-Square</th>
<th>* denotes significance @ P&lt;0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2(f) 1. Motivation</td>
<td>Y = 16, N = 5</td>
<td>5.76</td>
<td>*</td>
</tr>
<tr>
<td>Q2(f) 2. Self-Esteem</td>
<td>Y = 12, N = 9</td>
<td>0.42</td>
<td>N.S.</td>
</tr>
<tr>
<td>Q2(f) 3. Self-Advocacy</td>
<td>Y = 13, N = 9</td>
<td>0.42</td>
<td>N.S.</td>
</tr>
<tr>
<td>Q2(f) 4. Clarification</td>
<td>Y = 16, N = 5</td>
<td>5.76</td>
<td>*</td>
</tr>
<tr>
<td>Q2(f) 5. Asking for Accommodations</td>
<td>Y = 9, N = 12</td>
<td>0.42</td>
<td>N.S.</td>
</tr>
<tr>
<td>Q2(f) 6. Independence</td>
<td>Y = 13, N = 8</td>
<td>0.42</td>
<td>N.S.</td>
</tr>
<tr>
<td>Q2(f) 7. Assertiveness</td>
<td>Y = 12, N = 9</td>
<td>0.42</td>
<td>N.S.</td>
</tr>
<tr>
<td>Q2(f) 8. Ability to verbalize strengths and weaknesses</td>
<td>Y = 15, N = 6</td>
<td>3.86</td>
<td>*</td>
</tr>
<tr>
<td>Q2(f) 9. Asking questions</td>
<td>Y = 16, N = 5</td>
<td>5.76</td>
<td>*</td>
</tr>
<tr>
<td>Q2(f) 10. Asking for Assistance</td>
<td>Y = 14, N = 7</td>
<td>2.34</td>
<td>N.S.</td>
</tr>
</tbody>
</table>
assertiveness, and asking for assistance were helpful but the chi-square test was not significant.

The results revealed that clarification was still important for the students at the postsecondary level and the same number of participants (16) answered positively to this.

More students were able to verbalize their strengths and weaknesses at the postsecondary level. When discussing this characteristic, the students stated that they were more aware of their strengths and weaknesses and did not feel afraid to articulate them.

Asking for assistance was viewed differently now to the way the entire group viewed it at secondary school. Three participants found this useful in secondary school while 14 students now find it important. Again, when discussing this with the students, many of them stated that they did not feel stupid asking for assistance at the postsecondary level, whereas they did at secondary school.

Correlation Analysis

The researcher ran a correlation analysis using The Pearson product-moment correlation coefficient. It was used to evaluate the relationship between the personal characteristics that the participants possessed that helped them in secondary school and those that are still in use. Generally, no significant association was found between
responses on Question 3 and matched responses on Question 6. However, some specific items were significant. A significant positive correlation coefficient was calculated for the pairwise association between Q3-4 (What personal characteristics did you possess that helped you in secondary school - Asking for clarification on various class materials) and Q6-4 (Asking for clarification on various class materials) \( (r = 0.76; P<0.05) \). This result indicates that the way the participant scored on Q3 item 4 "asking for clarification on various class materials" is related to the way the participant scored on Q6 item 4 "asking for clarification on various class materials."

A significant negative correlation was found for Q3 item 2 and Q.6 item 2, within female respondents, concerning the importance of self-esteem for the students in secondary school and at the postsecondary level. This result indicates that the way females scored on Q3 item 2 is the opposite to the way they now see Q6 item 2. No other significant correlation coefficients were found in the data.

**Interpretation of Results from Table 5: Responses to "What new services\accommodations did you find out about in community college\university?"**

Most of the participants were aware of the first six services\accommodations before they attended community college. However, only half of the students were informed about the remaining services.
Table 5

New Services\Accommodations Students found out about in Community College\University.

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency of Y and N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taped textbooks</td>
<td>Y = 7</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>N = 14</td>
<td>66.7</td>
</tr>
<tr>
<td>Interpreters</td>
<td>Y = 5</td>
<td>23.8</td>
</tr>
<tr>
<td></td>
<td>N = 16</td>
<td>76.2</td>
</tr>
<tr>
<td>Textbook Readers</td>
<td>Y = 6</td>
<td>28.6</td>
</tr>
<tr>
<td></td>
<td>N = 15</td>
<td>71.4</td>
</tr>
<tr>
<td>Typists</td>
<td>Y = 7</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>N = 14</td>
<td>66.7</td>
</tr>
<tr>
<td>Computers</td>
<td>Y = 8</td>
<td>38.1</td>
</tr>
<tr>
<td></td>
<td>N = 13</td>
<td>61.9</td>
</tr>
<tr>
<td>Talking Calculators</td>
<td>Y = 8</td>
<td>38.1</td>
</tr>
<tr>
<td></td>
<td>N = 13</td>
<td>61.9</td>
</tr>
<tr>
<td>Proofreader</td>
<td>Y = 10</td>
<td>47.6</td>
</tr>
<tr>
<td></td>
<td>N = 11</td>
<td>52.4</td>
</tr>
<tr>
<td>Transcription service</td>
<td>Y = 10</td>
<td>47.6</td>
</tr>
<tr>
<td></td>
<td>N = 11</td>
<td>52.4</td>
</tr>
<tr>
<td>Electronic speller dictionary</td>
<td>Y = 11</td>
<td>52.4</td>
</tr>
<tr>
<td></td>
<td>N = 10</td>
<td>47.6</td>
</tr>
<tr>
<td>Advance book/reading lists</td>
<td>Y = 10</td>
<td>47.6</td>
</tr>
<tr>
<td></td>
<td>N = 11</td>
<td>52.4</td>
</tr>
</tbody>
</table>
Table 6

Services\Accommodations the Students no longer need

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency of ( Y ) and ( N )</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Skills</td>
<td>( Y = 3 ) ( N = 18 )</td>
<td>14.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>85.7</td>
</tr>
<tr>
<td>Time Management</td>
<td>( Y = 2 ) ( N = 19 )</td>
<td>9.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>90.5</td>
</tr>
<tr>
<td>Essay Writing</td>
<td>( Y = 4 ) ( N = 17 )</td>
<td>19.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>81.0</td>
</tr>
<tr>
<td>Exam Preparation</td>
<td>( Y = 4 ) ( N = 17 )</td>
<td>19.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>81.0</td>
</tr>
<tr>
<td>Note Taking</td>
<td>( Y = 4 ) ( N = 17 )</td>
<td>19.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>81.0</td>
</tr>
<tr>
<td>Advance Organizers</td>
<td>( Y = 4 ) ( N = 17 )</td>
<td>19.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>81.0</td>
</tr>
<tr>
<td>Word Processing</td>
<td>( Y = 6 ) ( N = 15 )</td>
<td>28.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>71.4</td>
</tr>
<tr>
<td>Tutoring</td>
<td>( Y = 3 ) ( N = 18 )</td>
<td>14.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>85.7</td>
</tr>
<tr>
<td>Extended time on tests</td>
<td>( Y = 5 ) ( N = 16 )</td>
<td>23.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>76.2</td>
</tr>
<tr>
<td>Extended time on Exams</td>
<td>( Y = 5 ) ( N = 16 )</td>
<td>23.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>76.2</td>
</tr>
<tr>
<td>Extended time on assignments</td>
<td>( Y = 6 ) ( N = 15 )</td>
<td>28.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>71.4</td>
</tr>
<tr>
<td>Recording lessons on tape</td>
<td>( Y = 4 ) ( N = 17 )</td>
<td>19.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>81.0</td>
</tr>
<tr>
<td>Buddy System</td>
<td>( Y = 6 ) ( N = 15 )</td>
<td>28.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>71.4</td>
</tr>
<tr>
<td>Positive Feedback</td>
<td>( Y = 3 ) ( N = 18 )</td>
<td>14.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>85.7</td>
</tr>
<tr>
<td>Stress Management</td>
<td>( Y = 6 ) ( N = 15 )</td>
<td>28.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>71.4</td>
</tr>
<tr>
<td>Assertiveness Training</td>
<td>( Y = 8 ) ( N = 13 )</td>
<td>38.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>61.9</td>
</tr>
<tr>
<td>Learning Strategies Program</td>
<td>( Y = 5 ) ( N = 16 )</td>
<td>23.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>76.2</td>
</tr>
<tr>
<td>Personal Counselling</td>
<td>( Y = 5 ) ( N = 16 )</td>
<td>23.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>76.2</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency of Y and N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Counselling</td>
<td>Y = 5</td>
<td>23.8</td>
</tr>
<tr>
<td></td>
<td>N = 16</td>
<td>76.2</td>
</tr>
<tr>
<td>Transition Counselling</td>
<td>Y = 6</td>
<td>28.6</td>
</tr>
<tr>
<td></td>
<td>N = 15</td>
<td>71.4</td>
</tr>
<tr>
<td>Learning Resource Room</td>
<td>Y = 6</td>
<td>28.6</td>
</tr>
<tr>
<td></td>
<td>N = 15</td>
<td>71.4</td>
</tr>
<tr>
<td>Other Services\ Accommodations</td>
<td>Y = 1</td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td>N = 20</td>
<td>95.2</td>
</tr>
</tbody>
</table>
Interpretation of results from Table 6: The Data Presented

Refer to Responses for Question 1 Part C on the Questionnaire, "What services\accommodations do you no longer need?"

All of the responses to this question were negative and it does suggest a need to reconsider those issues. Perhaps the wording of the question threw the participants off course.

Most of the participants were aware of the first six services\accommodations before they attended community college. However, only half of the students were informed about the remaining services.

Suggested Improvements in Services in Secondary School

The participants made suggestions regarding improving services in secondary schools. Approximately half of the participants asserted that more teacher training in learning disabilities was required, so that teachers would better understand the problems encountered by LD students and be equipped to adapt to the different ways that LD students might learn.

Some students indicated that more skills training should be implemented in secondary school as well as making students more aware of their learning disabilities. More than 60% of the students were unable to inform the
researcher about their learning disability or were unsure of the exact nature of their problem.

Participants expressed concern that teachers in secondary school do not care or are unwilling to accommodate them.

The following are some suggestions that students made:

"life skills programs would increase students' self-esteem and motivation." (S09)

"secondary schools should be more involved in teaching LD students how to be independent and I think that this is critical." (S10)

"a mandatory education class for all teachers so that they know what learning disabilities are." (S18)

"teachers should accommodate the students for their disability and realize that they learn differently than others." (S19)

"greater teacher education into the nature of learning disabilities." (S21)

Suggested Improvements in Services in Postsecondary School

Most of the participants indicated that Special Needs Services should be promoted more than they are at present. Many students were unaware of the scope of services available and were unsure of how to find out about services and accommodations.

Approximately a quarter of the students suggested that
teachers required more education about learning disabilities and what that means to students.

Students who attended College A complained more about the Special Needs Office than those who attended College B. The students mentioned that there should be more liaison between the Special Needs Office, the students, and their classroom teachers, where areas of concern could be aired. Some complaints involved difficulty contacting the Special Needs staff for help, not being able to have tests read in a way that the student comprehends, the fact that the Special Needs room was too small and more Special Needs staff to assist students.

"seminars for teachers explaining what learning disabilities are and how their students need accommodations." (S02)

"LD college students should visit secondary schools and discuss their successes, problems and what the colleges offer in assistance to LD students." (S05)

"give a list of all services available to LD students." (S19)

"most of these students have low self-esteem and they will be hesitant to ask for help. Lead them by the hand until they develop better personal responsibility and self-advocacy." (S21)

"teachers, students and special needs staff should meet to discuss concerns." (S09)
Summary

This study examined what students with learning disabilities perceive are the personal characteristics and services to be most useful in helping them make the transition from secondary to postsecondary education.

Twenty-one students, nine males and twelve females, participated in the study which consisted of a tape-recorded interview and completion of a written questionnaire. They all responded. The small number (n=21) restricts the generalizability of these results to the general population at large, to the general population of learners in Ontario, to the general population of LD students and the research design means that the findings are not generalizable. Further, the findings are reflective of this groups personal opinions and may be at variance with other populations. Also, what might be true for one particular time and place might change. The present study revealed three primary findings.

The first finding indicates that personal characteristics are important to the participants in secondary school and also at the postsecondary level. According to the findings, asking questions was not significant in secondary school but was important at the postsecondary level. The reason for this was that the students were uncomfortable asking for help and did not want to be singled out. As well, asking for assistance was
significant in secondary school but not at the postsecondary level. The participants reported that they were more comfortable seeking help at the postsecondary level as they did not feel stupid. Self-esteem was not an issue on the questionnaire but the students discussed with the researcher that their self-esteem was low and perhaps they would not admit this in writing. Therefore, the true feelings of the participants may not be fully revealed in the data from the questionnaire.

The second finding indicates that many of the typical accommodations and services supposed to be provided in secondary schools were not provided to the participants in this study and it is significant in that students felt they did not have the opportunity to avail themselves of these accommodations and services. Of importance, is that while transition planning is mandated under the Human Rights Act (1977), the majority of students interviewed did not have adequate transition planning to prepare them for postsecondary education. Only two students could recall having had appropriate transition planning. The students stated that positive feedback was not significant, but in discussing this issue with them, almost half of the participants said that they lacked positive feedback. As many services were not provided, it must be stated that careful evaluation of the frequency of responses is important in interpreting these data.
In response to Question 1 Part C in the questionnaire, although the students indicated that the services and accommodations were no longer needed, in discussion the students indicated these services were needed. This illustrates the conflicting nature of using a questionnaire to summarise findings and using interviews to encourage and get deeper into problems.

This supports the use of interview research at the preliminary stages of investigation. This conflict phenomenon is particularly important in a LD study. When the participant is given a question, his/her interpretation of questions may be different than when posed the same question verbally where participants are more comfortable asking for an interpretation of the question.

This is typical of the learning strategy that these students were accustomed to. They indicated that during secondary school questions were often read and interpreted by the instructor. However, at the postsecondary level this practice is no longer available.

The third finding indicates that the participants believed that they had more academic problems than social problems in secondary school and required more help in areas such as essay writing, study skills, time management, what to expect at the postsecondary level, and knowledge about their varying learning disabilities.

The secondary findings indicate that the female
participants differed from the male participants in that they were more independent in secondary school and were not afraid to ask questions. This is interesting as there is evidence that males have enjoyed more opportunities to speak than females in many environments (Mitchell, 1995) and the researcher was surprised that the female participants were more vocal. As the female participants wanted to be successful and study in a postsecondary environment, the researcher presumes that asking questions was one way to achieve this goal.

Deborah Tannen’s (1990) explanation that men use silence to escape certain situations could explain why the male students were less talkative. Tannen further states that asking questions and using tag questions might be perceived as a woman’s uncertainty and of her lower status. The researcher believes it could be a way of the female participants trying to make males contribute to dialogue and asserting control over conversations.

The present study confirms the belief held by the researcher that there are gaps in provisions for LD adolescents in transition from secondary school to postsecondary education and has extended the literature by taking an in-depth look at what has happened during the transition of 21 participants. To date, most of the existing research has focused on services and accommodations provided in postsecondary settings and to a lesser extent in
high schools (Armstrong & Davies, 1995; Bursuck, Rose, Cowen, & Yahaya, 1989; Williams, 1988). Some research has looked at the difficulties encountered and postsecondary service requirements for specific groups, including those students with learning disabilities (Nelson & Lignugaris/Kraft, 1989; Vogel, 1989).
CHAPTER FIVE: DISCUSSION AND CONCLUSIONS

Conclusions

Several conclusions can be reached as a result of this study and relate only to this sample. It is evident that LD students at the postsecondary level continue to experience barriers due to their disabilities and a lack of assistance with their difficulties at the secondary level. As Durlak, Rose & Bursuck (1991) stated, that when such characteristics as assertiveness, self-advocacy, creativity, and independence are present, and students receive feedback, these "are related to students' making a successful transition to postsecondary education" (p.51). The first finding from this study, which agrees with the research of Durlak et al. (1991), reveals that personal characteristics are important to the students to make a successful transition to postsecondary education.

Many of the students state that their schools did not always assist them in developing these skills, but it was often their mothers or someone else to whom they felt close. It is apparent that this sample of students think that secondary schools should do more to support them with programs.

The fact that participants' scores on "asking for clarification on various class materials," are related at the secondary and postsecondary levels, indicates that LD students require confirmation that they understand the
information to participate successfully. Some of the participants were explicit that they had encountered problems with teachers "getting fed up" answering questions about class material. If students receive more help in asking for clarification, this could assist them in both their academic and personal lives.

It is clear to the researcher from the interviews, that many participants had little knowledge about their disability, were unable to specifically describe their problems, how they affect their learning and what modifications are required to compensate for their disabilities. McWhirter & McWhirter (1990) recommend that students "fully understand their disability" before going to university.

The second finding that services and accommodations are not standard in all Ontario Boards, in particular transition planning, support the findings of Smith and Dowdy's study (1989), that states that a transition curriculum is not usually offered in the schools. The participants expressed some areas that would be beneficial to them in transition planning, (1) learning strategies for academic success and what to expect at the postsecondary level, (2) understanding and being able to explain the nature of their learning disability, and (3) more cooperative efforts between secondary and postsecondary institutions would have been helpful:
"what would have helped would be more clarification about what college\university is about and what is offered." (S9)

"a mandatory class for all teachers so that they know what learning disabilities are and can help students at school and in transition." (S18)

The third finding that the students perceived that they had more academic problems than social problems challenges existing literature, inasmuch as the research states that LD students have academic and\or social problems. As Dowdy, Carter and Smith (1990) stated, high school curriculum should be more related to the students’ needs:

"in class teachers should accommodate the student for their disability and realize that they learn differently than others." (S19)

The researcher discovered that many students lacked the content foundation necessary to succeed at the postsecondary level. Likewise, there was no evidence of a program of learning strategy development which would enable the students to generalize the skills learned to other settings. Several students stated that they found it difficult to keep up with courses and a number of them said that they had to redo courses or give them up and take different courses. The students believed that if secondary school teachers had more training in learning disabilities, students would be more likely to succeed. Although a document of the Ontario
Schools 1994 states that specialized staff, equipment, and facilities may be required for all students to develop abilities, this is not available at many schools.

"they didn't focus on helping me with my maths. If I passed a test that was good enough." (S7)

"teachers need more understanding of what LD students need." (S12)

The latter finding is also evident with many Non LD students who believe that their preparation for university was inadequate and that they lacked competence in time management skills that are crucial to being successful in postsecondary education (Grayson, 1993).

Nearly half of the participants believed that they had social problems and state that their schools did not offer programs to help them develop independence and self-advocacy skills required in secondary school and at the postsecondary level. It is evident to the researcher that many of the participants had difficulty adjusting to college and still lack the confidence in their own abilities. Aune (1991) and Mellard and Hazel (1992) studies validate the findings in this study that LD students require more training in social skills for secondary and postsecondary education and for the challenges that they will face in life.

Summarizing the findings from the interviews, it is clear that the majority of students reported that the
teachers did not care enough about their work:

"in the learning room there could have been more structure and strictness. They (the teachers) were too lenient. If I came into class with no work, they wouldn't persist on me doing anything." (S9)

The whole group felt that teachers required special training in learning disabilities, so that they can recognize a problem, accommodate it, and have empathy for students. The students perceived that more training related to dealing with LD students would reduce teachers' negative attitudes towards LD students. Lobosco & Newman (1992) stated that teachers who taught LD students had decreased job satisfaction and this was especially evident for those who were not specially trained to work with special needs students and those who taught at the high school level.

It is not mandated in Bill 82 to teach special education to teachers and not all faculties teach it. Brock provides for 20 hours of training over 10 weeks and only a little knowledge can be gleaned in this time frame.

It is evident, although the Ministry of Education’s Curriculum Guidelines Guidance document (1994) states that guidance counsellors will oversee the educational development of exceptional students and provide counselling services, that this is missing in the secondary school system. Of those counsellors that are involved, the participants perceive them to be disinterested and
inflexible.

Stodden & Boone (1987) state that 55% of LD students plan to attend community college or university. The researcher finds that the number of LD students entering postsecondary education is much higher now. Unfortunately, the two community colleges where this study was carried out were unable to give the researcher exact figures. The researcher recommends that community colleges should act equitably and keep an exact account of LD students entering community colleges.

On the issue of use of LD services by gender, there appeared to be a difference in the way that the female participants answered questions compared to the way that the male participants answered. In Q.6 item 1, students were asked if motivation was helpful to them in secondary school, 8 female students compared to 4 male students stated that it was important. In discussion with the students, the researcher found that while in secondary school the male students were less inclined to seek help than their female counterparts. This contradicts the information from Special Needs Office Services at Community College A which indicated that more males (97) than females (72) are on record with documentation, but the belief is that male and female students use the services equally. The researcher recommends that the colleges should be more accurate in their record keeping. The community college source
suggested that the reasons why female students might not ask for assistance is that they did not want to "bother anyone." Further, the reason why male students might not ask for help is pride (The community college source remains confidential).

Information from Community College B states that 323 males compared to 264 females are on record with documentation but these figures include all Special Needs students and not solely LD students.

The significant negative correlation found concerning the importance of self-esteem for the female participants in secondary school and at the postsecondary level, suggests that the female students are more confident in community college and that self-determination improved once participants succeeded academically:

"I started to build self-esteem by doing well in English and school in general." (S08)

The female participants indicated that they had more support in community college and this has assisted them in building up self-esteem. As Weber (1993) states "in a tradition that not only rewards but celebrates academic achievement, it is easy to understand that a student who consistently, often dramatically, fails to achieve at anywhere near the expected standards, will develop serious doubts about his whole persona" (p. 44).
Recommendations

The experiences of the participants interviewed were unique and their combined experiences uncover many concerns that require attention and are of use to educators. First, the finding that personal characteristics are important to LD students at both the secondary and postsecondary level should compel both secondary and postsecondary bodies to allot more time to integrate these skills in their programs. If students have more skills training, they will be able to make more informed choices and avoid pitfalls.

Second, there is a need for services and accommodations to be standardized and available to all students in secondary school. Even though various legislation mandates that adequate transition planning be accessible, the lack of it is contrary to what is stated in the regulations. Providing services will endeavour to prevent LD students from struggling at the postsecondary level and help to build a firm foundation of knowledge. Also, more LD students might pursue postsecondary options.

Third, perhaps adolescents should begin planning for transition to community college and university before they begin secondary school. There appears to be a need for LD adolescents to examine their requirements and strengths earlier.

Four, insights gleaned from the participants about negative experiences with teachers in secondary school, that
can be sustained into the postsecondary environment and again, experienced in community college, suggests that more staff development programs are necessary. Programs to enhance faculty awareness and understanding of LD students is important and perhaps special education teachers would have input in this process. As suggested by the students, secondary and postsecondary bodies should take steps to ensure that teachers are aware of learning disabilities, different learning styles, perhaps different ways of giving tests, are aware of services and accommodations that help LD students, and show empathy towards LD students.

Five, a collaborative effort by secondary and postsecondary bodies is needed to pool resources so that LD students can make successful transitions from secondary school to postsecondary education. Some suggestions are for secondary schools to arrange visits to various postsecondary colleges and for LD postsecondary students to visit secondary schools and to share their experiences. Some colleges in the US have introduced summer courses that teach students how to study, what services and accommodations are available and provide some basic skill training. I suggest that this would be an asset to the postsecondary system in Canada.

Six, services and accommodations for LD students should be widely publicized. Such vehicles as student magazines, application, and promotion materials during student
orientation can be used to tell students about the services and supports available. At present, students receive handbooks about special needs when they go to the Special Needs Office.

Seven, there does appear to be a gender difference in the way the male and female students answered the question "Which of the above services and/or accommodations do you still find useful?" However, the researcher is not sure at this time exactly why this is, as the data pulled out is not sufficient to reach a solution.

Eight, as many of the participants found their mothers instrumental in assisting them with their work and motivating them to continue with their studies, the researcher suggests that schools should involve mothers in the transition process. Brotherson, Berdine, and Sartini (1993) encourage family support and participation in transition planning. In particular, the researchers encourage students to plan for the future early, assist parents to realise the importance of their contribution and support parents and students with cooperative career planning.

Nine, this type of student seems to respond better to interviews at the preliminary stages than to quantitative tools. This conflict phenomenon is particularly important in a LD study. When the participant is given a question, his/her interpretation of questions may be different than
when posed the same question verbally where participants are more comfortable asking for an interpretation of the question.

Ten, there appears to be no method of standardisation in record keeping.

One of the reasons for researching this topic was to share the results with secondary schools, postsecondary bodies and other LD students. The researcher hopes that this study will be read by teachers and other professionals so that they can learn about the gaps in services for LD students in transition and become more proactive in helping LD adolescents to pursue a postsecondary education.

Research examining the successful transition of LD students from secondary to postsecondary education is still relatively new. Most research has looked at services available for LD students but not at the inconsistencies in the transition process.

Future research on the gaps is certainly indicated and also the differences between males and females in their pursuit of education.
References


The Brock University Standing Subcommittee on Research with Human Participants has reviewed the research proposal:

**Students with Learning Disabilities and a Retrospective Study.**
**Making the Transition from Secondary to Post Secondary Education**

The Subcommittee finds this proposal to conform to the Brock University guidelines for ethical research.
APPENDIX B: LETTER OF PERMISSION FROM COMMUNITY COLLEGE A

George Brown

The City College

November 27, 1996

Meriel Gordon,
7 Tangreen Circle,
Thornhill, Ont.
L4E 5E2

Dear Ms. Gordon:

This letter is in response to your request for written permission to conduct research at George Brown College for your Brock University program. It is our understanding that you will meet with several students with Learning Disabilities and administer a questionnaire. The College is agreeable to this plan as long as you have permission from each student that you interview.

If you have any further concerns please call me at 415-2620.

Yours sincerely,

Barbara Revill
Special Needs Coordinator

Judi Linton
Manager of Counselling and Special Needs

George Brown College of Applied Arts & Technology
ON DU T 175 Station B Toronto Ontario M5S 170 Telephone (416) 215-2000 or 1-800-265-9000
November 11, 1996

Ms. Muriel Gordon  
7 Tamgreen Circle  
Thornhill, Ontario  
L4J 5E2

Dear Ms. Gordon:

On behalf of the Services for Students with Disabilities Department, I extend to you a welcome.

I understand that you wish to interview students who have identified as having learning disabilities. Our department will invite such students to sign up for interviews.

Yours truly,

Craig Barrett, Ed. D.  
Acting Co-ordinator  
Counselling and Disability Services

/am
STUDENT QUESTIONNAIRE

Part A.

1. Male   □    Female   □

Are you between 15-19 □
                20-25 □
                26-30 □
                31-35+ □

2. What is your ethnic background?
   a. Caucasian □
   b. Afro-American □
   c. Hispanic □
   d. Native North American □
   e. Asian □
   f. Other-Specify ____________________________________________________

3. What is your first language? ______________________________

4. What other languages do you speak? _____________________________

5. In what region of Ontario do you live? ________________________

6. What was the last grade that you completed in elementary or secondary school?
   Grade__________________________________________________________

7. Please name the school board where you attended secondary school?
   ________________________________
Part B. Please indicate your answer by checking in the appropriate place.

1. What barriers in your education did you encounter in school?
   a. academic [ ]
   b. interpersonal [ ]
   c. both of the above [ ]
   d. other [ ]

2. Which of the following services/accommodations were provided and useful to you in secondary school:
   a. Study Skills ............... [ ]
   b. Time Management ........... [ ]
   c. Essay Writing ............... [ ]
   d. Exam Preparation ............ [ ]
   e. Note Taking ................. [ ]
   f. Advance Organisers .......... [ ]
   g. Word Processing ............. [ ]
   h. Tutoring ..................... [ ]
   i. Extended time on tests ....... [ ]
   j. Extended time on examinations [ ]
   k. Extended time on assignments [ ]
   l. Recorded lessons on tape ... [ ]
   m. Buddy system ............... [ ]
   n. Positive feedback .......... [ ]
   o. Stress management ......... [ ]
   p. Assertiveness training ...... [ ]
   q. Learning strategies ....... [ ]
   r. Personal counselling ....... [ ]
   s. Career counselling ........ [ ]
   t. Transition counselling ..... [ ]
   u. Help in the learning resource room [ ]
   v. Other services/accommodations [ ]
3. Which of the above services and/or accommodations do you still find useful?

a. Study Skills
b. Time Management
c. Essay Writing
d. Exam Preparation
e. Note Taking
f. Advance Organisers
g. Word Processing
h. Tutoring
i. Extended time on tests
j. Extended time on examinations
k. Extended time on assignments
l. Recorded lessons on tape
m. Buddy system
n. Positive feedback
o. Stress management
p. Assertiveness training
q. Learning strategies
r. Personal counselling
s. Career counselling
t. Other services/accommodations

4. What services/accommodations that were available in secondary school helped you make the decision to continue your education?
5. Were there services\accommodations that you required that you did not get that would have assisted you with the transition to community college\university?

Comments:


6. What personal characteristics did you possess that helped you in secondary school?

a. ☐ Motivation
b. ☐ Self-esteem
c. ☐ Self-advocacy about one’s learning disability
d. ☐ Asking for clarification on various class materials
e. ☐ Asking about accommodations
f. ☐ Independence
g. ☐ Assertiveness
h. ☐ Ability to verbalize own strengths and weaknesses
i. ☐ Asking questions
j. ☐ Asking for assistance
k. ☐ Other

Explain__________________________

__________________________

__________________________
Part C:

1. What services/accommodations do you no longer need?

   a. [ ] Study Skill
   b. [ ] Time Management
   c. [ ] Essay Writing
   d. [ ] Exam Preparation
   e. [ ] Note Taking
   f. [ ] Advance Organisers
   g. [ ] Word Processing
   h. [ ] Tutoring
   i. [ ] Extended time on tests
   j. [ ] Extended time on examinations
   k. [ ] Extended time on assignments
   l. [ ] Recording lessons on tape
   m. [ ] Buddy system
   n. [ ] Positive feedback
   o. [ ] Stress management
   p. [ ] Assertiveness training
   q. [ ] Learning strategies program
   r. [ ] Personal counselling
   s. [ ] Career counselling
   t. [ ] Transition counselling
   u. [ ] Learning resource room
   v. [ ] Other services/accommodations
2. What new services/accommodations did you find out about in community college/university? e.g.

- □ Taped textbooks
- □ Interpreters
- □ Textbook readers
- □ Typists
- □ Computers
- □ Talking calculators
- □ Proof reader
- □ Transcription service
- □ Electronic speller dictionary
- □ Advance book/reading lists
- Other

3. Are the personal characteristics that helped you in high school still in use in postsecondary education?

   Yes □  No □  If yes, please check below

- □ Motivation
- □ Self-esteem
- □ Self-advocacy about one’s learning disability
- □ Asking for clarification on various class materials
- □ Asking about accommodations
- □ Independence
- □ Assertiveness
- □ Ability to verbalize own strengths and weaknesses
- □ Asking questions
- □ Asking for assistance
4. What suggestions do you have for improving services in secondary school for students with learning disabilities?

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

5. What suggestions do you have for improving services at the postsecondary level for students with learning disabilities?

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________
APPENDIX E: BIOGRAPHICAL INTERVIEW

1. Tell me about yourself as a student?

2. How have your learning disabilities affected you in your personal life.

3. Whom do you remember as being most helpful?
   b. what did they do for you?

4. What strategies did you use that helped you?
Dear

Thank you for assisting with my research for my Master’s thesis. I appreciate the time you took to be part of the interview process and to complete the questionnaire. The information that you gave me was valuable for my research and very interesting to hear.

I hope to have completed this study by the fall of 1997 and I will leave a copy of the final thesis in the Special Needs Office of your college.

Sincerely,

Meriel Gordon
APPENDIX G: INFORMED CONSENT

BROCK UNIVERSITY

Title of Study: Students with Learning Disabilities and a Retrospective Study. Making the transition from Secondary to Post Secondary Education.

Researcher: Meriel Gordon
Tel: (905) 881-4656
Signature:

Advisor: Prof. Marian Walsh
Tel: (905) 688-5550 Ext.3348

Name of Participant:

I understand that this study in which I have agreed to participate will involve one-on-one interviews and/or answering a questionnaire about services and accommodations available at secondary school and in the postsecondary education system and also personal characteristics that assisted me to continue with my education.

I understand that my participation in this study is voluntary and that I may withdraw from the study at any time and for any reason without penalty.

I understand that there is no obligation to answer any question/participate in any aspect of this project that I consider invasive.

I understand that all personal data will be kept strictly confidential and that all information will be coded so that my name is not associated with my answers. I understand that only the researchers named above will have access to the data.

Participant signature _______________________________ Date ______________

If you have any questions or concerns about your participation in the study, you can contact (Meriel Gordon) at (905-881-4656)

Feedback about the use of the data collected will be available during the month of xxxxx, 199x in the (location). A written explanation will be provided for you upon request.

I have fully explained the procedures of this study to the above volunteer.

Researcher Signature _______________________________ Date ______________
APPENDIX H: RESULTS - CHI-SQUARE COMPUTATIONS

2 (1) What perceived personal characteristics have LD students found to be most useful in helping them make the transition from secondary to postsecondary education?

Q6-1 On the issue of motivation, the following are the results of the frequencies:

1 = Yes F=12 (%57.1) Observed
2 = No F 9 42.9) Observed

N=21 100%

Theoretical Expected is F = 10.5

\[ X^2 = \sum (O - E)^2 = \frac{(12 - 10.5)^2 + (9 - 10.5)^2}{10.5 + 10.5} \]

\[ = \frac{2.1 + 2.1}{2} = 0.42 \]

Q6-2 On the issue of self esteem, the following are the results of the frequencies:

1=Yes F=15 (%71.4) Observed
2=No F= 6 28.6)

N =21 100%

Theoretical expected is F = 10.5

\[ X^2 = \sum (O - E)^2 = \frac{(15 - 10.5)^2 + (6 - 10.5)^2}{10.5 + 10.5} \]

\[ = \frac{1.93 + 1.93}{2} = 3.86 \]
Q6 - 3 On the issue of how the students perceived self advocacy, the following are the results of the frequencies:

1 = Yes \( F = 9 \) \( \%42.9 \) \\
2 = No \( F = 12 \) \( \%57.1 \) Observed \\

\[ N = 21 \quad 100 \% \]

Theoretical Expected is \( F = 10.5 \)

\[ F = 10.5 \]

\[ X^2 = \sum \frac{(0 - \Sigma)^2}{\Sigma} = \frac{(9 - 10.5)^2}{10.5} + \frac{(12 - 10.5)^2}{10.5} \]

\[ = 0.21 + 0.21 \]

\[ = 0.42 \]

Q6 - 4 On the issue of clarification, the following are the results of the frequencies:

1 = Yes \( F = 16 \) \( \%76.2 \) \\
2 = No \( F = 5 \) \( \%23.8 \) Observed \\

\[ N = 21 \quad 100 \% \]

Theoretical Expected is \( F = 10.5 \)

\[ F = 10.5 \]

\[ X^2 = \sum \frac{(0 - \Sigma)^2}{\Sigma} = \frac{(16 - 10.5)^2}{10.5} + \frac{(5 - 10.5)^2}{10.5} \]

\[ = 2.88 + 2.88 \]

\[ = 5.76 \]
Q5 - 5 On the issue of asking about accommodations, the following are the results of the frequencies:

1 = Yes  F = 8  $38.1)$
2 = No   F = 13  61.9) Observed

\[ N = 21, 100 \%
\]

Theoretical Expected is \( F = 10.5 \)

\[ F = 10.5 \]

\[ X^2 = \Sigma(0 - \Sigma)^2 = (8 - 10.5)^2 + (13 - 10.5)^2 \]

\[ \Sigma \quad 10.5 \quad 10.5 \]

\[ = 0.21 \quad 0.21 \]

\[ = 0.42 \]

Q6 - 6 On the issue of independence, the following are the results of the frequencies:

1 = Yes  F = 12  $57.1)$
2 = No   F = 9  42.9) Observed

\[ N = 21, 100 \%
\]

Theoretical Expected is \( F = 10.5 \)

\[ F = 10.5 \]

\[ X^2 = \Sigma(0 - \Sigma)^2 = (12 - 10.5)^2 + (9 - 10.5)^2 \]

\[ \Sigma \quad 10.5 \quad 10.5 \]

\[ = 0.21 \quad 0.21 \]

\[ = 0.42 \]
Q6 - 7 On the issue of assertiveness, the following are the results of the frequencies:

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
<td>12</td>
<td>57.1</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
<td>9</td>
<td>42.9</td>
</tr>
</tbody>
</table>

\[ F = 10.5 \]

\[ X^2 = \sum (0 - \Sigma)^2 = (12 - 10.5)^2 + (9 - 10.5)^2 \]

\[ = 0.42 \]

Q6 - 8 On the issue of the ability to verbalize their strengths and weaknesses, the following are the results of the frequencies:

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
<td>17</td>
<td>81.0</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
<td>4</td>
<td>19.0</td>
</tr>
</tbody>
</table>

\[ F = 10.5 \]

\[ X^2 = \sum (0 - \Sigma)^2 = (17 - 10.5)^2 + (4 - 10.5)^2 \]

\[ = 84.5 \]
Q.6 - 9 On the issue of asking questions, the following are the results of the frequencies:

1 = Yes  
\[ F = 7 \]  
\[ \% 33.3 \)

2 = No  
\[ F = 14 \]  
\[ \% 66.7 \) Observed

\[ N = 21 \]  
\[ 100\% \)

Theoretical Expected is \[ F = 10.5 \]
\[ F = 10.5 \]

\[ X^2 = \Sigma (O - \Sigma)^2 = (7 - 10.5)^2 + (14 - 10.5)^2 \]
\[ \Sigma \quad 10.5 \quad 10.5 \]
\[ = 1.17 \quad 1.17 \]
\[ = 2.34 \]

Q.6 10 On the issue of asking for assistance, the following are the results of the frequencies:

1 = Yes  
\[ F = 3 \]  
\[ \% 14.3 \)

2 = No  
\[ F = 18 \]  
\[ \% 85.7 \) Observed

\[ N = 21 \]  
\[ 100\% \)

Theoretical Expected is \[ F = 10.5 \]
\[ F = 10.5 \]

\[ X^2 = \Sigma (O - \Sigma)^2 = (3 - 10.5)^2 + (18 - 10.5)^2 \]
\[ \Sigma \quad 10.5 \quad 10.5 \]
\[ = 5.36 \quad 5.36 \]
\[ = 10.72 \]
APPENDIX I: MALE/FEMALE RESPONSES TO PERCEIVED PERSONAL CHARACTERISTICS THAT WERE USEFUL IN SECONDARY SCHOOL.

Table 7

Perceived Characteristics that LD Students found useful

<table>
<thead>
<tr>
<th>Item</th>
<th>Male Yes</th>
<th>Male No</th>
<th>Female Yes</th>
<th>Female No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>4</td>
<td>5</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>7</td>
<td>2</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Self Advocacy</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Asking for Clarification on various class materials</td>
<td>6</td>
<td>3</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Asking about Accommodations</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Independence</td>
<td>4</td>
<td>5</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>5</td>
<td>4</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Ability to verbalize own strengths &amp; weaknesses</td>
<td>8</td>
<td>1</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Asking Questions</td>
<td>1</td>
<td>8</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Asking for Assistance</td>
<td>1</td>
<td>8</td>
<td>2</td>
<td>10</td>
</tr>
</tbody>
</table>

Interpretation of Results from Table 7: Responses to the question "What personal characteristics did you possess that helped you in secondary school?"

Due to the small sample size, a statistical analysis of these data is invalid.